

High Burnup Used Fuel Demonstration Workshop

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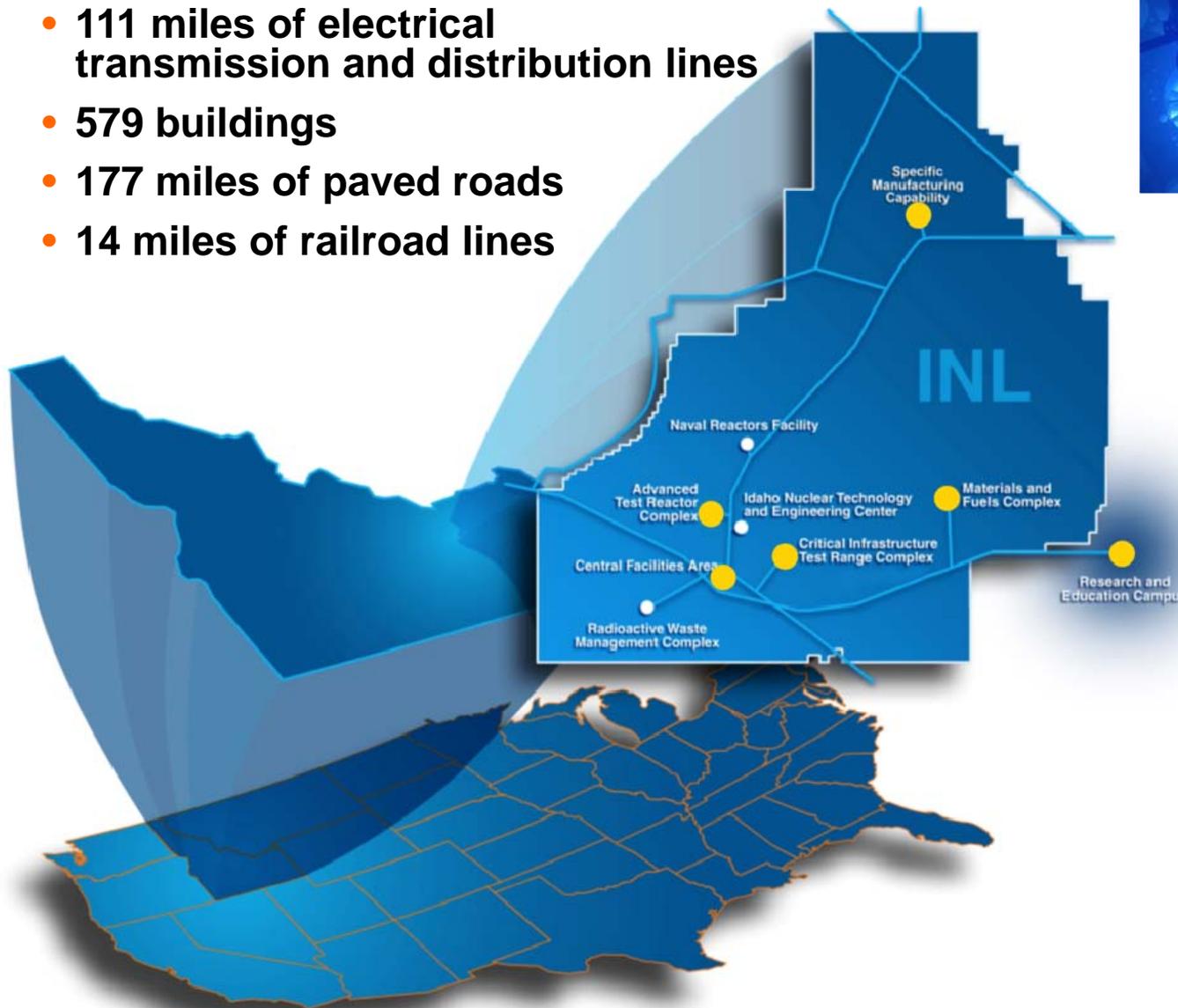
www.inl.gov



