

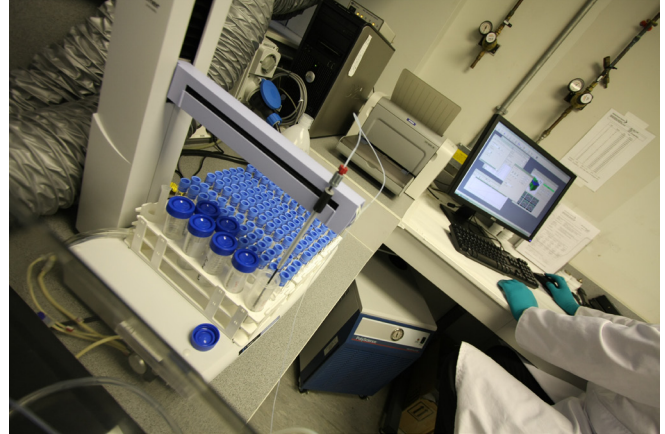


NNL provides a professional criticality safety assessment and related services to both our own facilities and a wide range of UK and international customers. Our technical expertise applies to a broad range of fissile isotopes and nuclear facilities, spanning all stages of the plant lifecycle.

## Criticality Safety Assessment and Peer Review

NNL has extensive experience in producing criticality safety assessments for nuclear facilities and transport packages. Our aim is to produce ALARP, fit for purpose assessments. Our assessors are skilled in various criticality safety assessment methodologies and have even played a role in shaping them. Added to this, our team is experienced in hazard identification processes. They have all the expertise needed to carry out nuclear criticality safety analyses using criticality data handbooks, hand methods of calculation and Monte Carlo techniques.

Our specialists are further experienced in conducting independent peer review work for a wide variety of plants and processes, including Independent Nuclear Safety Assessment (INSA), uranium isotopes and isotopic abundance. We use ICP-OES and ICP-MS in order to achieve detection limits of tens of parts-per-trillion for many elements.



## Operational Plant Support

NNL has extensive experience of providing operational plant support to nuclear facilities. This operational support covers a broad range of areas, including:

- Expert technical support to plant modifications
- Focussed job-specific training to non-criticality specialists
- Technical support in response to non-routine plant conditions
- Criticality compliance auditing and inspections
- Independent safety representation on Management Safety Committees
- Technical support to regulatory interactions

## Emergency Planning

NNL has the capability to produce Criticality Incident Detection (CID) system omission cases and CID system placement assessments using hand calculation methods. Our assessors provide specialist input into emergency planning work and guidance through out-of-hours plant support and participation in criticality emergency exercises.

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