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Emergency Preparedness Post 9/11 Initiatives Radiological Emergency Planning Harvard School of Public Health



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Outline

- NRC Emergency Planning, Preparedness & Response
- Post 9/11 Changes and Challenges
- Post-9/11 Enhancements



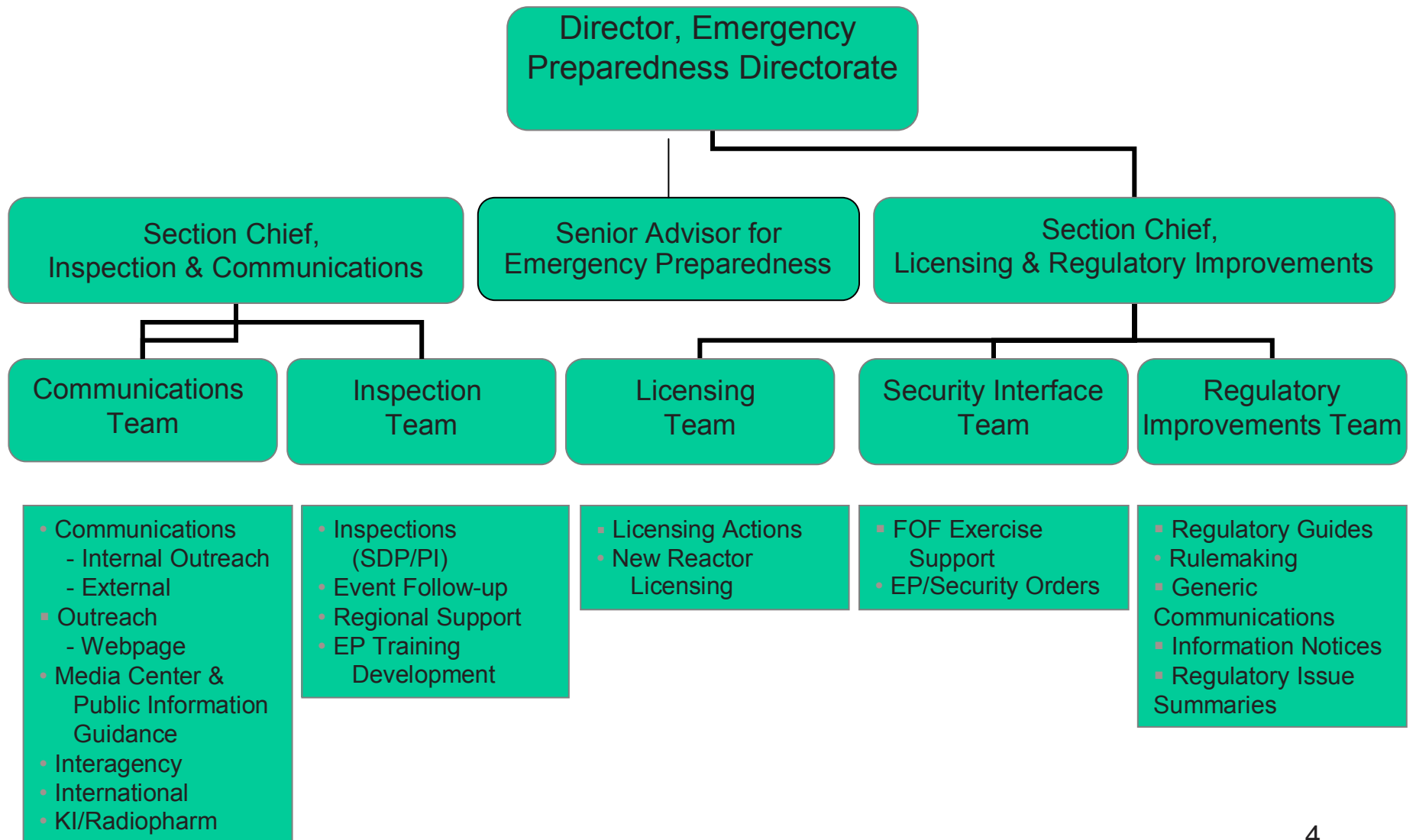
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NRC Emergency Planning, Preparedness & Response

