TEST AREA NORTH

Test Area North (TAN) is a U.S. Department of Energy facility with technical capabilities in nuclear fuel operations and heavy metal manufacturing, located at the north end of the Idaho National Engineering and Environmental Laboratory. Bechtel BWXT Idaho, LLC (BBWI) operates all the facilities at TAN for the U.S. Departments of Energy and Defense.

Missions

One recently completed TAN mission was storing and transporting Three Mile Island (TMI) core debris to the Idaho Nuclear Technology and Engineering Center (INTEC) as part of the Department of Energy's Spent Nuclear Fuel Program. The TMI spent nuclear fuel program specifically tested spent fuel storage casks, prepared the fuel for shipment and solved logistics issues related to transporting spent nuclear fuel across the Site. In April 2001, TAN completed the 29th and final shipment of TMI-2 core debris shipments to INTEC, where they were stored in above-ground concrete vaults. This milestone of the 1995 Settlement Agreement with the state of Idaho was completed six weeks ahead of schedule.

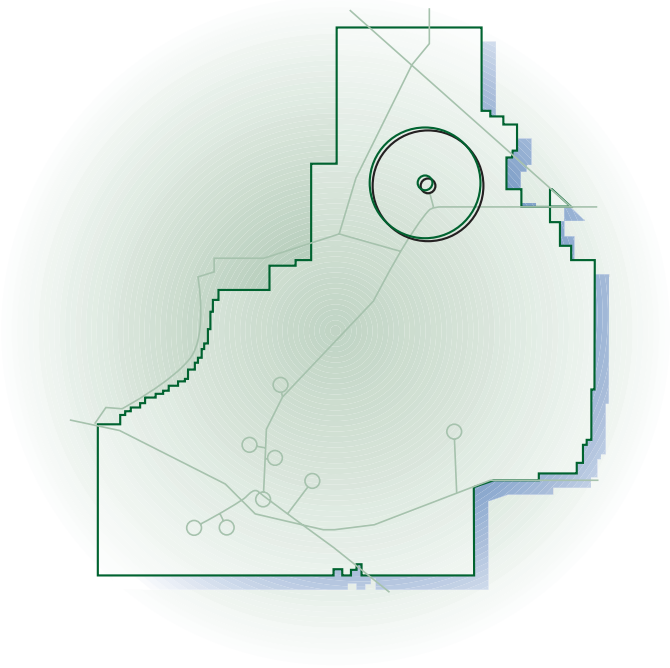
Also located at this INEEL facility is the Specific

Workers at the Specific Manufacturing Capability (SMC) facility at Test Area North pose with an M-1 Abrahms tank. SMC makes armor for the tanks.

Manufacturing Capability Project, which manufactures protective armor for the U.S. Army's M1A1 and M1A2 Abrahms main battle tanks. Recently the Army expanded the armor production to include side armor for the tanks. The new contract added $4 million to a $50 million scope of work. Bernie Meyers, INEEL president and general manager, said the addition of the side armor work is testimony to the strong performance of INEEL employees in the past, and the faith the Army has in their ability to continue to meet exacting demands.

"The SMC project has produced over 3,000 armor packages — all of them on time and within budget, with 100 percent quality acceptance by the Army," said Meyers. "We expect to continue to meet that high standard." INEEL's workers have a long history of providing cost-effective service to the U.S. Army, a tradition that continues today at TAN.

A third current mission at TAN is the cleanup of legacy environmental problems from past operations. Scientists working here have pioneered a biological remediation technique for destroying organic solvents in groundwater supplies. The technique has been successfully demonstrated to destroy trichloroethene contamination in a deep, fractured-rock aquifer. Because organic solvent pollution is one of the primary groundwater contaminants in the United States today, the scientific work has attracted national attention. It holds promise for solving one of the nation's most pressing water pollution problems at substantially less cost than was previously possible.



Employees

A skilled work force of 175 employees at Test Area North helps the nation manage and properly store spent nuclear fuel, protecting the environment and preventing nuclear proliferation. The employees have significant expertise in heavy metal manufacturing, and in the storage, handling and transport of spent nuclear fuel. Most employees work four 10-hour days per week. Security and utility operators work rotating shifts.

Facilities

- The **Specific Manufacturing Capability** project develops and produces armor for the U.S. Army's main battle tank, the M1A1 and M1A2.
- The **Technical Support Facility** buildings, constructed in the early 1950s, serve as the main administration, manufacturing and maintenance section for TAN. TSF area facilities support energy research and defense programs, and maintain

specialized facilities for technical engineering and remote radioactive materials handling programs.

- The **Initial Engine Test Facility** was used for the Aircraft Nuclear Propulsion Program, which ended in 1961, and later for the Space Nuclear Auxiliary Power Transient Program. It is now inactive.
- The **Containment Test Facility** is a former reactor facility that is now inactive.
- The **Water Reactor Research Test Facility** conducts tests to support a variety of programs.

History

DOE's predecessor agency, the Atomic Energy Commission, first established TAN in the 1950s to support the government's Aircraft Nuclear Propulsion program. The goal was to build and fly a nuclear-powered airplane. President John F. Kennedy canceled the project before it was completed. Two nuclear-powered aircraft engines were built and tested under this program. The engines are on display today at the EBR-I National Historic Site at INEEL.

The Loss-of-Fluid Test Reactor (LOFT), a scaled-down version of a commercial pressurized water reactor, was constructed between 1965-1975. Its design allowed engineers, scientists and operators to create or recreate loss-of-fluid accidents (reactor fuel meltdowns) under very controlled conditions. The Nuclear Regulatory Commission received the results from these accident tests and incorporated the data into commercial reactor operating codes. The facility conducted 38 experiments, including several small loss-of-coolant experiments designed to simulate the type of accident that occurred at Three Mile Island in Pennsylvania, before the LOFT facility was closed.

Test Area North is also the site of a Three Mile Island (TMI) Unit 2 Core Offsite Examination Program that ended in 1990. Shipment of TMI-2 core samples to the INEEL began in 1985 to study and obtain technical data necessary to understand the sequential events tied to the TMI-2 reactor accident. INEEL scientists also used the core samples to develop a database that predicts how nuclear fuel will behave when a reactor core degrades.

Distances

Test Area North is located approximately:

52 miles (83.7 kilometers) northwest of Idaho Falls.

12 miles (19.2 kilometers) west of Mud Lake.

18 miles (28.9 kilometers) east of Howe.

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