



Office of Nuclear Materials Integration (ONMI)

What is NMMSS

Presented by:

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Senior, NMMSS Analyst

Developed by:



The Nuclear Materials Management and Safeguards System (NMMSS)

NMMSS is the U.S. National System of Nuclear Material Accounting

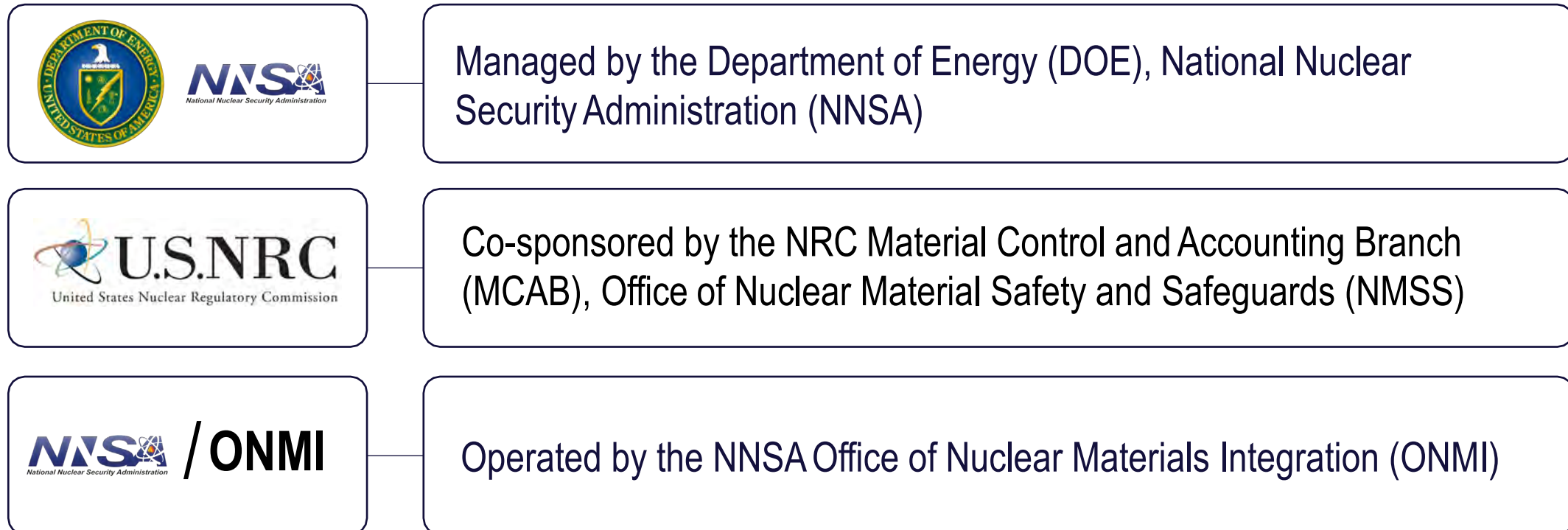
Also referred to as the USA's State System of Accounting for and Control of Nuclear Material (SSAC).
NRC Licensees and DOE sites report MC&A information to NMMSS.
NRC and DOE staff routinely utilize NMMSS data when performing MC&A Inspections.

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) provides the legal basis for International Atomic Energy Agency (IAEA) to negotiating and implementing safeguard agreements with Member States (Countries).

NMMSS perform a series of mission critical functions to track the movements and inventories of nuclear materials. These actions support of domestic U.S. regulations, IAEA safeguards agreements, and international/bilateral treaties.



Organizational Structure





Physical Operation



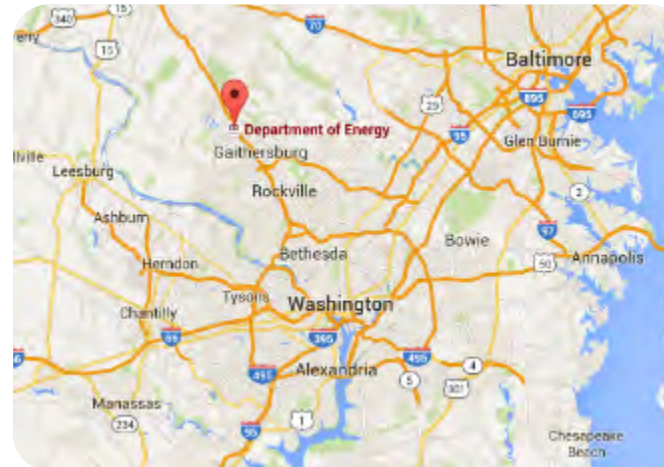
**DOE-HQ Facility in
Germantown, Maryland**



Data processing and report preparation
is performed inside secure vault.

All data and reports are subject to
classification review prior to release for
authorized use.

Database is Secret/RD



U.S. Department of Energy
1901 Germantown Road
Germantown, Maryland 20874-1290 USA



Key NMMSS Products and Services

Receive, Process and Maintain

MC&A data reported by U.S. nuclear operators (NRC licensees and DOE/NNSA nuclear facilities).

