



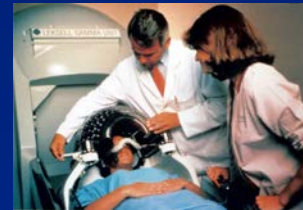
Legal and Regulatory Framework for U.S. NRC

Forum for Nuclear Cooperation in Asia 2018 International Workshop

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NRC's Mission

License and regulate the Nation's civilian use of byproduct, source, and special nuclear materials to ensure adequate protection of public health and safety, promote the common defense and security, and protect the environment.



Legal Basis for Regulated Activities

- Statutes, principally the Atomic Energy Act (AEA) of 1954, as amended.
- Energy Reorganization Act
- Other important statutes
 - the National Environmental Policy Act (NEPA)
 - Nuclear Waste Policy Act of 1982, as amended

Legal Basis for International Program

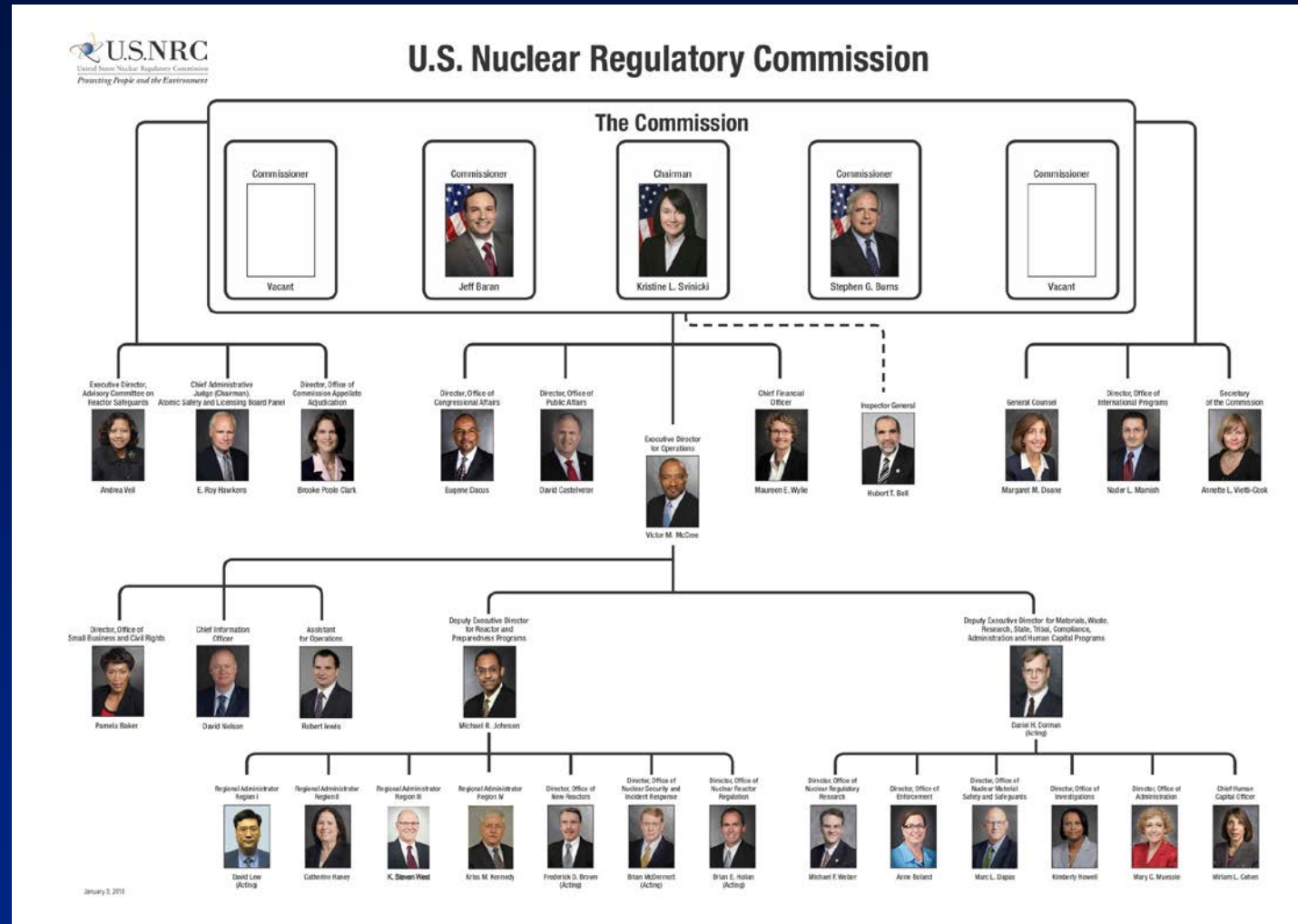
- **Atomic Energy Act of 1954, as amended**
- Nuclear Non-Proliferation Act of 1978
- Treaties, Conventions and Agreements including:
 - Nuclear Non-Proliferation Treaty
 - International Atomic Energy Agency (IAEA) Safeguards
 - Conventions: Nuclear Safety; Waste and Spent Fuel; Physical Protection; Early Notification; Assistance; and Liability
 - 123 Agreements for peaceful nuclear cooperation

NRC: An Independent Regulator

- NRC has 5 Commissioners, who are nominated by the President and confirmed by the U.S. Senate, and who serve staggered 5-year terms.
- No more than 3 Commissioners can be from the same political party.
- The President designates the Chairman, who acts as the NRC's official spokesperson and principal executive officer.

