

NRC Update



Emergency Preparedness Directorate
Division of Preparedness and Response
Office of Nuclear Security and Incident Response



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NRC Emergency Planning, Preparedness & Response

- NRC is a Safety, Security, and Emergency Preparedness (EP) Organization
- Emergency Preparedness Directorate created to enhance NRC focus on the integration of safety, security, and EP; recently relocated to Nuclear Security & Incident Response (NSIR) to better coordinate with response and security responsibilities
- NRC Offices of NSIR, Nuclear Reactor Regulation (NRR), and Nuclear Material Safety & Safeguards (NMSS) all have EP responsibilities



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Nuclear Security Policy
Project Directorate

Nuclear Security Ops
Project Directorate

Vulnerability Assessment
& Integrated Response

Materials, Transportation
& Waste Security Section

Reactor Security Section

Licensee Personnel
Security Section

Fuel Cycle and Special
Security Programs Section

Information Security
Section

Threat Assessment
Section

Security Performance
Evaluation Section

Security Oversight
Section

Division of Preparedness and Response Eric Leeds

Emergency Preparedness
Directorate

Incident Response
Directorate

Inspection and
Communications Section

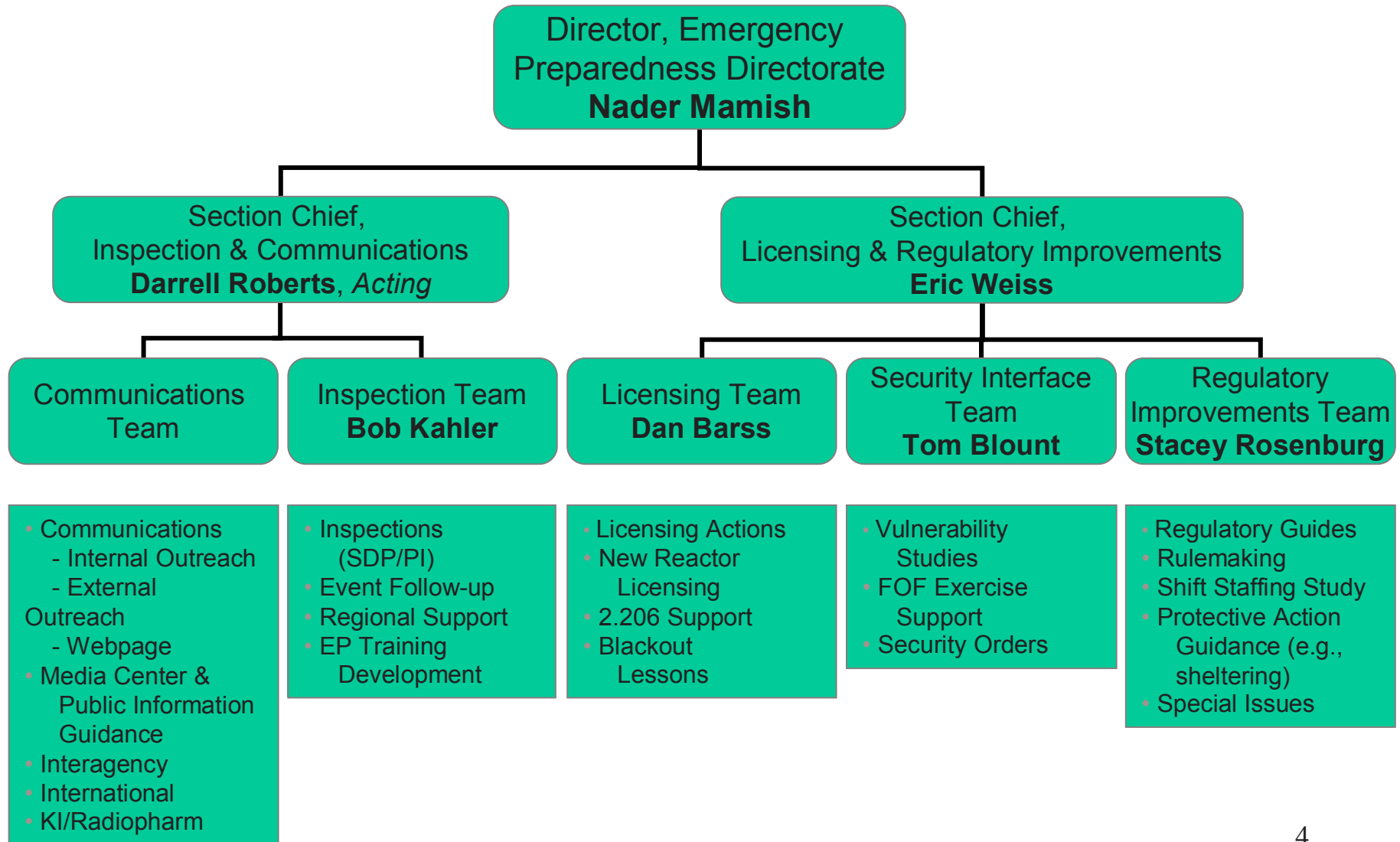
Licensing and Regulatory
Improvements Section

