

IAEA Safeguards at United States Commercial Nuclear Facilities and Locations

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Overview of U.S.-IAEA Agreements

- ***U.S. – IAEA Safeguards Agreement (INFCIRC/288)***
 - *“The U.S. Voluntary Offer Agreement”*
 - *Entry Into Force 1980*

- ***Protocol to the U.S. – IAEA Safeguards Agreement (INFCIRC/288)***
 - *“The Reporting Protocol”*
 - *Entry Into Force 1980*

- ***Protocol Additional to the U.S. – IAEA Safeguards Agreement (INFCIRC/288 Add.1)***
 - *“The Additional Protocol”*
 - *Entry Into Force 2009*

- ***U.S.-IAEA Caribbean Territories Safeguards Agreement (INFCIRC/366)***
 - *Includes a Small Quantities Protocol*
 - *Entry Into Force 1989*
 - *Modified Small Quantities Protocol - Entry Into Force 2018*

INFCIRC/288 Subsidiary Arrangements

Transitional Subsidiary Arrangements

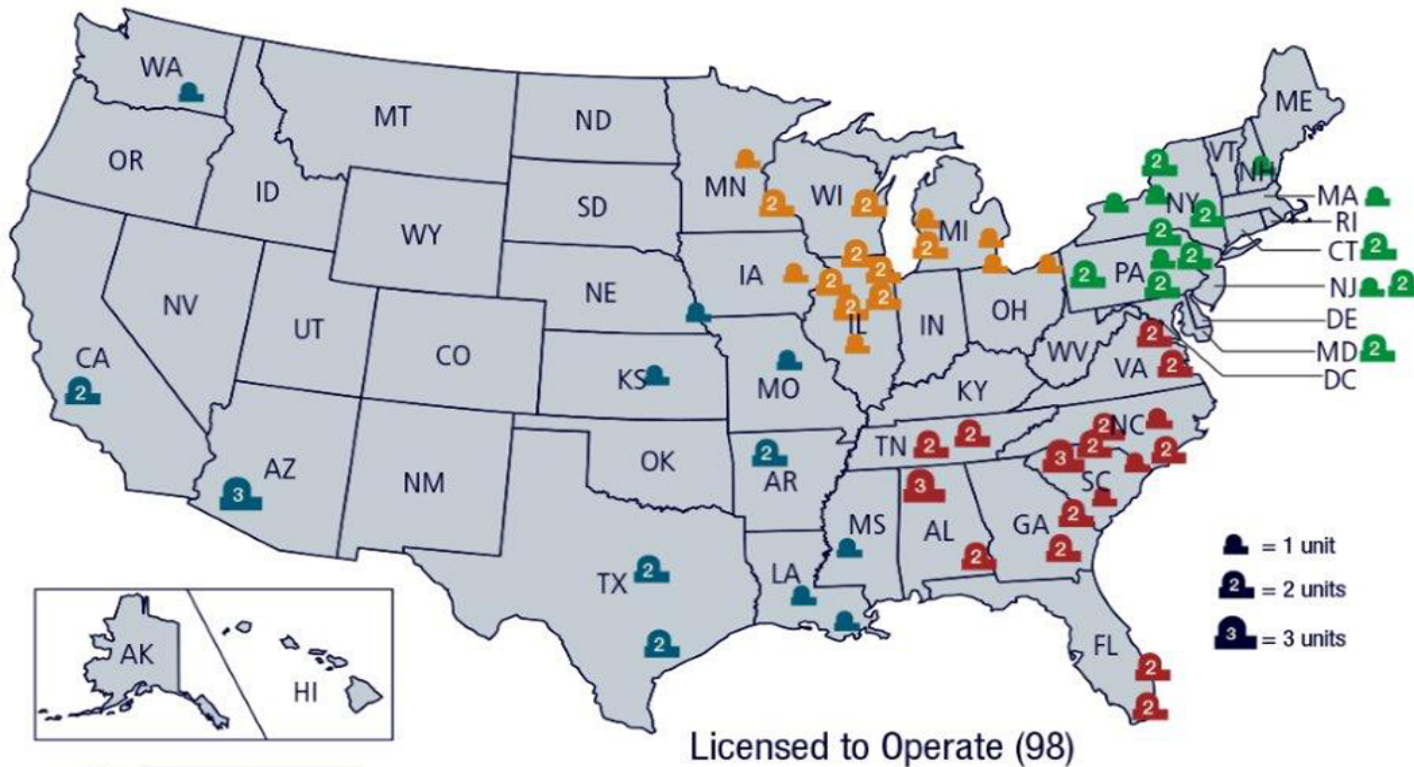
1. Regular channels of communication
2. National system of accounting for and control of nuclear material
3. Provision of information by U.S.
4. Provision of information by the IAEA
5. Publication of information by the IAEA
6. N/A
7. N/A
8. Inventory and export of nuclear material under the Protocol
9. Visits and inspectors
10. Content, Format, and Structure of reports to the IAEA

