

Part 4:

NRC / FEMA Relationship

Research / Test Reactor and Fuel Cycle EP

Topics:

- Role of FEMA
- Reasonable Assurance
- 10 CFR 50.54(s) - Withdrawal of Reasonable Assurance
- NRC / FEMA Memorandum of Understanding
- Research / Test Reactor and Fuel Cycle EP

Role of FEMA

- Determination of “Reasonable Assurance” for offsite emergency response plans
- Two basic parts:
 - Initial and annual review of State and local emergency plans for a radiological emergency at a commercial nuclear power facility
 - Assess the demonstration of State and local government capabilities to effectively implement their plans to protect the health and safety of the public

FEMA/DHS Time Line

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



Reasonable Assurance

- Following TMI, Commission issued regulations stating:
 - “no operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is **reasonable assurance** that adequate protective measures can and will be taken in the event of a radiological emergency”
- Adequacy of Reasonable Assurance
 - Requires NRC to make a predictive finding that there are no undue risks to public safety. It does **not require zero risk**.

Reasonable Assurance

- NRC bases findings on review of FEMA findings and determinations as to whether State and local plans are adequate and capable of being implemented
- In addition, NRC assesses whether the onsite plan is adequate and capable of being implemented
- Adequate emergency plans are in place
 - Adequate staff and facilities to implement plan
 - Emergency plans are workable

Reasonable Assurance

- The phrase, *reasonable assurance* is included to indicate the required level of confidence that the NRC and FEMA must have in their respective findings and determinations.
 - The regulations do not require *absolute* assurance that state and local governments adopt extraordinary measures to address every conceivable occurrence.
 - The regulations place emphasis on *prudent risk reduction measures*
 - There should be core planning with sufficient planning flexibility to develop reasonable response to those very serious low probability accidents which could affect the public.
 - Objective is achievement of reasonable and feasible dose reductions in the event of an accident
 - Not a preset minimum dose saving or minimum evacuation time

Initial Plant Licensing

- NRC must find that the state of emergency preparedness (*onsite & offsite*) provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency prior to issuance of full power license
 - NRC findings on the state of onsite preparedness
 - 10 CFR 50.47(b) and Appendix E
 - A review of FEMA findings on the state of offsite preparedness
 - 44 CFR 350.5
- Granting a license is based on a finding of *reasonable assurance*
- Reasonable assurance *does not need to be reaffirmed* on a periodic basis

Once the License is Issued

- Licensee required to follow and maintain effectiveness of its emergency plan
 - Governed by 10 CFR 50.54(q)
- If any any time the NRC finds that the state of emergency preparedness (**onsite & offsite**) does not provide reason-able assurance that adequate protective measures can and will be taken and the findings are not corrected in four months, the Commission will determine whether the reactor shall be shutdown until the findings are remedied.
 - The decision to shut down an operating plant or take other enforcement action is based on **a *finding of no reasonable assurance.***
 - Governed by 10 CFR 50.54(s)(2)(ii)

Withdrawal of Reasonable Assurance

- FEMA identifies a deficiency
 - FEMA starts a 120-day clock for the State/locals to correct the problem
 - Licensee, NRC, State, locals notified within 10 days
 - After 60 days, a progress report is made
- After the 120 days is up, FEMA withdraws reasonable assurance
- NRC then starts its own 120-day clock for the licensee to correct the problem or face Commission action
 - Total time from deficiency to agency action = 240 days*

*10 CFR 50.54(s)(3) does allow Commission take other action within its authority or at any other time specified in the rule.

Exercises

- Primary means used by FEMA to assess continued adequacy of offsite EP is the evaluation of the biennial full participation exercise



Offsite Exercise Deficiencies

- What is a Deficiency (Level 1)?

