

Human Capital Development and Resource Requirements at the NRC

- Implementation of Safeguards -

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NRC Mission and Structure

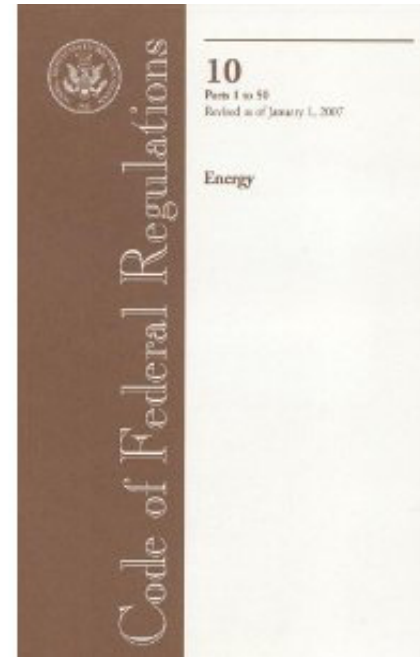
- **Mission:** *“To license and regulate the nation's civilian use of byproduct, source, and special nuclear materials in order to ensure the adequate protection of public health and safety, promote the common defense and security, and to protect the environment.”*
- NRC was created in 1974
 - Predecessor was the Atomic Energy Commission, created in 1954
- Independent regulatory authority
- Five member Commission
 - Sets policy, issues orders, etc...
- Executive Director of Operations (EDO)
 - Implement Commission policy, day-to-day operations, etc...
 - Most Program Offices report to the EDO

NRC Mission and Structure

- Primary Functions:
 - Establish rules and regulations
 - Issue licenses
 - Provide oversight through inspection, enforcement, and evaluation of operational experience
 - Conduct research in support of regulatory decisions/actions
 - Respond to emergencies
- The NRC does not...
 - Regulate nuclear weapons, military reactors, or space vehicle reactors
 - Own or operate nuclear power plants
 - Promote nuclear power