- NRC is a Safety, Security & Emergency Preparedness (EP) Organization
- Emergency Preparedness Directorate (EPD) Created to Enhance NRC Focus on Integration of Safety, Security & EP
- EPD Relocated to Nuclear Security & Incident Response (NSIR) to Better Coordinate with Response & Security Responsibilities



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Post 9/11 Changes

- **Significant Strengthening of Security**
- **Modification of Operations Procedures**
- **Significant Increase in Federal Agency Coordination**
- **Enhancements to Nuclear Power Plant (NPP) Emergency Preparedness (EP)**
- **National Response Plan**



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Post-9/11 Challenges

- **Terrorist Attack Scenarios**
 - Core physics does not change
- **Scenarios Challenge Response**
 - Resource Deployment
 - Loss of Resources Possible
 - Inaccessible areas
- **Accident Precursors Differ**
- **Threat of Coordinated Attacks on Multiple Facilities**



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2002 EP Enhancements

- **Alternative Facilities**
- **Onsite Protective Actions**
- **Emergency Staffing Review**
- **February 25, 2002 - Interim Safeguards and Security Order**



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2003 Enhancements

- **Evaluation of EP Planning Basis**
 - **EP Planning Basis for Nuclear Power Reactors Remains Valid**
 - **EP Programs Remain Protective of Public Health and Safety**
- **RIS 2003-18, Sup. 1 Changes to EAL schemes**



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2003 Enhancements

- **Alternate Methods for Offsite Notification**
- **Offsite Resource Utilization**
- **Examination of NRC Protective Action Recommendation Guidance**
- **Terrorist Scenario Based Drill & Exercise Program**



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2004 Enhancements

- **NRC Conducted Pilot Program Force-on-Force (FOF) Exercises**
 - **EP Table Top Drill Part of Exercise**
 - **Tests EP-Operations-Security Interface**
 - **Lessons Learned by Site EP Programs**
- **Matured Into Formal Inspection**
 - **EP Portion Continues Improving Response**



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2004 Enhancements

- **RIS 2004-13 and Sup.1 Protective Action Recommendations**
- **RIS 2004-15 Post 9/11 Emergency Preparedness**
- **IN 2004-19 Backup Power Supplies to Emergency Response Facilities**



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2005 Enhancements

- **Consideration of Aircraft Threat**
 - **NRC Communications**
 - **Operational Issues**
 - **Personnel Safety Issues**
 - **Fire Response**



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2005 Enhancements

- **NUREG/CR-6864 Identification and Analysis of Factors Affecting Emergency Evacuations**
 - Reviewed 230 US Evacuations
 - Developed Case Studies of 50
 - Evacuations are Effective
 - Emergency Workers Report for Duty
 - Identified Effective Command Structure



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2005 Enhancements

- **NUREG/CR-6863 Development of Evacuation Time Estimate Studies for Nuclear Power Plants**
 - Integrates new technologies in traffic management, computer modeling and communication systems into evacuation time estimates
 - Shadow evacuation considered



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2005 Enhancements

- **RIS 2005-02 Decrease in Effectiveness**
- **IN 2005-06 Alert and Notification System
Tone Alert Radio Capability**



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2005 Enhancements

- **NRC Bulletin 2005-02 Emergency Preparedness and Response Actions for Security-Based Events**
 - **Emergency Action Levels**
 - **Prompt NRC Notifications**
 - **Onsite Protective Actions**
 - **Drill & Exercise Program**
 - **ERO Augmentation**



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EP Public Meeting

- **Focus of meeting:**
 - NRC Bulletin 2005-02
 - other proposed enhancements
- **Aug 31 & Sept 1 2005 at NRC HQ**



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Conclusion

- **EP Planning Basis Remains Valid**
- **Post 9/11 enhancements include resource deployment and communications**
- **NRC continues to place high priority on post 9/11 initiatives and enhancements**



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Questions?

Comments?