

Peter Lutwyche, Deputy Managing Director Sellafield Site, Sellafield Ltd, UK Developing the Strategic Vision for the Greater Sellafield

Executive summary

The Sellafield site is around two square miles and is located in the North West corner of England. It is a compact, highly complex, highly interdependent and very busy site with over 10 000 employees.

The site was originally established during the 1930s to accommodate Royal Ordnance factories producing explosives for World War II. The British Government later sought to develop its own independent nuclear defence capability and also recognized that atomic energy could be harnessed for commercial uses and this has set the purpose of the site to this day.

Today, Sellafield Ltd manages and operates the site on behalf of the owners, the Nuclear Decommissioning Authority (NDA).

Activities centre on:

1. Remediation, decommissioning, accelerated hazard and environmental risk reduction and clean-up of the historic legacy.
2. Commercial activities at the Thorp and Magnox reprocessing plants, the Sellafield Mixed Oxide Fuel manufacturing plant and a wide range of waste management and effluent treatment facilities.

Sellafield is now a full member of WANO, the first nuclear processing organization to join. This is a major platform driving further improvements across the site, and also represents recognition of the already existing high quality of operations.

Sellafield represents the most challenging nuclear site management programme in the world. Safety - nuclear, conventional, radiological and environmental - is key.

The Integrated Strategy for the Remediation of Sellafield has the principal objective of taking the Sellafield site to a point of quiescence where radioactive material and contaminated buildings are held in a safe and secure form which can be sustained for the period needed until disposal of treated waste can begin. It takes a long-term holistic view of Sellafield and the vision for the site. It considers all aspects of the future plan and the decisions required for remediation, including interactions between clean-up and commercial operations, and interactions between the activities to reach a quiescent state and the activities required to achieve the necessary site end-state. The modelling tool allows assessment of the undertaking of future commercial activities, for example, substantial further reprocessing

contracts can be modelled on their total downstream impact for site infrastructure.

The strategy offers the opportunities to:

1. Accelerate the clean up of the Sellafield site by about 40 years.
2. Reduce the net lifetime cost of remediation at Sellafield in the order of £5 billion.
3. Reduce the impact to the environment and meet OSPAR requirements.
4. Take the site and the wastes held on it to a position which is robust against key national uncertainties facing the nuclear industry, such as the nature and availability of repositories and the ultimate site end-state. It is clear, however, that the maximum benefits arise from taking early decisions and actions in respect of waste disposal.

Regulatory engagement has been key in developing the strategy, informing the options considered, and the actual key strategy decisions that have emerged. Engagement with stakeholders local to Sellafield has also taken place and has given valuable insights that have influenced our thinking.

The report lays out significant decisions and timings of those decisions, in the form of a calendar of decisions, that will need to be taken on a timely basis in order meet the objective of safely and efficiently remediating the Sellafield site, including the safe management of the waste arisings.

It is recognised that the Sellafield site is a major component of the NDA's scope and therefore this process could play a greater role in helping to accelerate cleanup on other sites. Recognizing that these are matters of national significance, with strong regulatory and stakeholder interest, the strategy proposes an approach for proactive national engagement on the topics leading to timely decision-making by the appropriate authorities. This builds on the NDA's national stakeholder engagement arrangements.

Such a national engagement programme could be very effectively supported by the type and quality of information presented in the strategy. The information is laid out in a transparent and layered way that summarizes the key points for policy makers and regulators, and facilitates access through to the detailed and complex technical analysis. This is necessary to allow confidence in the key conclusions reached to be supported by the industry specialists and regulatory concerns. This also provides a basis for supporting an effective national stakeholder engagement with the capability to respond to questions, challenges and alternative proposals as they arise.