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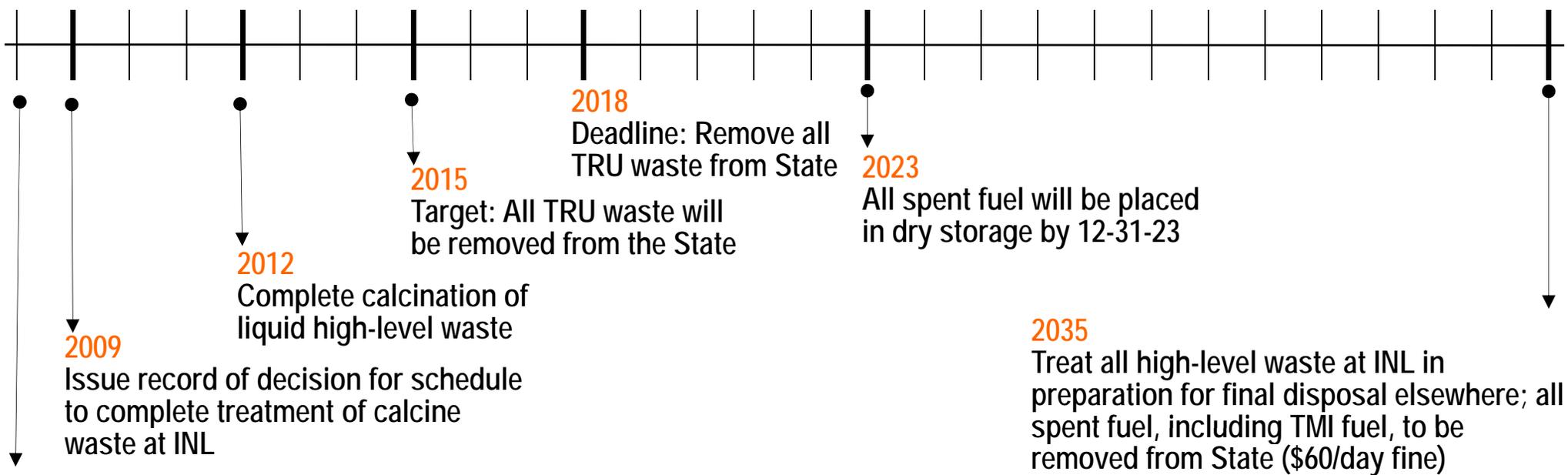
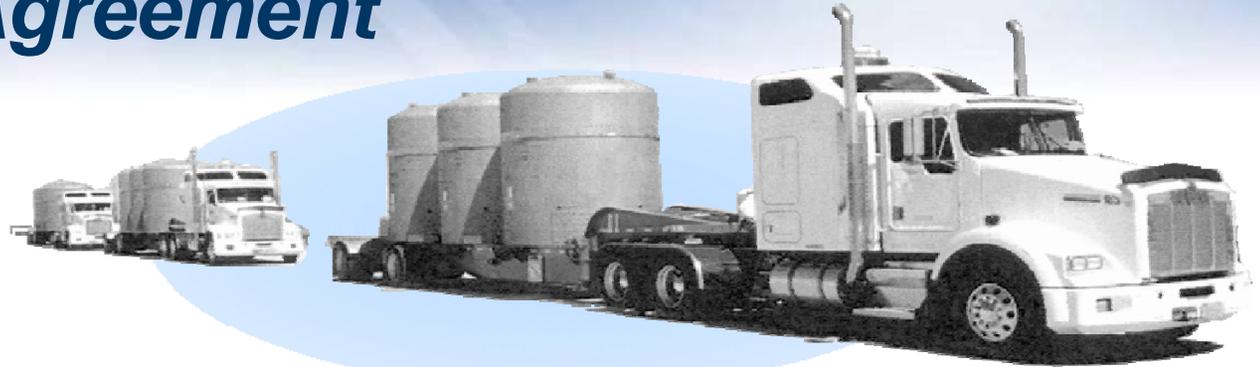
Idaho National Laboratory

