



# Hot Fuels Examination Facility: Interns Poster

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*Changing the World's Energy Future*

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# Hot Fuels Examination Facility

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## What is HFEF?

The Post-Irradiation Facility located inside of the Materials and Fuels Complex contains the largest inert atmosphere hot cell in the United States. Designed in the late 60s and built in the early 70s the building contains four floors, and multiple points of penetration into the argon hot cell and decon cell.



## Research Operations



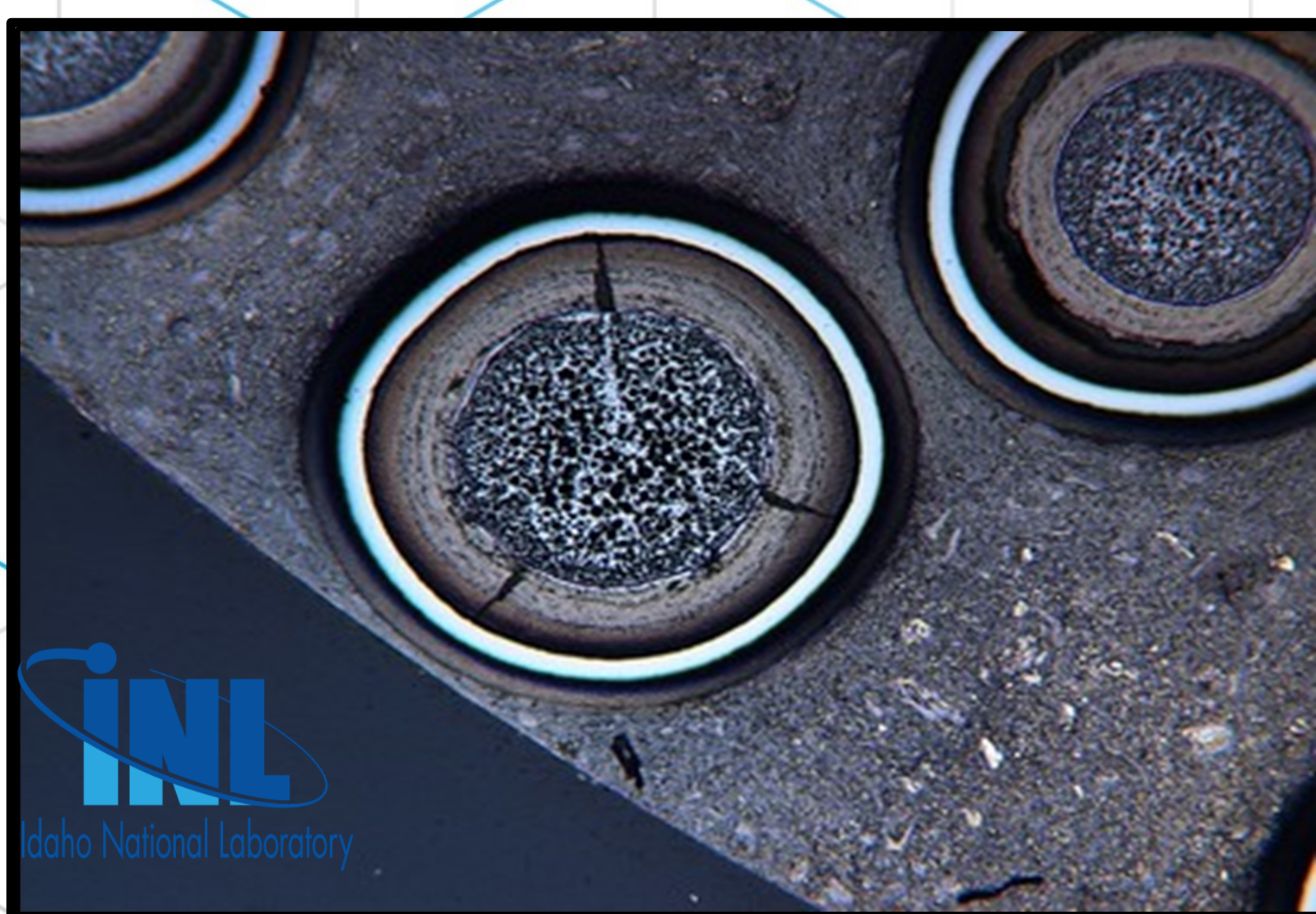
Research operations involves using remote manipulators to conduct experiments and to decontaminating material. Facility Operations involves operating the control room and monitoring facility parameters, maintenance and facility modifications. They both work hand in hand to complete multiple research projects.

## Cask Operations



The Cask Crew is another part of the operations at HFEF. There is three ports in total between the two different types of cells, the cask crew will receive different types of casks. Then depending on what is in it and where it needs to go, they will then move the cask cart to the correct port and lift it into the correct cell. Inside of the casks can be experiments or radiological waste.

## AGR Fuel



TRISO Particle fuel is an example of the research being conducted at HFEF. TRISO stands for Tri-structural Isotropic Particle Fuel. It is a significant advancement due to its robust and resilient nature. This fuel is created by coating Uranium in high and low-density carbon, as well as other ceramic material. The durable product is designed to endure extreme temperatures preventing the melting of the fuel. The fuel design is being tested for new reactor designs such as fourth generation gas reactors, to run at higher temperatures. The NRC will utilize the research being conducted at HFEF to determine if the fuel can be certified for private industry use.