

# United States Government Structure for Commercial Nuclear Power Plant Emergency Preparedness

# U.S. Government

- The USA is a federal republic consisting of 50 states and a federal district (Washington D.C.).
  - A representative democracy in which majority rule is tempered by minority rights protected by law.
- In the USA, citizens are usually subject to three levels of government:
  - federal,
  - state, and
  - local (e.g., counties, municipalities, parishes, school districts, etc.).
- State governments are typically structured like the federal government with a constitution and a bicameral legislature.
- Executive and legislative officials are elected by a plurality vote of the citizens.

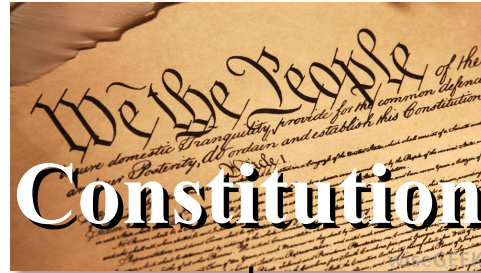
# Federal–State Relationship

- The relationship and authority of states and the federal government are governed by the U.S. Constitution.
  - Note that the U.S. Constitution is silent with regard to local governments.
- The federal government is delegated certain enumerated powers while all other powers not otherwise prohibited by the Constitution are reserved to the states.
- The regulation of nuclear materials is a federal power that cannot be pre-empted by states.
  - States can apply for an agreement that allows the state to regulate certain classes of radioactive material (no special nuclear material).
- Unless a state is a NRC licensee, the state is not subject to NRC regulations pertaining to a licensee.

# Federal–State Relationship

- In most states, the responsibility for emergency response lies with the state's senior decision maker (e.g., governor).
  - Some states, known as home-rule states, delegate the response to local governments; there are some hybrids.
- During a radiological emergency, the NRC oversees its licensee's response to the emergency.
- The NRC does not have the authority to direct preparedness or response actions taken by the State.
  - Neither does the Federal Emergency Management Agency
- The NRC can advise the State authorities regarding the event.
- The NRC is not a first-responder, but it's licensees are.





### **Executive**

- Executes the law
- Approves or veto legislation
- Runs day-to day activities of government
- International treaties



### **Judicial**

- Adjudicate disputes between states
- Rule on constitutionality of laws passed by congress
- Create precedents for future laws



### **Legislative**

- Makes the law
- Financial & budget
- Collect taxes
- Declare war
- Oversee Executive



# Executive Branch

- Created to “execute” the law.
- Run the day-to-day activities of the government.
- Comprised of several different entities:
  - Executive Office of the President,
    - Support staff and Councils
  - Executive departments,
    - e.g., Department of State, Department of Defense, Department of Homeland Security
  - Independent agencies and government corporations, and
    - e.g., NRC, TVA
  - Quasi-Official agencies.
    - e.g., Smithsonian Institution



# Departments

- Heads of executive departments are members of Cabinet
- Cabinet members appointed by President
  - Confirmed by simple majority of Senate.
- Cabinet members serve for that President while in office
  - President can remove member without consulting Senate.
- These departments are sensitive to political factors and partisan politics.
- Examples:

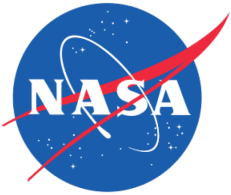


# Independent Agencies

- Commissioners/Administrators typically appointed by President.
  - Confirmed by simple Senate majority to fixed terms.
  - President cannot remove from position.
  - Requires act of Congress for removal.
- Established and given authority and direction by Congress.
  - Includes power of rulemaking.
  - Matters too complex for ordinary legislation.
- Agency rules (or regulations)
  - Authority derives from federal law.
  - Code of Federal Regulations.

# Independent Agencies

- Not under direct control of President
  - Partisan politics have **less** effect on daily operations or policy
- Examples:



# United States Nuclear Regulatory Commission



# The Commission

- NRC headed by five Commissioners.
  - President appoints Commissioners.
    - Confirmed by Senate.
    - Five-year terms.
    - Term can be renewed.
  - President designates one Commissioner as Chairman.
    - Official Commission spokesperson.
    - President can change Chairman designation at any time.
    - President can not add or remove Commissioners without the consent of Congress.
  - No more than 3 of the 5 Commissioners can be of the same political party.
  - Policy decisions by the Commission require a majority vote.