- 890 square miles
- 111 miles of electrical transmission and distribution lines
- 579 buildings
- 177 miles of paved roads
- 14 miles of railroad lines



- 3 Reactors
- 2 Spent Fuel Pools
- Mass transit system
- Security
- Museum
- “Landfills”
- 300 Metric Tons of Used Fuel
- Educational and Research Partnerships – CAES

Idaho Settlement Agreement Milestones



Commercial spent fuel received for testing is exempt from these requirements

Note: TRU received from another state for treatment at the INL shall be shipped outside of Idaho for storage or disposal within six months following treatment

Leadership in Nuclear Energy Commission

- **Purpose**

- Make recommendations to the Idaho Governor Otter on policies and actions of the State to support the long-term viability and mission relevance of INL

- **Executive Order 2012-01 Issued Feb. 2012**

- Identify INL unique research capabilities and role in Idaho's economic growth
- Recommend improvements to nuclear workforce development program
- Identify long term issues affecting INL
- Identify infrastructure needs at INL (roads, transmission, information technology)
- Review BRC report and opportunities for enhancement of R&D at INL, while adhering to the position that state will not be a repository for spent fuel or HLW
- Evaluate policy options for strengthening Idaho's broader nuclear industry
- Members include officials from State government, Idaho House, Idaho Senate, county commissioner, industry, and the public

- **Subcommittees established/public meetings**

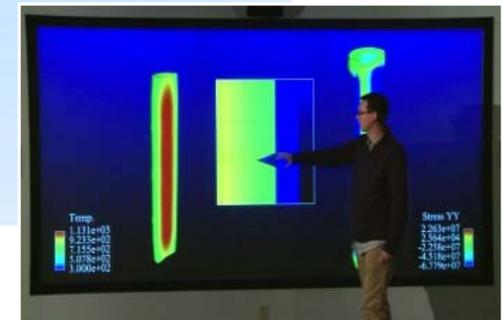
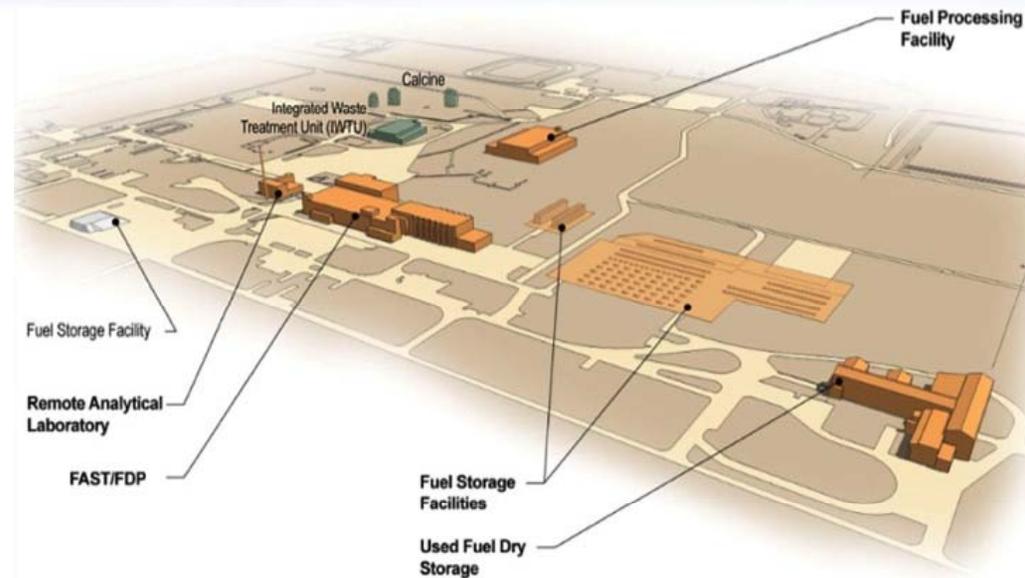
- **Final report to governor by January 1, 2013**



Used Fuel RD&D at INL

- Capabilities and experience in fuel development, storage, testing
- Able to bring in research quantities of used fuel to the laboratory (e.g., 400 kg heavy metal with ability to roll over)
- Additional research needs (assembly level and beyond) negotiable

Research, development and demonstration associated with used fuel management (e.g., treatment, storage) is critically important to the long term viability of nuclear energy.



