

# UK Irradiation Archive Options Study - status

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# Background

- There is a wide range of irradiated material at Sellafield, power stations and other sites and also UK material irradiated more recently overseas. This would be a valuable resource for UK researchers – but it may be disposed of if an archive is not established to preserve it.
- UKAEA, the University of Bristol and NNL were awarded EPSRC NNUF funding to do a detailed options study, November 2019 to March 2021.
- The Irradiated Materials Archive Group initiated the concept of an archive and is advising the project. It has members from the main stakeholders - Grace Burke, Keith Hallam, James Marrow and David Parfitt are representing universities.
- The archive could be similar to US DoE's Nuclear Fuels and Materials Library led by Idaho National Laboratory, which is providing advice to the project.

# The Options

1. Do nothing – pedigree material will in time be lost
2. **A distributed archive** – unirradiated & irradiated samples of pedigree materials are catalogued and stay at their current location. Researchers consult databases to find out what is available. There is a process to request and retrieve samples.
3. **A central archive** - samples are brought to new, dedicated stores at Sellafield and (low activity samples) Culham, with databases and a request and retrieval process.
4. A mix of 2 and 3.

As well as the demand for and contents of the archive, the March 2021 report will cover the options' operating arrangements and their implementation and running costs.

# Project status

1. Discussions have been held with NDA, Rolls Royce/MoD and EdF. A range of samples might be made available - steels, plates & forgings; Zircalloy claddings; weld material; graphites; cements, concretes, grouts.
2. Bristol has held meetings with 17 universities, who were enthusiastic about the archive and indicated which materials would be important for the archive and what pedigree information would be needed.
3. Issues such as ownership, liability, conditions of use, transport and disposal, are being addressed.

# Next Steps

1. 11 September - project advisory group (IMAG) meeting
2. 30 September – online workshop to consider progress. Numbers are limited but we hope all interested universities will be represented. Owners of material and other interested organisations will also attend. To check your university is invited please email [sabrina.shirazi@bristol.ac.uk](mailto:sabrina.shirazi@bristol.ac.uk)
3. December – IMAG considers draft findings
4. Jan to March – final consultation with stakeholders, completion of project report.

EPSRC has NNUF funds to implement the archive if it is decided to proceed; this would require (a) the agreement of the owners of the material and (b) a way to fund its operation.

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