# NRC Commissioners



**Commissioner  
Jeff  
Baran**



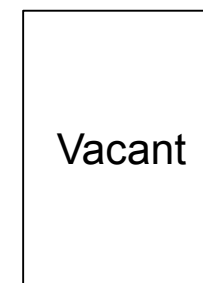
**Commissioner  
Kristine L.  
Svinicki**



**Chairman  
Stephen G.  
Burns**



**Commissioner  
William C.  
Ostendorff**



Vacant



- Approximately 3800 staff working at NRC HQ in Rockville, MD, four regional offices, and a training center:
  - Region I King of Prussia, PA
  - Region II Atlanta, GA
  - Region III Lisle, IL
  - Region IV Arlington, TX
  - Technical Training Center, Chattanooga, TN
- Directed by Executive Director for Operations (EDO).
  - carries out policies and decisions of Commission.

# Program Offices

- Nuclear Reactor Regulation (NRR)
- New Reactors (NRO)
- Enforcement (OE)
- Nuclear Regulatory Research (RES)
- Nuclear Material Safety and Safeguards (NMSS)
- Nuclear Security and Incident Response (NSIR)

# Program Offices

- **Nuclear Reactor Regulation (NRR)**
  - Responsible for accomplishing key components of the NRC's nuclear reactor safety mission.
  - Performs regulatory activities in areas of rulemaking, licensing, oversight, and incident response for commercial nuclear power reactors, and test and research reactors, to protect the public health, safety, and the environment.
- **New Reactors (NRO)**
  - As NRR, but for new reactors licensed under 10 CFR Part 52.
- **Enforcement**
  - Oversees, manages, and directs the development and implementation of policies and programs for enforcement of NRC requirements.
  - Manages the NRC allegation management programs.

# Program Offices

- **Nuclear Regulatory Research (RES)**
  - Manages and implements programs of nuclear regulatory research and coordinates research activities with the program offices.
  - Coordinates the development of consensus and voluntary standards for agency use, and appoints RES staff to domestic and international committees and conferences.
  - Based on research results and experience gained, recommends regulatory actions to resolve ongoing and potential safety issues for nuclear power plants and other facilities regulated by the NRC.
  - Develops and maintains computer codes and databases used in evaluating the response of systems, structures and components.
  - Conducts research to reduce uncertainties in areas of potentially high safety or security risk or significance.
  - Leads the agency's initiative for cooperative research with domestic and International partners.

- **Nuclear Material Safety and Safeguards (NMSS)**
  - Responsible for regulating activities which provide for the safe and secure production of nuclear fuel used in commercial nuclear reactors; the safe storage, transportation and disposal of high-level radioactive waste and spent nuclear fuel; and the transportation of radioactive materials.
  - Performs regulatory activities including rulemaking, licensing, inspection, assessment of licensee performance, events analysis, enforcement, and identification and resolution of generic issues.
  - Has lead responsibility within NRC for domestic and international safeguards policy and regulation for fuel cycle facilities, including material control and accountability.
  - Oversees and implements the National Materials Program to enable the safe and secure use of radioactive materials in medical, industrial, and academic applications for beneficial civilian purposes. Manages the agreement state program.

# Program Offices

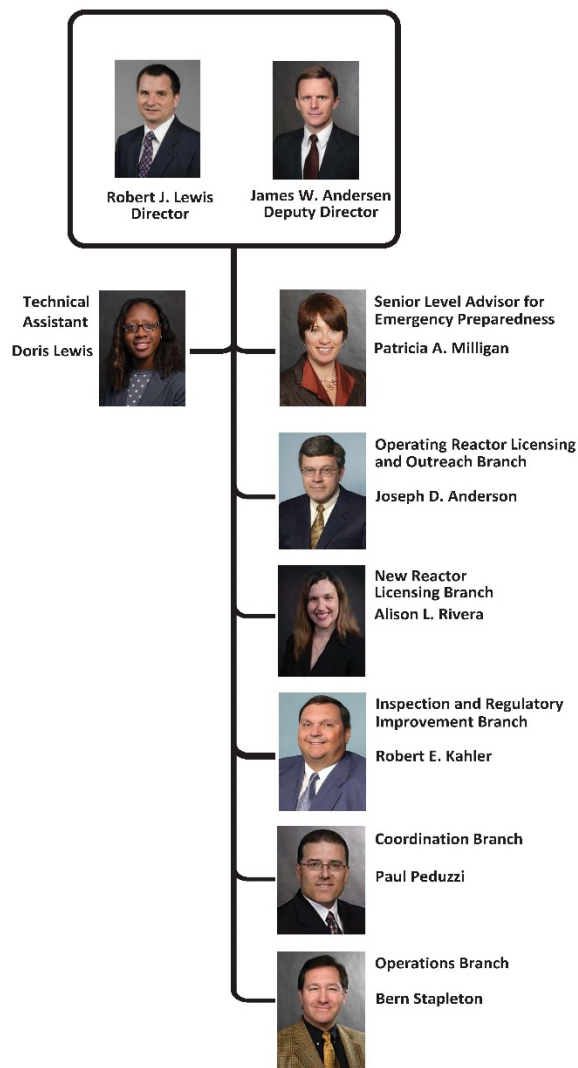
- **Nuclear Security and Incident Response (NSIR)**
  - Develops overall agency policy and provides management direction for evaluation and assessment of technical issues involving security at nuclear facilities, and is the agency safeguards and security interface with the Department of Homeland Security (DHS), and other agencies.
  - Develops emergency preparedness policies, regulations, programs, and guidelines for both currently licensed nuclear reactors and potential new nuclear reactors.
  - Provides technical expertise regarding emergency preparedness issues and interpretations, conducts and directs the NRC program for response to incidents.
  - Maintains the agency emergency preparedness and incident response interface with the DHS, Federal Emergency Management Agency (FEMA) and other Federal agencies.