Subsidiary Arrangements

1. Regular channels of communication
2. National system of accounting for and control of nuclear material
3. Provision of information by U.S.
4. Provision of information by the IAEA
5. Publication of information by the IAEA
6. Termination of, exemption from and reapplication of safeguards
7. Advance notification of withdrawals and transfers
8. Inventory and export of nuclear material subject to safeguards
9. Inspections and inspectors
10. Content, Format, and Structure of reports to the IAEA

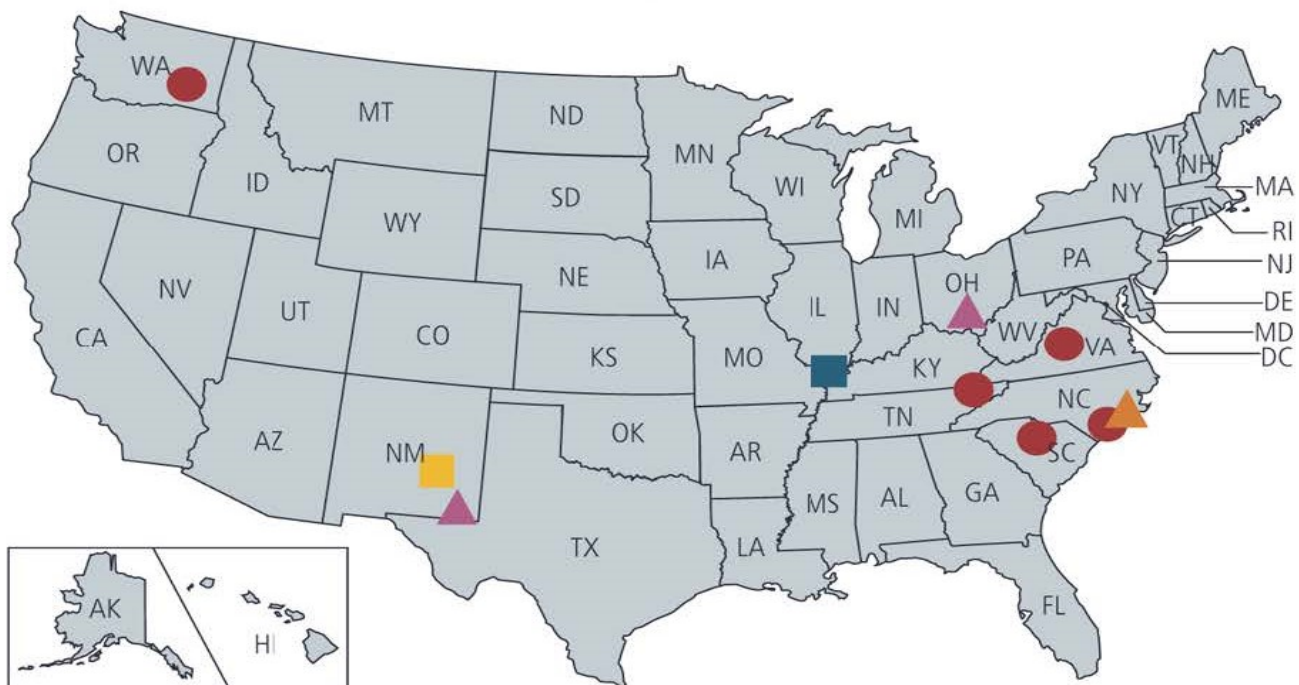
U.S. Operating Commercial Nuclear Power Reactors

U.S. Operating Commercial Nuclear Power Reactors



Fuel Cycle Facilities

Locations of NRC-Licensed Fuel Cycle Facilities



- Uranium Hexafluoride Conversion Facility (1)
- Uranium Fuel Fabrication Facility (5)
- Gas Centrifuge Uranium Enrichment Facility (2)
- Uranium Enrichment Laser Separation Facility (1)
- Depleted Uranium Deconversion Facility (1)

Note: There are no fuel cycle facilities in Alaska or Hawaii.

For the most recent information, go to the Dataset Index Web page at <https://www.nrc.gov/reading-rm/doc-collections/datasets/>.

IAEA Selected Facilities and Location Outside Facilities

- IAEA Selected Facilities in the U.S.
 - Completed IAEA Design Information Questionnaire (DIQ)
 - Negotiated Facility Attachment (Transitional for Reporting Protocol) (FA/TFA)
 - Subsidiary Arrangements - Reports and Records
- Currently 5 Facilities Selected by IAEA
 - VOA - Main Text
 - K-Area Material Storage (KAMS)
 - VOA - Reporting Protocol
 - Urenco USA Uranium Enrichment Facility (UUSA)
 - Columbia Fuel Fabrication Facility (CFFF)
 - Framatome Fuel Fabrication Facility (Framatome FFF)
 - Global Nuclear Fuels – America Fuel Fabrication Facility (GNFA)
- Fuel Fabrication Facilities Selected ~ 1980's
 - DIQs Submitted to IAEA Under Original Selection
 - FA/TFAs Negotiated Independently – Inconsistent
 - Significant effort made to revise DIQs and FA/TFAs
- INFCIRC/366 US-IAEA Caribbean Territories SG Agreement
 - Amendment to Small Quantities Protocol (ModSQP)
 - Subsidiary Arrangements
 - Locations Outside Facilities Attachment (LOFA)



