

**INL News Release**  
**FOR IMMEDIATE RELEASE**  
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## **AREVA donates equipment to examine used nuclear fuel**

As the nation's lead laboratory in nuclear energy research, Idaho National Laboratory is expanding its spent nuclear fuel testing capabilities with the help of state-of-the-art eddy current measurement equipment donated and installed by AREVA, Inc. This equipment allows the INL to non-destructively evaluate the structural performance of nuclear fuel cladding, to help extend fuel life.

The eddy current measurement equipment measures electrical current induced when a conductor is placed in a region where there is a change in magnetic flux. This non-destructive testing can detect material defects and measure the oxide layer thickness on certain specimens. In this case, the specimens are spent fuel rods. The Eddy Current Measurement System was installed in the Hot Fuel Examination Facility (HFEF) at the INL desert Site in late 2005.

"Corrosion performance is one of the limiting parameters or qualities of a fuel rod. We're characterizing the way this fuel behaves at very high burnup. The fuel rod is licensed by the Nuclear Regulatory Commission for use to a certain burnup or amount of irradiation," said Bruce Hilton, who holds a Ph.D. from MIT in nuclear materials engineering and is the principle investigator for all commercial fuels work at INL.

Extending the life of nuclear fuel has economic and environmental benefits. Utilities can purchase fewer fuel assemblies to power their reactors if a longer lifetime can be justified. Using fewer fuel assemblies means less spent fuel for storage and/or disposal. The tests performed at the INL provide data essential for licensing the fuel, with the Nuclear Regulatory Commission, for a longer life.

Building upon the spirit of the Energy Policy Act of 2005, INL and AREVA are teaming to evaluate four high burnup rods at the HFEF. This project is an example of a successful partnership of private industry and national laboratory achieving meaningful results for the nuclear industry. AREVA, headquartered in Bethesda, Maryland, is a U.S. and world leader in nuclear energy production and is the only company that covers all industrial activities within the nuclear energy field. INL is the leading U.S. lab for nuclear energy research and performs commercial nuclear fuel examinations.

The partnership allows for more efficient use of time, money and resources. It allows companies to send small amounts of spent fuel to be examined within the U.S. rather than out of the country. Keeping the fuel inside the country and not having to outsource internationally is a big boost to the U.S nuclear industry.

The Nuclear Energy Institute, nuclear utilities and many others have been advocating for more nuclear energy for the past 10 years. With new initiatives and support coming from the government, nuclear energy is expected to remain an integral part of the U.S. energy mix.

In the U.S. and in over 100 countries around the world, AREVA is engaged in the 21st century's greatest challenges: making energy available to all, protecting the planet, and acting responsibly towards future generations.

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Idaho National Laboratory is the U.S. Department of Energy's lead nuclear energy research and development and demonstration laboratory. INL conducts programs in nuclear energy, national and homeland security, science and environment research. Battelle Energy Alliance manages and operates the laboratory for the DOE.

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