# Program Offices

- **Nuclear Security and Incident Response Divisions**

- Division of Preparedness and Readiness.
  - Inspection and Regulatory Improvements Branch.
  - New Reactor Licensing Branch.
  - Operating Reactor Licensing and Outreach Branch.
  - Coordination Branch.
  - Operations Branch.
- Division of Security Operations
  - Nuclear Security Oversight Branch.
  - Security Performance Evaluation Branch.
  - Security Training and Support Branch.
  - Intelligence Liaison and Threat Assessment.
  - Information Security.
- Division of Security Policy.
  - Reactor Security Licensing Branch.
  - Material and Waste Security Branch.
  - Fuel Cycle and Transport Security Branch.
  - Security Programs Support Branch.
- Cyber Security Directorate.

## Division of Preparedness and Response



### 2015 MANAGEMENT PRIORITIES AND FOCUS AREAS

- Maintain readiness of the response organization and headquarters operations center.
- Enhance preparedness and response guidance, ensuring clear expectations with stakeholders, and compatibility with broader all-hazards approaches; especially for NUREG-0654 revisions, decommissioning emergency preparedness guidance, and incident response manual chapters/procedures.
- Prepare for and conduct the full-federal, whole community exercise – Southern Exposure 2015.
- Improve coordination and cooperation across the branches within the division and the office; give opportunities to cross train our staff across our product lines and missions.
- Ensure unity of effort and informed decision making through good communications flow

- Operating Reactor, Fuel Cycle, and ISFSI EP licensing casework
- NSIR outreach team
- FEMA REPP program interface
- EP Decommissioning exemptions

- New reactor EP licensing casework
- Small Modular Reactor EP regulatory framework
- Fukushima NTTF EP recommendations

- Oversight activities and regional interface
- EP research and guidance (with RES)
- Rulemaking activities
- NUREG-0654/FEMA-REP 1

- Agency exercise program and responder qualifications
- Interagency interface with FEMA, DOE, White House
- Southern Exposure exercise
- Agency COOP and Pandemic program

- Headquarters Operations Officers/ Notifications
- Ops Center physical and IT support (OCIMS and ERDS)
- NSIR manager on call program



# FEMA and NRC

# Topics:

- Role of FEMA
- Background – Time Line
- Licensing
- Reasonable Assurance
- Exercises
- 10 CFR 50.54(s) - Withdrawal of Reasonable Assurance
- Realism Rule
- Events Which Have Shaped the NRC/FEMA Relationship
- MC 1601 - Can We Talk?
- Memorandum of Understanding
- Research / Test Reactor and Fuel Cycle EP