U.S.-IAEA Caribbean Territories Safeguards Agreement

INFCIRC/366 - “U.S. Caribbean Territories Safeguards Agreement”

(Agreement Between the U.S.A. and the IAEA for the Application of Safeguards in Connection with the Treaty for the Prohibition of Nuclear Weapons in Latin America)



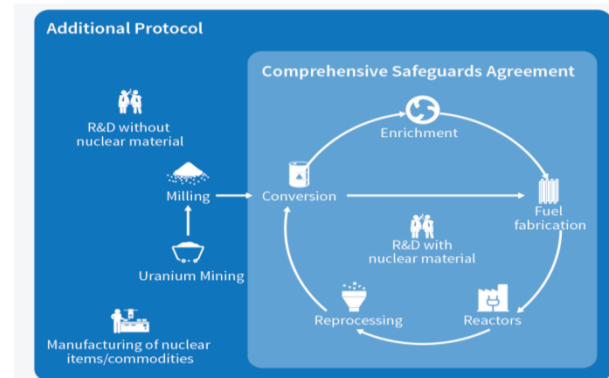
U.S. Protocol I Territories:

- **Puerto Rico**
- **U.S. Virgin Islands**
 - **St. Croix**
 - **St. Thomas**
 - **St. John**
- Navassa Island
- Serranilla Bank
- Baja Nuevo (Petral Island)
- Guantanamo Naval Base

Technological Advancements on Reporting and Tracking

- U.S. Domestic Additional Protocol Reporting System (APRS)
 - Department of Commerce Providing a National Reporting System for AP Reports/Declarations
 - Minimize use of Hard Copy Forms for Reporting Exports/Imports
 - Annual Declarations - U.S. Government Vetting
 - APRS to Work in Conjunction with IAEA Protocol Reporter 3 (PR-3)

- Nuclear Materials Management and Safeguards System (NMMSS)
 - Significant Upgrades to existing NMMSS Database
 - Advancements in Infrastructure for Improved Accessibility
 - Improvements in Nuclear Cooperation Agreement Reporting
 - Developing New Software Tools for Data Analysis
 - Automating US-IAEA Reports – ICR, MBR, PIL
 - Quality Control Functions Improved



Export Licensing Considerations

International Agreements and Foreign Obligations on U.S. Nuclear Industry

Non Proliferation Regime



Foreign Obligations apply to U.S. facilities



Calvert Cliffs Nuclear Power Plant, Lusby, MD

- Nuclear Reactors
- Fuel Fabrication Facilities
- Enrichment Facilities
- Conversion Facilities
- Uranium Recovery

States that have Bilateral Agreements for Peaceful Cooperation with the United States

| | |
|---|-----------------------|
| Argentina | Kazakhstan |
| Australia | Korea, Republic of |
| Brazil | Morocco |
| Canada | Norway |
| China | Russian Federation |
| Egypt | South Africa |
| EURATOM ⁽¹⁾ | Switzerland |
| International Atomic Energy Agency (IAEA) | Taiwan ⁽²⁾ |
| India | Turkey |
| Indonesia | Ukraine |
| Japan | United Arab Emirates |
| | Vietnam |

(1) The European Atomic Energy Community (EURATOM) comprises the following Member States: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

(2) Pursuant to the Taiwan Relations Act, April 30, 1979

Bilateral Agreement Requirements



Foreign obligations may Apply to

- Special Nuclear Material
- Source Material
- Nuclear Equipment
- Nuclear Components
- Nuclear Technology

NPP: Nuclear Power Plants
SNM: Special Nuclear Material

NPPs FACTS



Outreach to NRC Licensees

- NRC Staff held On-Site Workshops 2014-2015 with Selected Licensees
 - Overview of IAEA Safeguards
 - U.S. Voluntary Offer Agreement (INFCIRC/288)
 - U.S. Additional Protocol
 - Facility Type Safeguards
 - Site Specific Safeguards
 - Mock DIV

- NRC/DOE Staff held Workshops in U.S. Caribbean Territories
 - Changes in Federal Regulations (10CFR Part 75) (INFCIRC/366)
 - New Records and Reporting Requirements
 - Subsidiary Arrangements
 - LOF Attachment

- NRC Continuous Outreach
 - Routine Quarterly Discussions with Selected Facilities
 - Routine Communication with Possessors of Nuclear Material U.S. Caribbean Territories
 - Licensees Informed of Additional Protocol Reporting Requirements

