

## TRAINING AND ASSURANCE OF PERSONNEL COMPETENCE

The expectations of Office of Nuclear Regulation ([ONR](#)) with respect to Training Needs Analysis ([TNA](#)) are set out in the Safety Assessment Principles ([SAPs](#)) at a total of ten locations. In particular [SAPs](#) EHF.5 and EHF.8 must be taken into consideration to ensure the training and assurance of personnel competence is adequately actioned and represented in the nuclear safety case.

- **EHF.5:** Proportionate analysis should be carried out on all tasks important to safety and used to justify the effective delivery of the safety functions to which they contribute.
- **EHF.8:** A systematic approach to the identification and delivery of personnel competence should be applied.

Paragraph 457 of the SAPs expands upon EHF.8 and states:

*“The process for identifying and delivering competence should encompass the phases of: job analysis; identification of competence requirements; training needs analysis; training programme design and implementation; formal assessment of competence; and training programme evaluation. The process should be applied to all whose actions could impact on safety, whether they are an employee or a contractor, including personnel who may not interact directly with plant or equipment (see Paragraph 447). Close supervision and monitoring should be maintained until individuals are demonstrably competent to perform their tasks.”*

The safety case production process is described in SAP SC.1 and in particular Paragraph 91(e) states that application of this principle should lead to:

*“definition of the training and qualifications needed for the formal roles within the process (to ensure that those who undertake the roles are suitably qualified and experienced).”*

In addition, SAP SC.4 must be considered.

- **SC.4:** A safety case should be accurate, objective and demonstrably complete for its intended purpose.

Paragraph 101(h) of the SAPs expands upon SC.4 and states the safety case should:

*“provide the basis for the safe management of people, plant and processes. (For example, the safety case should address management and staffing levels, training requirements, maintenance requirements, operating and maintenance instructions, and contingency and emergency instructions).”*

## Emergency Planning and Preparedness

Training and assuring the competence of personnel extends to the response required in severe accident scenarios. Training for such an event extends beyond the personnel of the nuclear power plant and will include personnel of local emergency services. This requires SAP AM.1 to be considered.

- **AM.1:** Strategies and plans should be in place to prepare for and manage accidents at the facility and / or site.

Paragraph 777 of the SAPs expands upon AM.1 and states:

*“The emergency operating procedures and accident management guidelines should be tested during emergency exercises to confirm their accuracy and effectiveness and should also form part of operator training. At operating power reactors, testing of the emergency operating procedures and, where practicable, the accident management guidelines should include the use of full-scope plant simulators.”*

Further, Paragraph 786 of the SAPs states:

*“Provision should be made for training personnel (including from the local emergency services) in the accident management procedures and implementing the accident management strategies. The training should include periodic exercising of the site’s emergency arrangements, including multi-facility exercises where relevant. The exercises should be chosen so that in total they test the full scope of the site’s arrangement and activities within the plans, eg the deployment of mobile equipment such as pumps and generators.”*

Further information may be found on the ONR website and in the ONR’s Technical Assessment Guide (*TAGs*) for training and assuring personnel competence. In particular [NS-TAST-GD-027](#) sets out the Licence Conditions relating to training and competence and the International Atomic Energy Agency (*IAEA*) requirements of the licensees of nuclear power plants.

In addition the [Joint Services Publication JSP 822](#) contains information specifically about TNA. This is a Defence Services document which is free-source and contains a thorough breakdown of TNA.

## Additional Information & Guidance

- [ONR, Safety Assessment Principles for Nuclear Facilities, 2014 Edition Revision 1 \(January 2020\)](#).
- <http://www.onr.org.uk/resources.htm>
- [ONR, NS-TAST-GD-027, Training and Assuring Personnel Competence, July 2017](#).
- [JSP 822, \(V3.3 Aug 20\) Defence Direction and Guidance for Training and Education: Part 2 Guidance, UK, MOD](#).