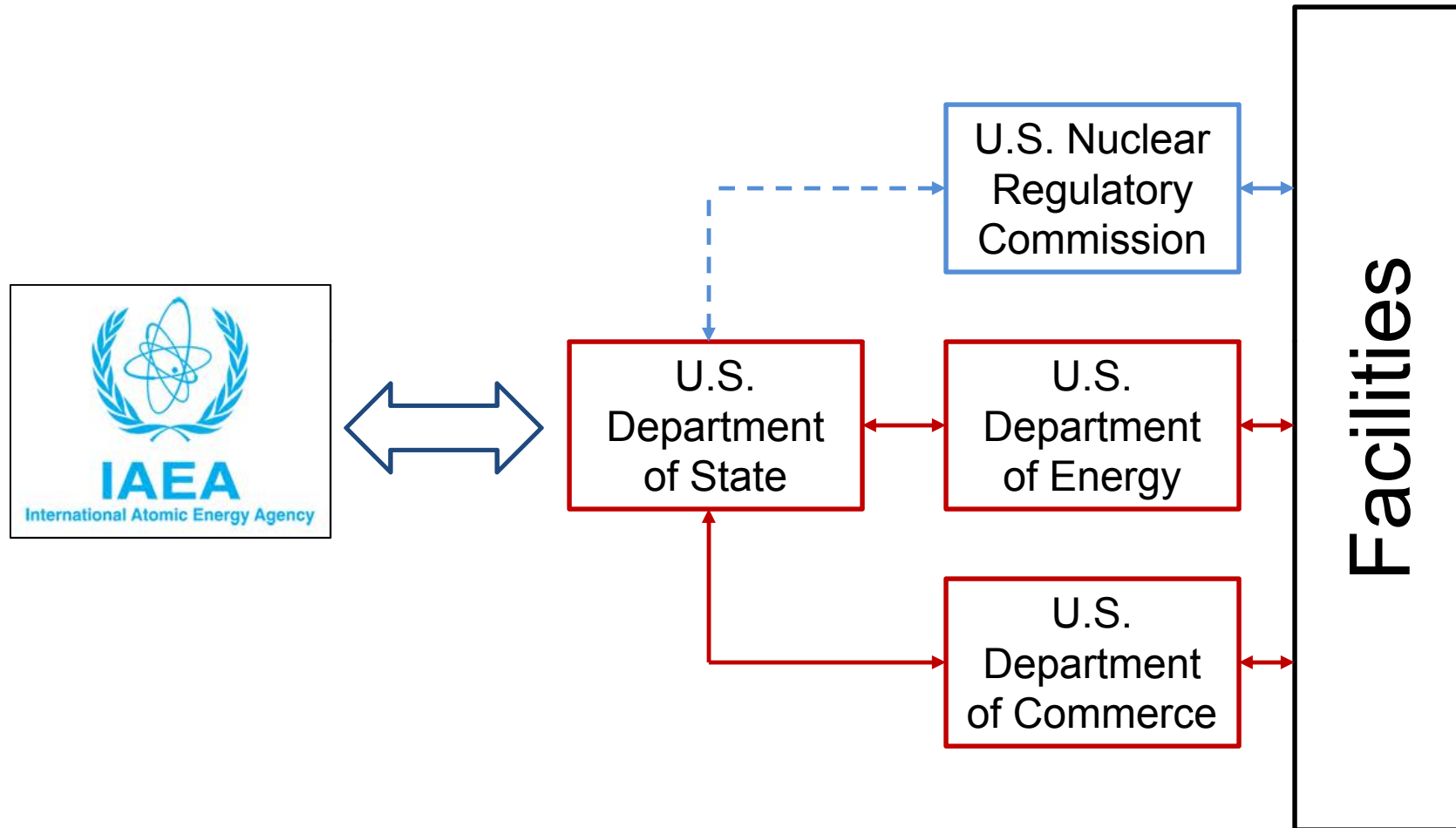
NRC Mission and Structure

- Title 10 Code of Federal Regulations (10 CFR)
- Basis for NRC inspection and oversight
- 10 CFR Part 75
 - Voluntary Offer, Additional Protocol
- 10 CFR Part 110
 - Import/Export



For more information go to <http://www.nrc.gov/about-nrc.html>

NRC and International Safeguards



Considerations for Resource Requirements

- Proper CSA and AP implementation takes planning:
 - Timing
 - Structure of “reporting system”
 - Regulatory infrastructure development
 - Outreach
- All of the stages of implementation require resources
- Carefully consider how to best divide implementation responsibilities
 - Existing legal authorities?
 - Established reporting procedures?
 - Experience with inspections and facility oversight?

U.S. Implementation and Structure

- Five U.S. Government Agencies are primarily responsible for implementing IAEA safeguards in the U.S.:
 - Department of Energy (DOE owned/leased facilities)
 - Nuclear Regulatory Commission (NRC licensed facilities)
 - Department of Commerce (everything else; AP only)
 - Department of Defense
 - Department of State
- Each Agency is independently responsible for:
 - Issuing appropriate regulations or orders
 - Ensuring the compliance of their “facilities” with the U.S. Voluntary Offer and the U.S. AP

NRC Resource Requirements

- The NRC devotes approximately **5 full-time staff** to implement and manage international safeguards requirements
- International Safeguards Team at the NRC:
 - **Thomas Grice**, Team Leader
 - **David Hanks**, Senior Int. Safeguards Analyst
 - **Brian Horn**, Int. Safeguards Analyst
 - **Santiago Aguilar**, Import/Export Analyst
 - **Eric Freeman**, Int. Safeguards Analyst
- NRC staff and management work closely to allocate resources and ensure that the U.S. Government remains in compliance with international agreements
- Note: The NRC maintains an Office of International Programs that deals primarily with policy issues and functions as the point of contact for foreign assistance and other activities



Left to Right: Tom Grice, Eric Freeman, Dave Hanks, Santiago Aguilar, and Brian Horn

NRC AP Resource Requirements

- During initial implementation, NRC devoted approximately **2 full-time staff** to the Additional Protocol
 - Revision to the regulations
 - Plan and conduct outreach
 - Assist with development of the reporting forms
 - U.S. Government coordination and planning
 - Assembly and submission of the initial AP declaration
- NRC devotes approximately **1 full-time staff** to the Additional Protocol on a regular basis
 - Annual update and quarterly export reports
 - Continued outreach
 - Respond to IAEA questions
 - Complementary access
 - Guidance documents and procedures

AP Task Distribution

- Task and responsibilities under the AP fall into four general categories:
 - Reporting (annual and quarterly)
 - Complementary Access (coordinate, support, participate)
 - Outreach (Draft materials, deliver presentation, answer questions)
 - Oversight (Approve reports, enforcement issues, provide general guidance)
- AP tasks are distributed to prevent single point failures
 - Annual and Quarterly reporting is performed by a single team member but others should participate and be aware of how to complete this task
 - Multiple staff members are prepared to support a complementary access
 - Outreach material is created by the team but could be presented by any team member
- Focus should be on ensuring adequate coverage and cross training rather than rigid job descriptions

