INL/MIS-23-75828-Revision-0

ALD S9 Presentation NHS Overview

November 2023

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Changing the World's Energy Future

INL is a U.S. Department of Energy National Laboratory operated by Battelle Energy Alliance, LLC

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Zach Tudor
Associate Laboratory Director

National and Homeland Security

Battelle Energy Alliance manages INL for the
U.S. Department of Energy's Office of Nuclear Energy

Idaho National Laboratory

INL is One of DOE's Multi-Program National Laboratories

- Nuclear Science and Technology
- National and Homeland Security Science and Technology
- Energy and Environment Science and Technology

Addressing Energy and Security Challenges at Scale

$1,630 M FY22 Total Operating Cost
5,500+ Employees
569,178 Acres
890 Square Miles

4 Operating reactors

12 Hazard Category II & III non-reactor facilities/ activities

50 Radiological facilities/activities

17.5 Miles railroad for shipping nuclear fuel

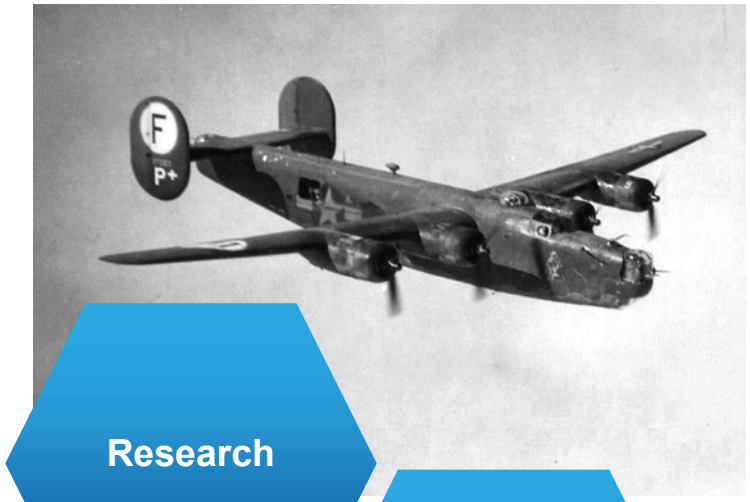
44 Miles primary roads (125 miles total)

