

AS LOW AS REASONABLY PRACTICABLE

Introduction

While the safety case is a mandatory regulatory requirement, its primary purpose is to enable the Licensee to satisfy themselves that they have considered all potential risks associated with the activities on site, and have implanted suitable and sufficient measures to mitigate the risk of radiological consequences to their staff and the public to a level that is As Low As Reasonably Practicable ([ALARP](#)).

The term 'reasonably practicable' enables the Health and Safety Executive ([HSE](#)) to set goals for duty-holders rather than being prescriptive. The concept of 'reasonably practicable' lies at the heart of the UK health and safety system. It is a key part of the [Health and Safety at Work Act \(1974\)](#) ([HSWA](#)) and many other Health and Safety regulations that the HSE, Office for Nuclear Regulation ([ONR](#)) and local authorities enforce.

Licence Condition 14 (Safety Documentation) requires arrangements to "produce and assess safety cases... to justify safety" whilst Licence Condition 23 (Operating Rules) requires an adequate safety case to be produced and that the facility is operated in accordance with the safety case. The safety case is still required to address the duty to reduce risks to ALARP from the HSWA.

Principles of ALARP

In the majority of cases, ALARP decision-making will take the form of applying 'good practice' established by discussion between stakeholders to achieve a consensus as to what ALARP is. Deciding whether a risk is ALARP can be challenging because it requires stakeholders to exercise judgement.

ALARP decision-making in many cases involves scoring against pre-determined criteria to provide an auditable trail and to support the justification of ALARP decision making. For significant hazards, complex and novel situations, good practice is supported further by formal decision making techniques such as Cost Benefit Analysis (CBA) to inform judgements.

The nuclear safety risk is generally determined to be tolerable and ALARP as a result of the combined deterministic and probabilistic assessments. These approaches shall demonstrate the licensee's understanding of the dominant risk areas and all reasonably practicable measures for risk reduction should be implemented or managed in relative priority.

Stages of ALARP Decision-Making

The stages in the ALARP decision making process are likely to include those detailed below.

- Define and characterise the problem/shortfall.
- Generate the potential options to address the problem/shortfall.
- Assess the options and their merits, including CBA.
- Identify and justify the best option or options.
- Implement the selected options.

Additional Information & Guidance

- ONR, NS-TAST-GD-005, Guidance on the Demonstration of ALARP (As Low As Reasonably Practicable), December 2019.
- HSE, Principles and Guidelines to assist HSE in its judgements that duty-holders have reduced risk to as low as reasonably practicable, December 2001.
- HSE, Health and Safety at Work Act (HSWA), 1974.
- HSE, Reducing Risks, Protecting People; HSE decision-making process, 2001.
- HSE, Tolerability of Risks from Nuclear Power Stations, 1992.