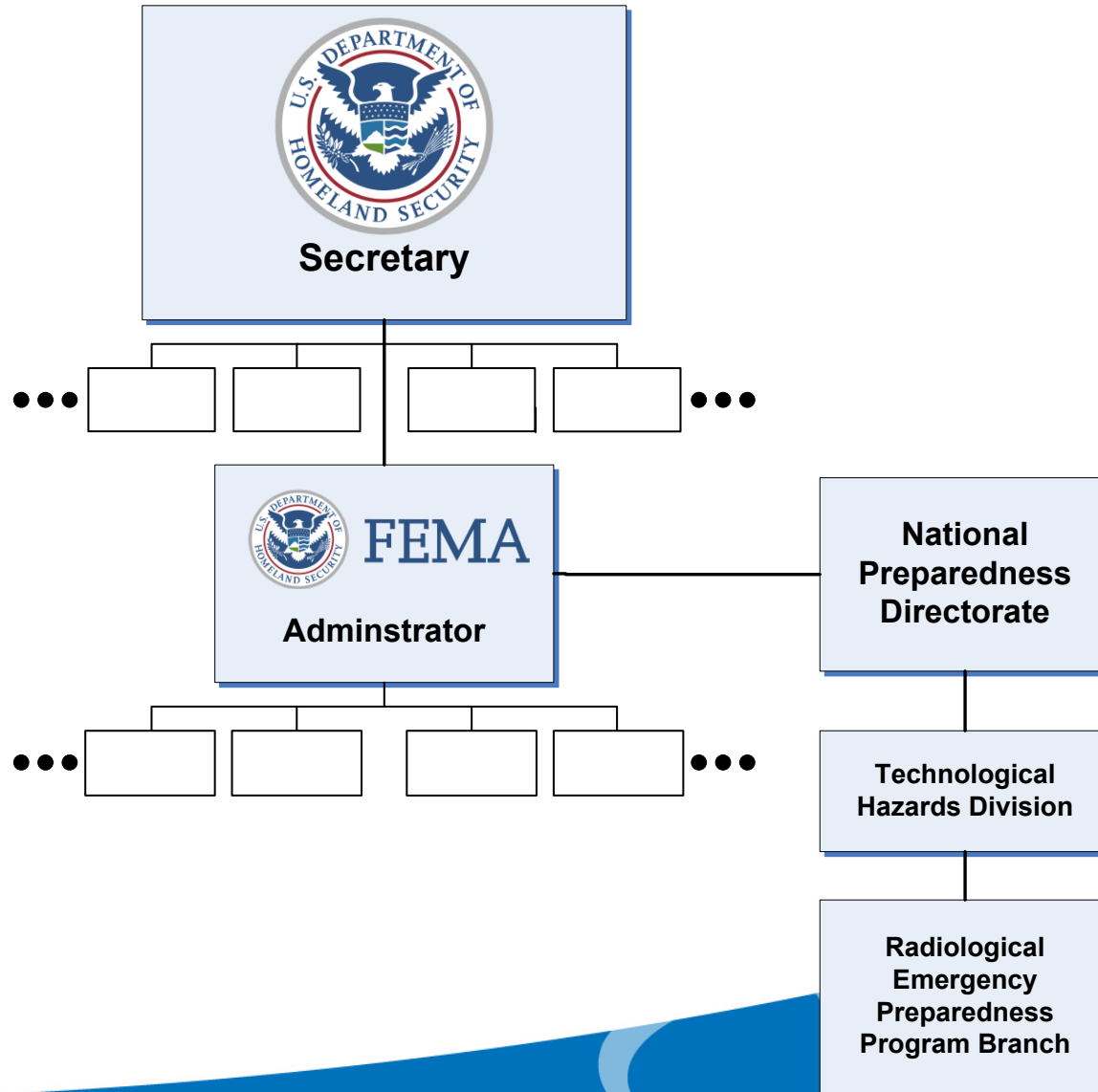


FEMA

# Offsite EP

- Although it is in the applicant's/licensee's interest to work with State and local governments in developing and maintaining offsite preparedness, the licensee has no authority over those governments and is not directly responsible for offsite emergency preparedness.
- Integrated guidance and criteria (NUREG-0654)

# Organization



# FEMA Time Line

- June 19, 1978 – Created as an independent agency as part of a governmental reorganization.
- December 1979 – Assumed the lead responsibility for offsite nuclear power plant EP.
- November 25, 2002 – Department of Homeland Security (DHS) created as a cabinet department.
- March 1, 2003 – FEMA absorbed into DHS.



## Pre-TMI

- NRC voluntary concurrence program
- NRC - Lead role for both onsite & offsite emergency preparedness
- NRC coordinated Federal radiological emergency preparedness activities

## Post-TMI

- “350 Process”; Offsite Planning & Preparedness a condition of licensing (P.L. 96-295, 6/30/80)
- NRC - Lead onsite role; FEMA - Lead offsite role (Presidential Directive - 12/7/79)
- FEMA coordinates Federal radiological emergency preparedness activities



# NRC and FEMA

- NRC responsible for regulating & assessing **onsite** emergency planning, preparedness & response
- FEMA - responsible for assessing **offsite** emergency planning, preparedness & response



## FEMA

# The NRC/FEMA Interface

- Memorandum of Understanding (MOU)
  - Clarifies roles & responsibilities
    - FEMA
    - NRC
    - Joint
  - MOU first issued January 1980
  - Current version issued June 1993
    - Under revision
  - Appendix A to 44 CFR 353



# NRC/FEMA MOU Summary

## FEMA

- To take the lead in offsite emergency planning and review and assess offsite emergency plans and preparedness for adequacy,
- To make findings and determinations as to whether State and local emergency plans are adequate,
- To assume responsibility, as a supplement to state, local, and utility efforts for radiological emergency preparedness training, and
- Develop and issue an updated series of interagency agreements that delineate respective agency capabilities and responsibilities.