NRC: An Independent Regulator (Cont.)

- Executive Director of Operations
 - Nuclear Reactor Regulation
 - Nuclear Materials Safety and Safeguards
 - New Reactors
 - Nuclear Incident and Response
 - Research
- Office of the General Counsel
- Office of the Chief Financial Officer
- Office of Congressional Affairs
- Office of International Programs
- Office of the Inspector General



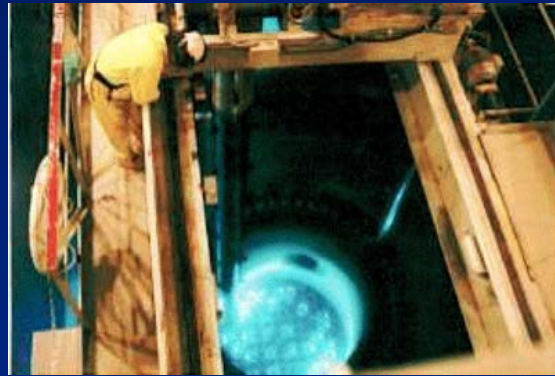
NRC Licensed Activities

- 99 operating power reactors producing about 20% of U.S. electricity
- 31 operating research/test reactors, and
- 14 major fuel cycle facilities (uranium recovery and milling, uranium conversion and deconversion, uranium enrichment, and fuel fabrication)
- 2,900 NRC issued materials licensees (18,900 issued by States)
- Jurisdiction over waste facilities, including any proposed high level waste repository

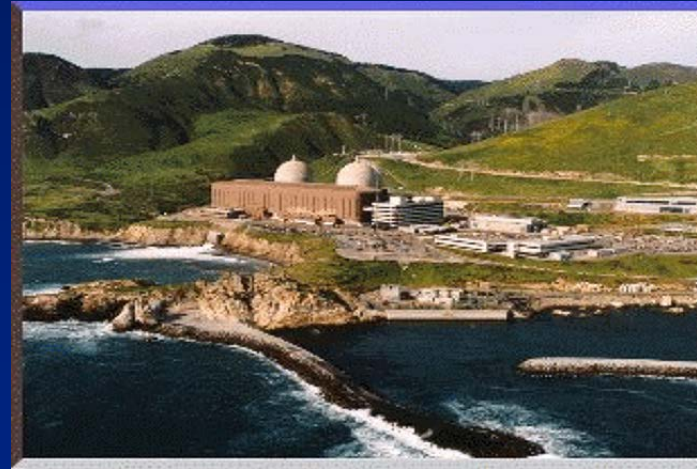
Nuclear Reactors:

Commercial power reactors for generating electricity: 99 operating at 65 sites in 31 states

Research and test reactors used for research, testing and training: 31 operating in 22 states



Reactor Core



Diablo Canyon Plant,
CA

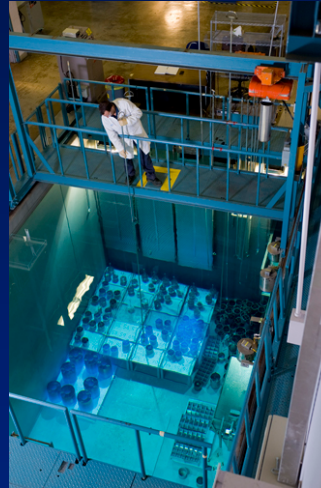
New Reactors

- **Early Site Permits (ESPs)**
 - Issued 5 ESPs
 - One ESP application under review for the Clinch River Nuclear Site
- **Design Certifications (DCs)**
 - Issued certifications for 5 reactor designs
 - Two DC applications under review
 - One DC renewal application under review for the ABWR design.
- **Combined Licenses (COLs)**
 - Issued 12 COLs at 7 different sites
Awaiting the Commission's decision on whether to issue a COL for Turkey Point Units 6 & 7.