- Inventories and locations
- Movements and inventory changes – domestic and international
- Material balances

Track

Imports, **Exports**, and **Retransfer** of U.S. Nuclear Materials

Track

Nuclear Materials within the U.S. that is subject to **Nuclear Cooperation Agreements (NCA)**

Reconcile

Nuclear Material Inventories at NRC licensee and DOE/NNSA Nuclear Facilities

Prepare

U.S. Government Reports in support of IAEA Safeguards Agreements

Prepare

U.S. Government Reports to support implementation of NCA

Analyze

Foreign Governments' notifications of **Receipts**, **Shipments**, and **Retransfer** of U.S. Nuclear Material

Perform

Special Analysis and Information requests in support of the Executive Branch and other U.S. Government entities

Electronic Data Found in NMMSS: *One-of-a-Kind National Asset*

1964

Facility-reported inventory
changes since 1964

1965

Facility-reported inventories
since 1965

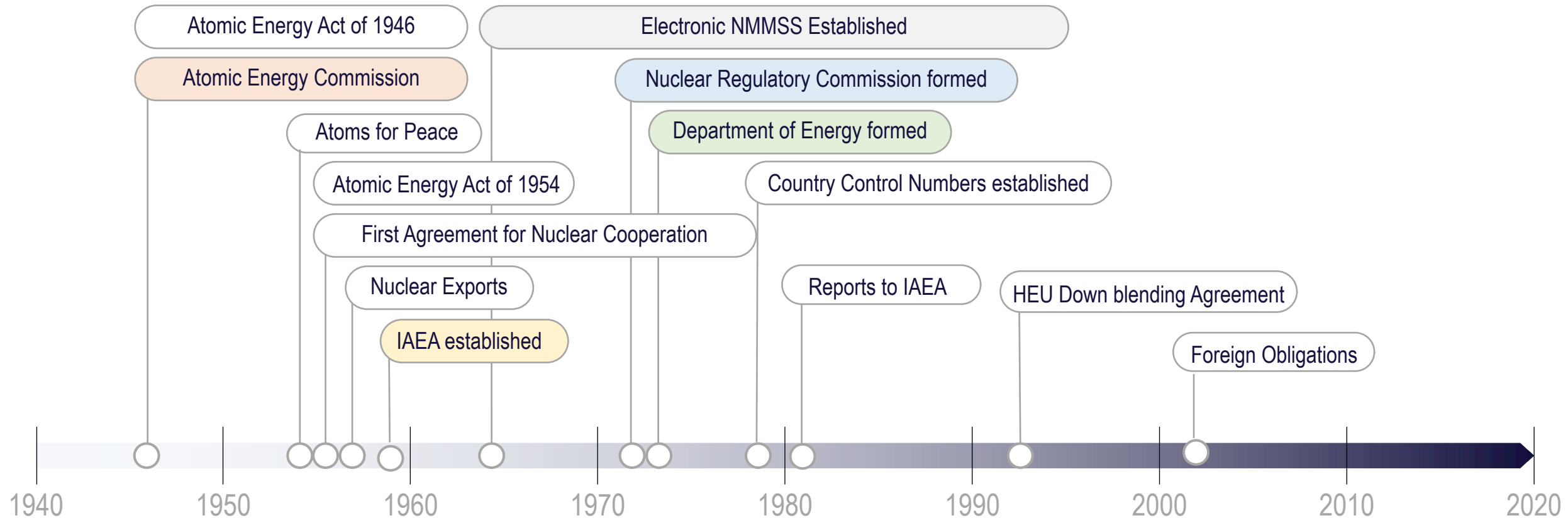
1956-1965

U.S. exports of nuclear
materials for period
1956-1965*

*Data backfitted starting in 1968

History

Key Events Influencing the Nature of Nuclear Material Accounting



Diverse Equity Holders

Policy, Programmatic, Regulatory, Non-Proliferation, and National Security

DOE/NNSA Complex



Defense Programs

- Highly Enriched Uranium Inventories
- P&PD
- Tritium Modeling



Non-Proliferation

- Compliance with Peaceful use Agreements for Nuclear Commerce



Naval Propulsion

- Material inventory in support of Navy's mission



Defense Nuclear Security

- Compliment NMC&A



Chief Financial Officer

- Financial assets



Environmental Management

- Waste Disposition at WIPP



Office of Nuclear Energy

- Current inventories
- Restricted use material



Office of Science

- Support laboratories & medical research efforts



Environment, Safety and Health

- Public & worker health studies

Domestic



Nuclear Regulatory Commission

- Nuclear material accounting
- Regulatory support



Department of State

- Non-proliferation Compliance Monitoring



Department of Defense

- NWC Support

International



International Atomic Energy Agency

- NPT and Safeguards Agreements



EURATOM

- Peaceful Use Nuclear Cooperation



U.S. State System for Accounting and Control (SSAC)



Serves as the official contact for the U.S. Government. Establishes U.S. policy. Chairs the IAEA Steering Group Subcommittee on International Safeguards and Monitoring (SISM).



Responsible for activities that take place at NRC licensed-facilities, sites and locations. Chairs the Subgroup on International Safeguards in the U.S. (SISUS).



Responsible for activities that take place at DoD owned, operated or leased locations.



Responsible for activities that take place at DOE owned, operated or leased locations. Provides resources and technical expertise.



Responsible for activities that take place at locations not covered by DoD, DOE or NRC.



Current Profile of Domestic Nuclear Operators Reporting to NMMSS

Facility Types	Number of Facilities	IAEA Selected*
Mines and mills	2	
Conversion	1	
Enrichment	1	1
Fuel fabrication	5	3
Research/test reactors	31	
Power reactors	98	
Other facilities	213	*
NNSA/DOE	49	1
Total	~400	5*

* 6 additional Location-outside-Facility (LOF) subject to SQP Rule

Questions