Coordination Section

Operations Section



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Communications

- **Outreach**
 - Internal Communication
 - External Communication
 - State/Local level
 - Media
 - Webpage Development
 - Media Center & Public Information Guidance
 - Interagency Relationships
 - International Participation
 - KI/Radio-pharmaceutical Information and Distribution



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Inspection

- Inspections
 - Reactor Oversight Process (ROP)
 - Significance Determination Process (SDP)
 - Performance Indicators (PI)
- Event Follow-up
- Regional Support in Observing & Evaluating Exercises
- EP Training Development
 - EP Technology Course
 - Additional Topical Courses



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Licensing

- Licensing Actions
- New Reactors
 - Early Site Permits (ESP)
 - Reviewing three ESP applications: North Anna, Clinton, and Grand Gulf
 - Review Advanced Reactor Designs
 - Advanced Light-Water Reactors (ALWRs)
 - High Temperature Gas-Cooled Reactors (HTGRs)
 - Combined License (COL) Preparation
 - EP Inspection Test Analysis and Acceptance Criteria (ITAAC)
- 2.206 Petition Response Support
- Incorporating Lessons Learned from Blackout Experience



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Security Interface

- Vulnerability Studies
 - NRC and Industry are conducting accident analyses of reactor and spent fuel vulnerabilities
- Security Orders
 - Orders issued after 9/11 directed licensees to take immediate action while vulnerability studies were being completed
- Force-on-Force Exercise Support
 - NRC conducting FOF drills
 - Drills provide data on the ability of EP programs to provide reasonable assurance for terrorist-based contingencies



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Regulatory Improvements

- Top-down Review of Emergency Planning Program
- Rulemaking
 - Conforming Changes to Part 50 to incorporate Part 52 Licensing Concepts
 - Clarification of Exercise Requirements for Co-Located Licensees, and review and approval of Emergency Action Levels (EALs)
- Regulatory Guides
- Studies
 - Protective Action Guidance (e.g. Sheltering)



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Initiatives



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EP Top-Down Review

- In response to the creation of the EPD, a top-down review of EP will be done to:
 - Identify current and future necessary emergency preparedness activities
 - Re-examine the EP basis in light of 9/11 and vulnerability assessment results
 - Implement these activities
- Goal is to enhance effectiveness of EP and incident response



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Potassium Iodide - 20 Miles

- Public Health Security and Bio-terrorism Preparedness and Response Act of 2002, P.L.107-188, Section 127
 - Signed into law on June 12, 2002
 - Act is intended to improve the ability of the USA to prevent, prepare for, and respond to bio-terrorism and other public health emergencies



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Potassium Iodide - 20 Miles (Cont'd)

- Section 127 requirements:
 - Through Strategic National Stockpile (SNS), DHHS will make KI available to State and local governments for stockpiling and for distribution in quantities sufficient to protect the public within 20 miles of a nuclear power plant
 - State/locals must submit a plan for stockpiling, distribution, and utilization of KI
 - State must approve local plan(s) and make sure it is consistent with the State plan



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Potassium Iodide - 20 Miles (Cont'd)

- The KI Subcommittee of the FRPCC developed the guidelines
- “One stop shopping” for KI
 - Requests will go to one agency.
- 10-mile EPZ will not change.
 - No new requirements for licensee.
- Licensees will not be expected to change their emergency plans/procedures.
- Guidelines will be issued to States/stakeholders for input, followed by issuance in the Federal Register



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EP Post 9/11

- The NRC recognizes that many things have changed in the post 9/11 threat environment.
- NRC believes the EP planning basis for nuclear power reactors remains valid.
- Challenges for EP in post 9/11 world:
 - revised design basis threat
 - communication strategies
 - coordination among Federal agencies (including creation of Dept. of Homeland Security and State DHS offices)
 - revised National Response Plan



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EP Post 9/11 (Cont'd)

- Evaluation of Nuclear Power Reactor Emergency Preparedness Planning Basis Adequacy in the Post 9/11 Threat Environment
 - RIS 2004-15 addressing post 9/11 EP issues
 - Study of PARs with Sandia National Laboratory
 - Pilot drill program to look into licensee EP response with terrorist based scenarios