Materials Regulation

- Sealed sources and devices
- Medical uses
- Industrial uses
- Academic and research uses
- Consumer products



COMMERCIAL IRRADIATOR



SMOKE DETECTOR



MOISTURE DENSITY GAUGE

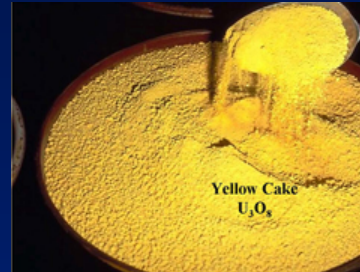


GAMMA KNIFE

Fuel Cycle: Uranium Production & Enrichment



Nuclear Fuel Services



Uranium Yellow Cake



In Situ Uranium Mining

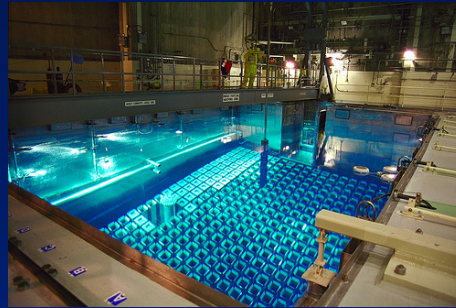


Reactor Fuel Fabrication



Louisiana Energy Services
Enrichment Facility

Radioactive Waste Storage and Disposal



SPENT FUEL POOL



DRY CASK STORAGE



YUCCA MOUNTAIN, NV



LOW LEVEL WASTE STORAGE

NRC's International Activities

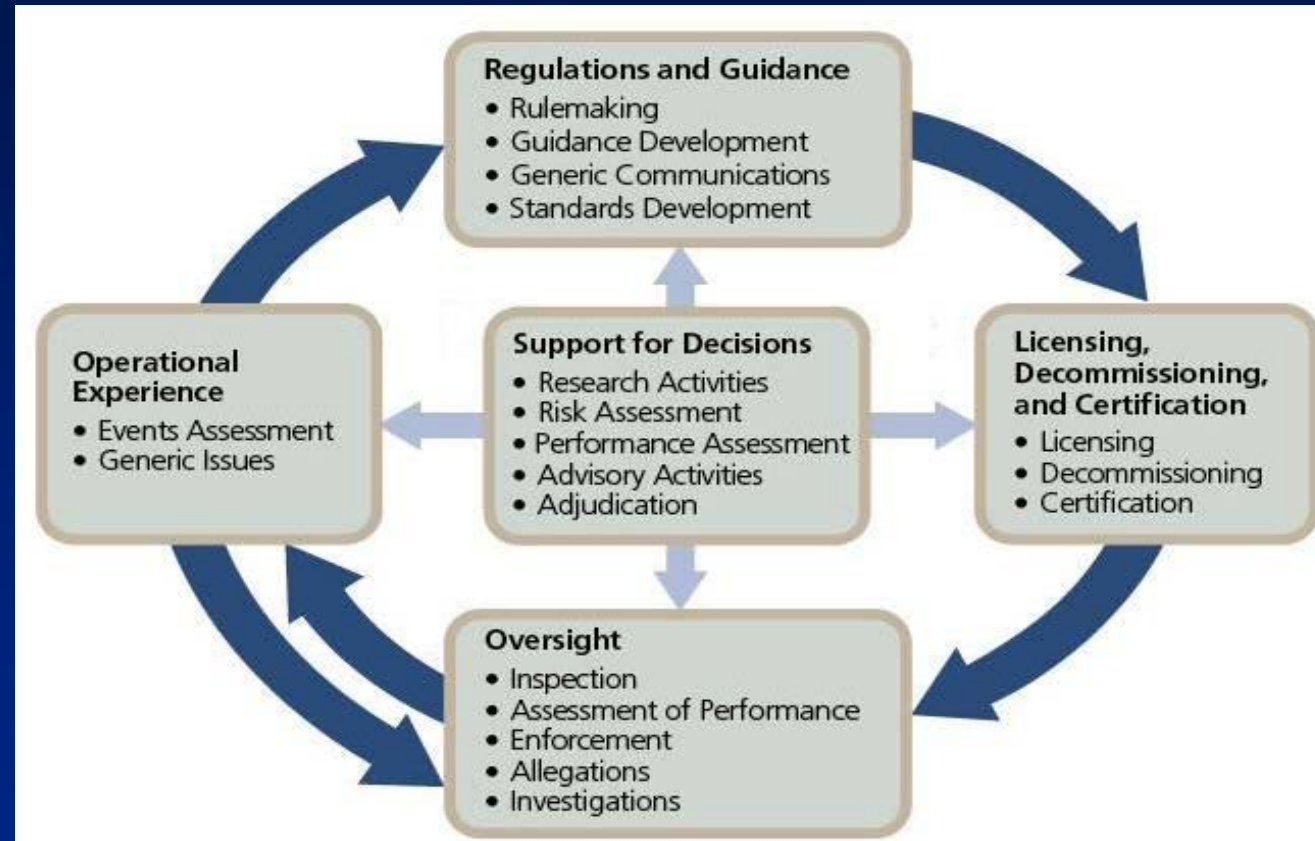
- Participates in major international nuclear organizations & activities
- Export/import licensing
- Implement US Non-Proliferation Policy