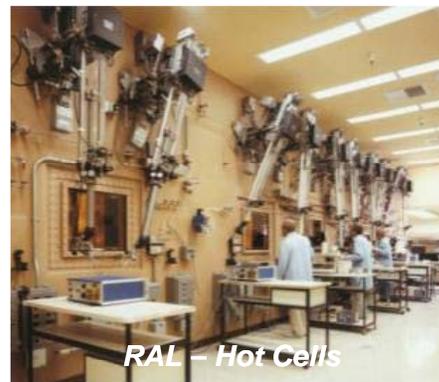
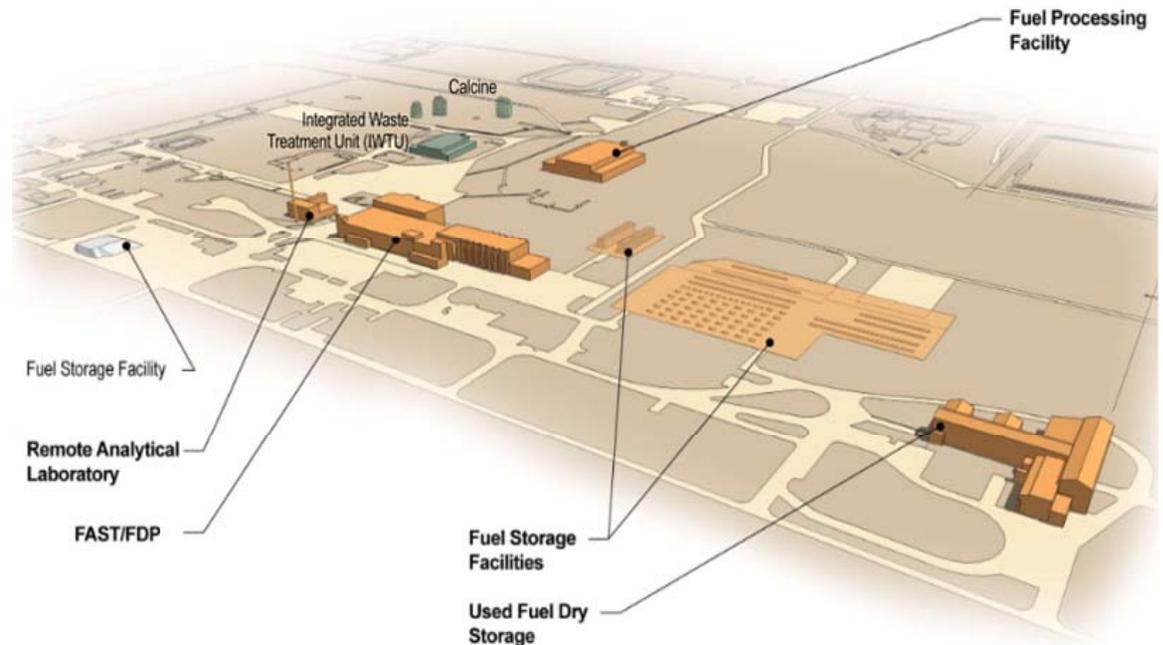