## NRC

- To assess licensee emergency plans for adequacy,
- To verify that licensee emergency plans are adequately implemented,
- To review the FEMA findings and determinations as to whether offsite plans are adequate and can be implemented, and,
- Make radiological health and safety decisions with regard to the overall state of emergency plans (onsite and offsite), such as assurance for continued operation, for issuance of operating licenses, and enforcement actions.

# NRC/FEMA MOU Summary

- NRC Licensing Reviews
  - FEMA will provide support with regard to the assessment of offsite preparedness by providing findings and determinations.
  - FEMA will appear in NRC licensing proceedings on matters involving FEMA findings and determinations.
- FEMA Review of Offsite Plans
  - NRC will assist in the development and review of offsite plans and preparedness through its membership on the Regional Assistance Committees.
  - NRC will recognize FEMA as the interface with State and local governments as to interpretation planning criteria.
  - FEMA will report evaluation results to state and local governments.

# NRC/FEMA MOU Summary

- Joint Exercises
  - FEMA and NRC will cooperate in determining exercise requirements.
  - They will jointly observe and evaluate exercises.
  - FEMA will report offsite exercise Level 1 findings (deficiencies) to NRC verbally in 1-2 days.
  - FEMA will send written notifications to the state, NRC, and the Radiological Assistance Committee (RAC), with information copy to licensee within 10 days.
    - Starts a 120 day clock for correcting the finding/deficiency.
    - RAC will be discussed later in this presentation.
  - About 60 days later, the NRC, in consultation with FEMA, will assess the progress towards resolution.
  - If the finding/deficiency is not resolved, FEMA will withdraw its reasonable assurance findings.

# NRC/FEMA MOU Summary

- Withdrawal of Reasonable Assurance Finding
  - If FEMA determines that the offsite emergency plans or preparedness are not adequate to provide reasonable assurance that adequate protective measures can be taken:
    - FEMA shall withdraw its approval.
    - FEMA will notify State and NRC.
    - NRC will promptly review the FEMA findings and determinations and formally document the NRC's position.
    - If the NRC finds, pursuant to 10 CFR 50.54(s)(2)(ii), that the state of emergency preparedness does not reasonable assurance that adequate protective measures can and will be taken the NRC will start a 120-clock
    - The NRC will consider other actions pursuant to 10 CFR 50.54(s)(2)(ii).

# NRC/FEMA MOU Summary



- Emergency Planning and Preparedness Guidance
  - NRC has the lead responsibility for guidance for licensees
  - FEMA has the lead responsibility for guidance for state and local agencies.
  - NRC and FEMA recognize the need for a coordinated approach to onsite and offsite emergency planning and preparedness and will provide each with the opportunity to review and comment such guidance prior to adoption as formal agency guidance.

# FEMA/NRC Steering Committee

- Addressed in MOU, 44 CFR 353 App A
- Focal point of coordination
- Serves to implement points in the MOU
- Examples of Recent Issues
  - EP Rulemaking
  - NUREG-0654/FEMA-REP-1 Revision
  - Alert and Notification Systems
  - Hostile action based EP exercises
  - New reactor license applications
  - Decommissioning facilities

# Federal Radiological Preparedness Coordinating Committee (FRPCC)

- FEMA Lead (44 CFR 351.10 & .11)
- Meets quarterly
- Many federal agencies are represented
- Assists FEMA in providing policy direction for Federal assistance to State & locals
- Coordinates research & study efforts
- Assists in resolving issues related to final FEMA approval of a State plan

# Regional Assistance Committee (RAC)

- FEMA Lead (44 CFR 351.10 & .11)
- One in each FEMA Field Office (10)
- Federal participation
- Assists State and local government officials in the development & review of their radiological emergency plans
- Observes exercises to evaluate adequacy of plans
- NRC is represented on the RAC by the Regional State Liaison Officer



# NRC Inspection Manual

## Chapter 1601

- A natural disaster, malevolent act, or extended shutdown may call into question the status of EP around a plant site
- MC 1601 defines interaction between FEMA and the NRC during restart situations
  - As defined in the MOU
- FEMA performs offsite EP assessment and informs NRC of results
- Restart requires FEMA and NRC approval
- Requires rapid, effective communications to many stakeholders in many areas