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Exercises

- Security exercises with EP component (non-public)
 - Significant, but less extensive challenges to EP interface
 - Detailed demonstration and rigorous analysis of Security challenges
- EP exercises (public)
 - Detailed demonstration and rigorous analysis of EP-Operations challenges involving offsite response organization participation
 - Security interface limited; terrorism component not required



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Exercises (Cont'd)

- Force on Force
- Terrorist-based exercise scenarios:
 - Indian Point on June 8, 2004
 - Diablo Canyon in 2003
 - Palo Verde in 2000



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Force-on-Force Lessons Learned

- Observation of Transitional FOF exercises conducted with select licensees through October 2004
- Lessons-learned shared with industry in a RIS
- EPD will continue to cover FOF exercises when the program becomes formal
- Inspection procedure drafted



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Enhanced Security Emergency Action Levels

- Current implementation of emergency preparedness is based on radiological consequences
- Moving toward implementing EP based on confirmed threats
 - Enhanced security EALs
 - Would raise the classification sooner



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Enhanced Security EALs

- Current EALs, with exception of security related EALs, will not be changed
- Addition of enhanced security EALs enable licensees to inform States more quickly of a threat
 - If a licensee is aware of a threat, they will notify State instead of waiting for actual plant damage



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Evacuation Study Overview

- Public evacuations have been successful in protecting public health & safety
- Study validates NRC's use of evacuations as an important protective measure



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Evacuation Study

Supports EP Planning Basis

- Evacuations successfully protect the public health & safety over a broad range of initiating circumstances & challenges
 - Public evacuations occur frequently (~once every 3 weeks)
 - Shadow Evacuations Do Not affect the effective implementation of adequate protective actions
 - Emergency workers report to duty when asked
 - Public education is an important contributor to efficient & effective evacuations
 - Route Alerting is effective & a significant contributor to efficient & effective evacuations



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Evacuation Study

Investigative Approach

- Perform extensive background search on evacuations in general, as well as on specific evacuation experiences
- Identify “universe” of evacuation incidents meeting specified criteria
 - U.S. mainland public evacuation
 - Occurred after January 1, 1990
 - Evacuation >1,000 people
 - Evacuation from more than a single building or industrial facility
- Identify factors contributing to efficient and effective evacuations



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Evacuation Study Major Issues Considered

- Evacuation decision-making
- Notification of response personnel/officials
- Citizen notification and warning
- Citizen action
- Emergency communications
- Traffic movement & control
- Congregate care centers
- Law enforcement Issues
- Re-entry Issues
- Shadow evacuations
- Special facilities evacuations
- Training & drills
- Type of emergency plan
- Community preparedness & history of emergencies
- Number of deaths/injuries
- Unusual, or special, circumstances



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Protective Action Recommendation (PAR) Study

- Review of NRC PAR guidance in NUREG-0654, Supplement 3
- Review sheltering
- Examine innovative PAR strategies
- Involve States/Local OROs in evaluation
- 2 year project to examine technical issues
- If beneficial changes will be recommended



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Sheltering

- Staff reviewed potential generic aspects of reactor licensees' implementation of Protective Action Recommendations (PARs)
- RIS 2004-13 issued 8/2/04 to clarify that licensees shall consider sheltering in the range of PARs



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Early Site Permits (ESP)

- NRC and FEMA are reviewing ESP applications
 - North Anna (Dominion)
 - Clinton (Exelon)
 - Grand Gulf (SERI/Entergy)
- Review Standard RS-002 and Supplement 2 to NUREG-0654, are being used to evaluate applications



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COL/ITAAC

- Combined License (COL) Applications
(Subpart C of 10 CFR Part 52)
- Emergency Planning Inspections, Tests,
Analyses, and Acceptance Criteria (ITAAC)
 - Jointly developed and reviewed by NRC and
FEMA



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Alert and Notification System (ANS) Performance Indicator

- Staff is re-evaluating the ANS PI to ensure that it is providing the best measure of the licensee's capability to provide for notification of the public.
- Licensee can't change the ANS test program for PI reporting mid-quarter



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Decrease in Effectiveness (DIE)

- 10 CFR 50.54(q) allows e-plan changes if evaluated by licensee as not constituting a “decrease in effectiveness”
- EPPOS-4 in effect
- NRC and NEI have discussed the DIE
 - NEI has submitted a white paper
- RIS to be issued on what constitutes a DIE, examples of what is and what is not



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10 CFR 50.54(q) vs. Appendix E

- Contradictory regulations
 - 50.54(q): allows e-plan changes if no plan decrease in effectiveness
 - Appendix E: EAL changes may be made after licensees discuss with State/locals
- Rule change is slated to be issued Fall 2004



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Questions??

- www.nrc.gov
- www.nrc.gov/what-we-do/emerg-preparedness.html