9 Substations with interfaces to two power providers

126 Miles high-voltage transmission lines

3 Fire Stations

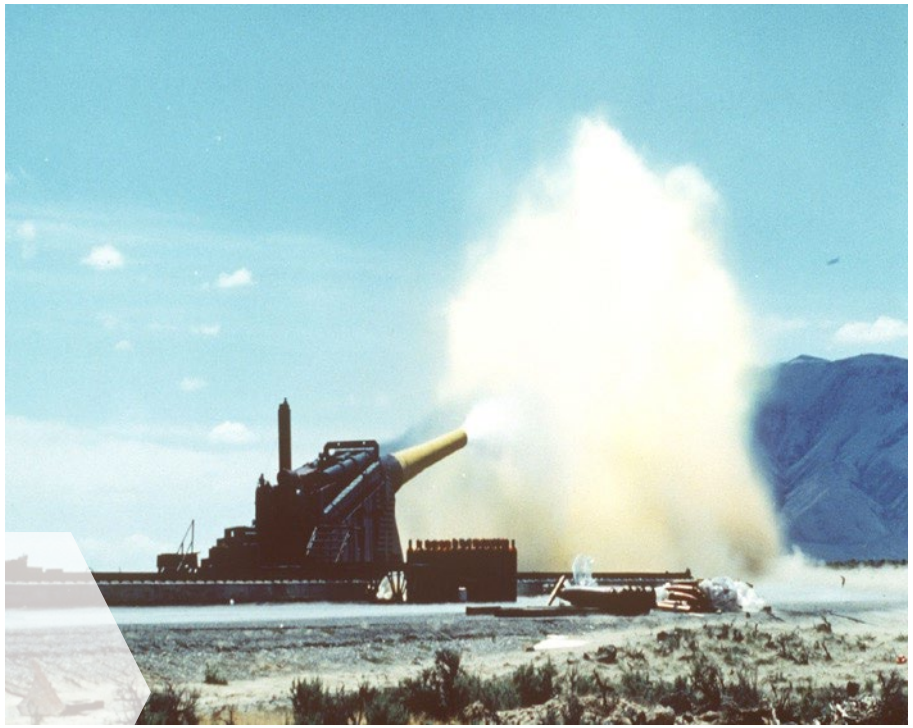
National & Homeland Security History

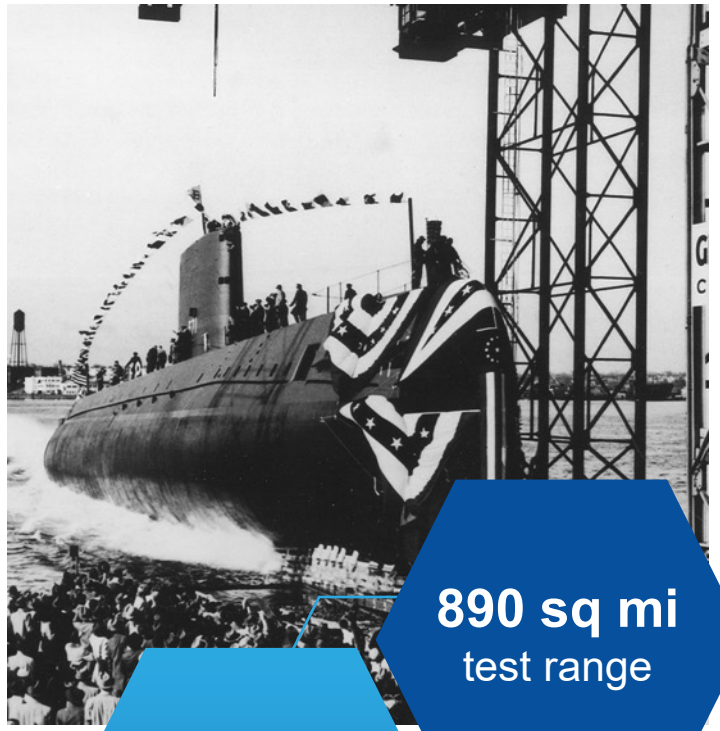


Research

Development

Demonstration





890 sq mi
test range

Deployment

INL has supported **national security research** for nearly 80 years.

National and Homeland Security Focus Areas

Industrial Cybersecurity

Improving infrastructure security through cyber threat analysis, vulnerability assessments, and engineer expertise

Infrastructure Resilience

Strengthening infrastructure resilience through dependency analysis, risk assessments, and visualization tools

Nuclear Security

Preventing the illicit use of nuclear or radiological materials through detection, forensics, security, and safeguards

National Defense

Advancing defense community solutions through materials science, armor development, explosives and radiological materials analysis

Workforce Development

Accelerating the talent pipeline through collaborative research programs and new education models

Industrial Cybersecurity

Innovating, developing, and applying control systems cybersecurity solutions.

Infrastructure and Risk Analysis

Advancing infrastructure and risk analysis to create a more secure and resilient world.