Competencies and Skill Sets

- Examples of NRC Int. Safeguards Team backgrounds:
 - Domestic material control and accounting
 - Nuclear power plant operator
 - Both technical and non-technical degrees
 - Staff members with significant regulatory experience
 - Former IAEA safeguards inspector
- What are helpful skill sets or backgrounds for AP implementation?
 - Familiarity with the nuclear industry/facilities and the complete fuel cycle
 - Basic understanding of the legal/regulatory system
 - “People Skills”: Ability to interact with industry and facility staff
 - Experience working with/for the IAEA
- You can create a successful AP implementation team with almost any combination of staff backgrounds

Training and Staff Retention

- Incoming staff should have some basic qualifications
 - Nuclear engineer, lawyer, physicist, political science degree, etc...
- NRC provides training tailored to the needs of the individual
 - New university graduate will require fairly broad and extensive training
 - Experienced former IAEA inspector may just need familiarization with internal processes
 - Assumes during budgeting process that staff will take a certain amount of training
- NRC maintains a Professional Development Center (PDC) that manages training courses
 - NRC also takes advantage of DOE sponsored training

Training and Staff Retention

- NRC supports internal (and external) rotations as a means to develop staff
 - Short term 3-6 months; doesn't have to be directly related to current position
- Staff with IAEA experience are beneficial to the NRC
 - Should create a system that will support this transition
 - U.S. Policy allows for transfer/detail of staff to international organizations for a certain number of years and provides reemployment rights (e.g., cost free experts)
- Nothing provides better training and development than hands-on experience!
 - *“See one, do one, teach one”*

Interactions and Outreach

- AP implementation requires interactions with both traditional and “new” stakeholders (internal and external)
 - Uranium mills and in-situ recovery facilities
 - Manufacturing and assembly of certain Annex I items
- Very important to plan how to acquire/require data from within your organization and from external stakeholders
 - Do you have to work with regional components? Other Government Ministries?
 - Can you use data that already exists from other regulatory requirements?
 - Is there an established industry group for your target audience?
- AP staff will need to interact with and educate other regulatory or Government staff on requirements
 - This will require staff time and effort (resources!)
 - Need cooperation and understanding from other parts of your organization

Interactions and Outreach

“An AP significantly increases the IAEA’s access to information and locations in the State. In order to meet those broader obligations, the State oversight and control functions may need to be expanded. The governmental entities responsible for overseeing activities reportable under the AP may be different from the entity responsible for implementing the CSA.

“...it is necessary for each State’s SRA to develop legally enforceable and effective communication and coordination channels with other ministries and entities as necessary to compile and submit complete and accurate declarations and reports, and to effectively facilitate and host inspections, visits and complementary access.”

Chapter 3.1 Guidance for States Implementing Comprehensive Safeguards Agreements and Additional Protocols

NRC Interactions

Sometimes it isn't as simple as
picking up the phone and calling
a facility

Lessons Learned

- Planning is very important!
 - Set timeline and major milestones
 - Helps to determine resource requirements
- Try to utilize existing infrastructure/staff/expertise when implementing CSAs and APs
 - Less costs, less conflicts, less headaches
- Adequate planning and outreach in the beginning will ensure a smoother implementation
 - This should lower resource needs in later years
 - Ensures you get a higher quality product sooner

Lessons Learned

- You do not need a large staff to implement the AP; the resource requirements are manageable!
 - Works best when integrated into existing infrastructure
 - Many sources of assistance are available
- Staffing levels must be maintained appropriately to avoid single point failures
 - This does not mean a large number of staff
 - Will need additional staff early in the implementation process
 - Succession planning
- Maintain good relationships and clear communication channels with Government colleagues and facility staff
 - Pursue enforcement when necessary but focus should be on cooperation

Lessons Learned

- The regulator may be required to function in a non-traditional role while implementing the AP
 - Regulator vs. Facilitator
- Clear and enforceable regulations are important and will help you collect the necessary data and provide the IAEA appropriate access
 - NRC incorporated the AP requirements into different portions of existing regulations (Title 10 Code of Federal Regulations)
 - DOC copied the AP requirements (exactly) into their regulations

QUÍ VỊ CÓ CÂU HỎI?