Export Control Regulations

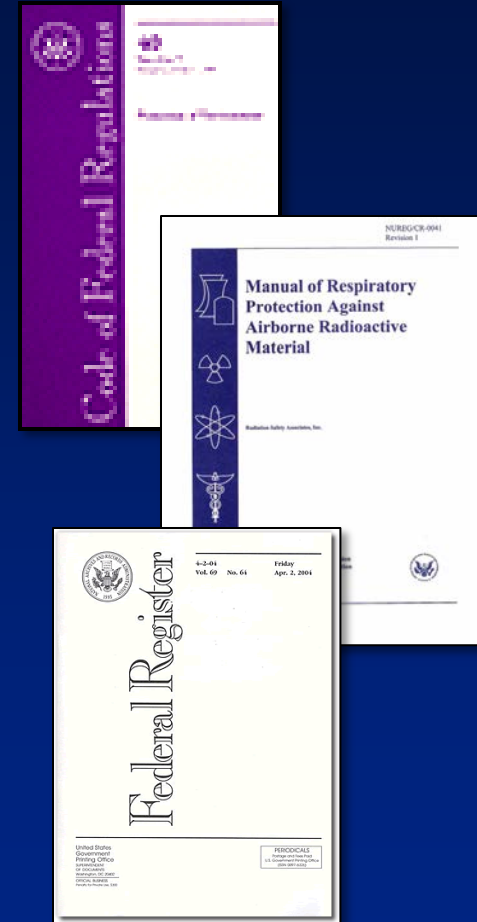
- Reflect statutory requirements and implement international treaties and agreements
- Apply to any person who exports or imports nuclear equipment and material with few exceptions
- Authorize export/import only – do not authorize receipt, acquisition, transfer, transport, possession
- Require compliance with applicable domestic requirements
- Provide for public review and comment

Carrying Out a Regulatory Program



Setting Standards: Rulemaking

- Regulations (or rules) are generically applicable and provide the basic framework for the NRC's safety and security standards for licensing, operation, enforcement activities, and public participation.
- Regulations must be publicly available and are compiled in the Code of Federal Regulations (CFR)
- Regulations are developed on the basis of research, international guidance, operating experience, etc.
- Regulations may be supplemented by guidance documents: more detailed descriptions of a means to comply with a rule, though not legally binding in themselves.



Inspection and Enforcement

- Broad powers to inspect regulatory activities to ensure compliance with regulations
- Can impose civil monetary penalties for non-compliance
- Certain non-compliance can result in criminal enforcement
- Can order shut down of a facility or lesser actions

Public Hearings

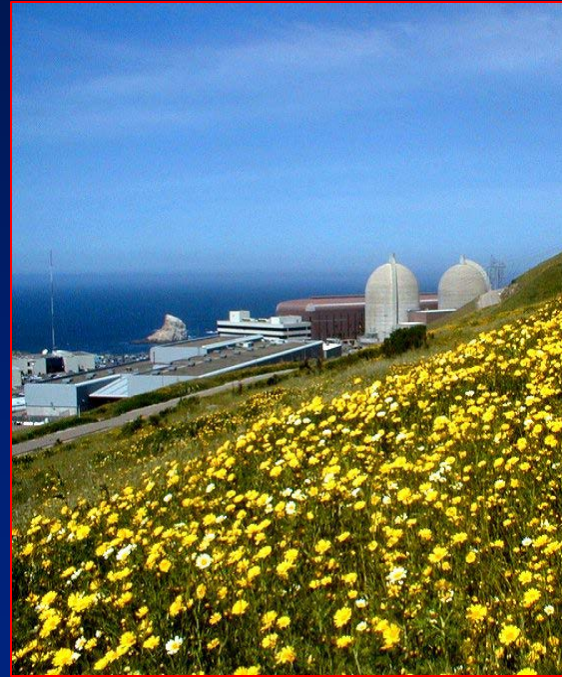
- Required by Atomic Energy Act, Section 189
- Held Before:
 - Three-Member Atomic Safety and Licensing Boards (typically one lawyer and two scientists)
 - Commission
- Subject to review by Federal Courts



NRC Principles of Good Regulation

- Independence
- Openness
- Efficiency
- Clarity
- Reliability

Thank you!



For Additional Information

- <http://www.nrc.gov>
- <http://www.nrc.gov/reading-rm/doc-collections/cfr/>
- <http://www.nrc.gov/about-nrc/regulatory.html>
- <https://www.nrc.gov/about-nrc/organization.html>