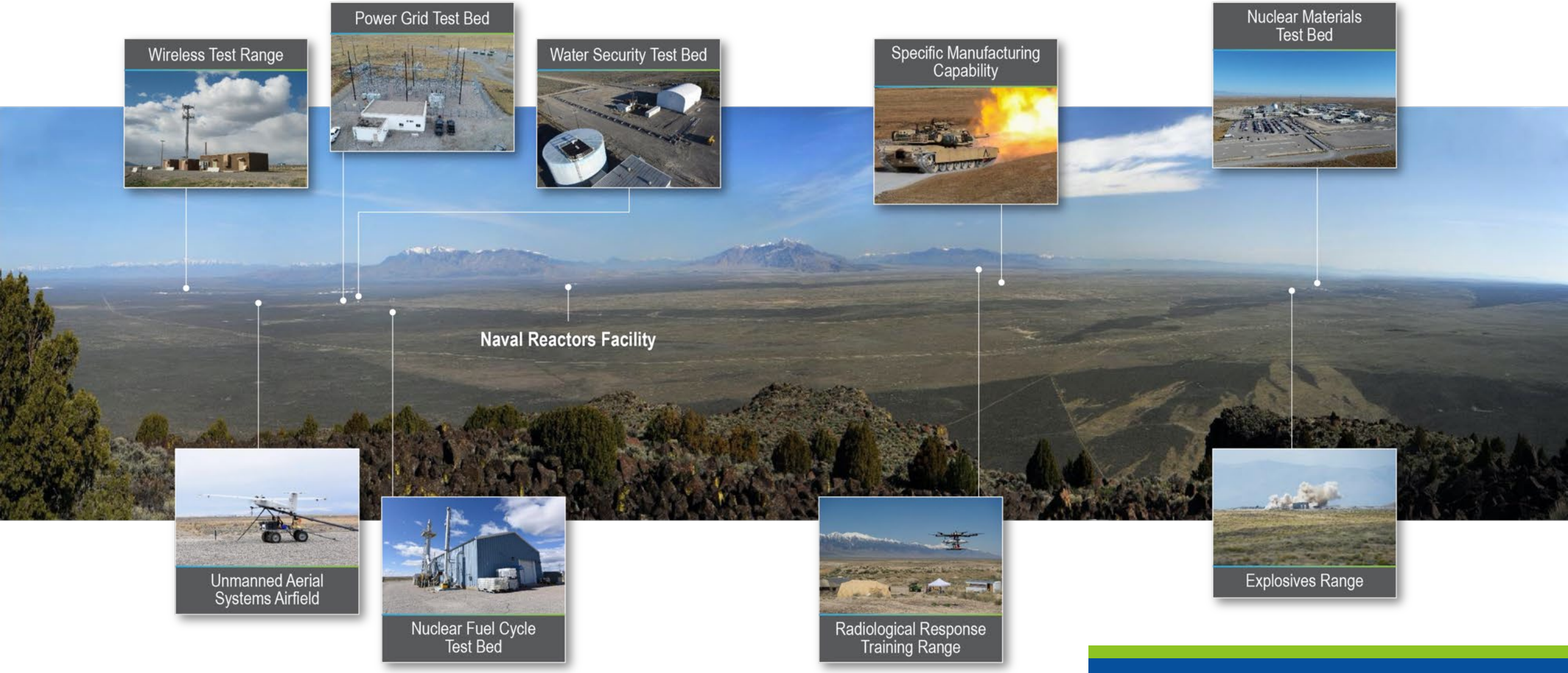
Wireless Security

Creating and deploying wireless technology solutions.

Workforce Development

Addressing workforce development needs to protect the nation's critical infrastructure

Infrastructure, Ranges, and Capabilities



Deploying our cyber-physical capabilities

Current Programs and Tools

Cyber-Informed Engineering (CIE) - "engineer out" cyber risk throughout the design and operation lifecycle, rather than add cybersecurity controls later

Cybersecurity for the Operational Technology Environment (CyOTE™) - asset owners improve identification of adversarial techniques within operational technology (OT) environments

CyTRICS™ - cyber vulnerability testing, forensics, and digital subcomponent enumeration

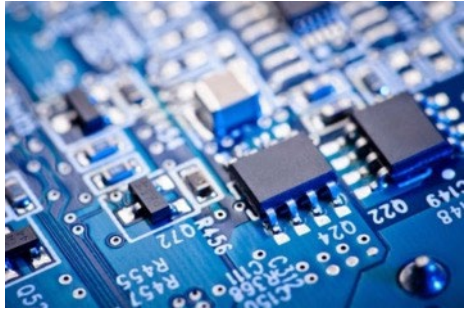
Improves cybersecurity supply chain for ICS

Uses expert testing

Identifies common-mode vulnerabilities

Partners with vendors and asset owners

Relationships & Continuing Engagement



National & Homeland Security's Vision for the Future

- Scale Cyber-Informed Engineering
- All-Hazards Infrastructure Resilience
- Increased Supply-Chain Security
- Secure Wireless Communication
- Nuclear Nonproliferation Risk Reduction
- Next Generation Materials Science

Aligning and adapting our capabilities to meet evolving national security challenges.

Idaho National Laboratory

Battelle Energy Alliance manages INL for the U.S. Department of Energy's Office of Nuclear Energy. INL is the nation's center for nuclear energy research and development, and also performs research in each of DOE's strategic goal areas: energy, national security, science and the environment.