“An **observed or identified inadequacy** of organizational performance **in an exercise** that could cause a finding **that offsite EP is not adequate to provide** reasonable assurance that **appropriate protective measures** can be taken in the event of a radiological emergency to protect the health & safety of the public living in the vicinity of a nuclear power plant”

[44 CFR 353, Appendix A]

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
 - Revised in 2015
 - ADAMS Accession Number ML15344A371

MOU for Radiological Emergency Planning & Preparedness

- Areas of Cooperation
 - NRC licensing reviews
 - FEMA Review of offsite plans & preparedness
 - Preparation for & evaluation of joint exercises
 - Withdrawal of reasonable assurance
 - Emergency planning & preparedness guidance
 - Public information & education programs
 - Recovery from disasters affecting offsite emergency preparedness

FEMA/NRC Steering Committee

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

Federal Radiological Preparedness Coordinating Committee (FRPCC)

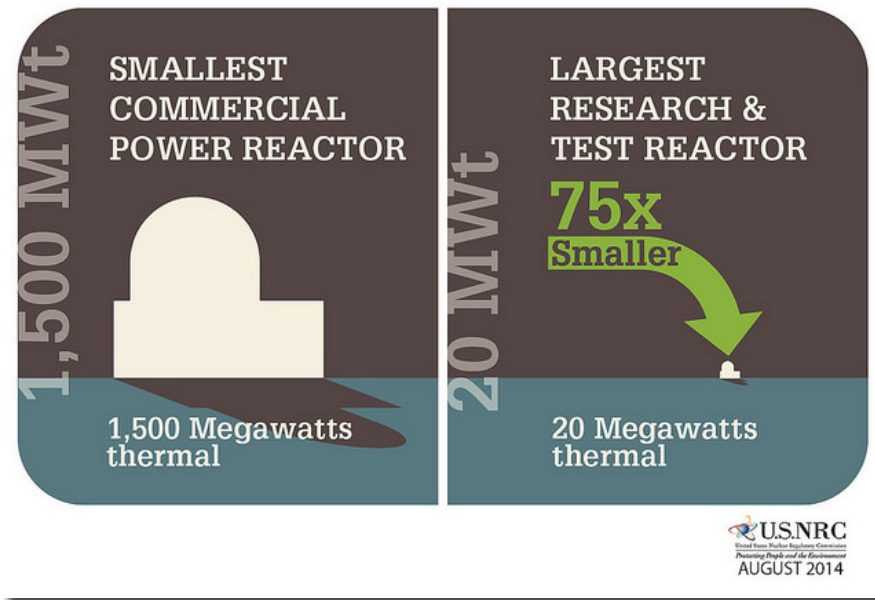
- FEMA Lead (44 CFR 351.10 & .11)
- Meets quarterly
- Many federal agencies are represented
- Assists FEMA in providing policy direction for Federal assistance to State & locals
- Coordinates research & study efforts
- Assists in resolving issues related to final FEMA approval of a State plan

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

Research and Test Reactor (RTR) EP

- Due to the low power level (0.1 to 20 MW) and small amount of radioactivity in the core, the radioactive release from an accident associated with most RTRs will not result in radiological doses to the general public exceeding the protective action guides (PAGs)
- Emergency plans are required by 10 CFR 50 Appendix E
- 10 planning standards (as opposed to 16)



Research and Test Reactor (RTR) EP

- EPZs range in size from the operations boundary for a reactor less than or equal to 2 megawatts to 800 meters for a reactor up to 20 megawatts
- Guidance is found in Regulatory Guide 2.6 which endorses ANSI-15.16-1982, “Emergency Planning for Research Reactors”

Fuel Cycle Facility EP

- The scope and depth of emergency plans are more variable and generally not as extensive as power reactors
 - This reflects the diverse nature of these facilities and the hazards and risks associated with their operation
- Facts
 - No designated EPZs
 - No extraordinary provisions to alert and notify the general public
 - Only 2 levels of emergency classifications
 - Alert – requiring no offsite response
 - Site Area Emergency – could require offsite response
 - FEMA has no oversight over State and local governments with regards to a fuel cycle facility
- Why?
 - No EPA PAGs will be exceeded beyond the site boundary

Fuel Cycle Facility EP

- Regulatory Guide 3.67 provides the standard format and content for emergency plans for fuel cycle and material facilities
- Independent Spent Fuel Storage Installations (ISFSIs)
 - If located at an **operating** reactor, the 10 CFR Part 50 emergency plan is all that is required
 - If located at a **non-operating** reactor or elsewhere, there are lesser emergency plan requirements

Outreach

- Emergency Preparedness
 - Link between NRC, FEMA, licensee, offsite agencies and the public
- Integration and Communication
 - Commission focus on outreach and communication
 - Coordination between the Regions and HQ
- Engage external stakeholders
 - State/locals
 - Licensees/Industry
 - Public/Professional Societies

Current Outreach

- FEMA regional planning meetings
- NREP Conference
- NEI Communications Forum
- Regulatory Information Conference
- Webpage

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