Idaho National Laboratory

The National Nuclear Laboratory

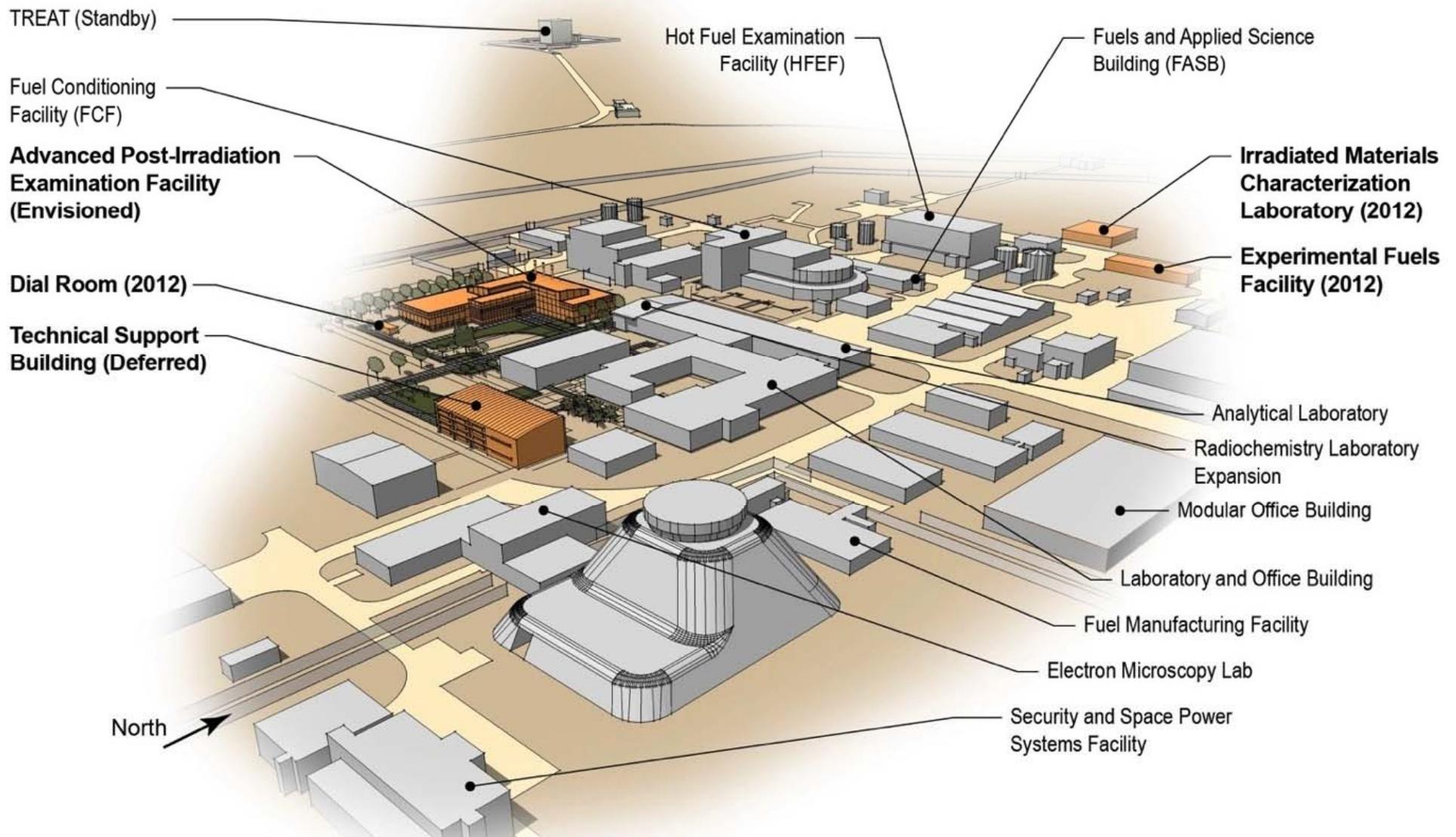
Idaho Nuclear Technology & Engineering Center — Fuel Storage and Recycling Complex

- Establishing consolidated special nuclear materials storage
- RAL is important element for INL advanced separations and waste form R&D
- Other facilities under consideration
 - Unirradiated Fuel Storage Facility (CPP-651)
 - FAST/FDP (CPP-666)
 - Fuel Processing Facility (CPP-691)
 - Fuel storage facilities
 - Calcine
 - Integrated Waste Treatment Unit (IWTU)



Capabilities for advanced separations, waste form, and used fuel storage research, development and demonstration.

Materials and Fuels Complex



Distinctive capabilities in fuels and materials research, development, and testing

