



U.S. Nuclear Regulatory Commission

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USNRC

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Agenda

- Decision Making Processes
 - NRC Guiding Principles
 - Licensing
 - Operations
 - Emergency
 - Open Government



NRC Organizational Values

In conducting all our work, we at the NRC adhere to the following organizational values. These values guide every action we take — from decisions on safety, security, and environmental issues; to how we perform administrative tasks; to how we interact with our fellow employees and other stakeholders. Our employees share their personal perspectives on the importance of these values in a 9-minute video, entitled Living the NRC Values, and the accompanying transcript.

Integrity

- ...in our working relationships, practices and decisions
- ...trustworthy, reliable, ethical, unbiased

Service

- ...to the public, and others who are affected by our work
- ...responsive, accountable, proactive

Openness

- ...in communications and decision-making
- ...transparent, forthright



NRC Organizational Values (cont'd)

Commitment

...to public health and safety, security and the environment
...dedicated, diligent, vigilant

Cooperation

...in the planning, management, and performance of agency work
...helpful, sharing, team-oriented, engaged

Excellence

...in our individual and collective actions
...high quality, continuously improving, self-aware

Respect

...for individuals' diversity, roles, beliefs, viewpoints, and work-life balance
...professional, courteous, objective, compassionate



Principles of Good Regulation

As a responsible regulator with a very important safety and security mission, our values guide us in maintaining certain principles in the way we carry out our regulatory activities. These principles focus us on ensuring safety and security while appropriately balancing the interests of the NRC's stakeholders, including the public and licensees. The following table briefly describes these principles.

Independence: Nothing but the highest possible standards of ethical performance and professionalism should influence regulation. However, independence does not imply isolation. All available facts and opinions must be sought openly from licensees and other interested members of the public. The many and possibly conflicting public interests involved must be considered. Final decisions must be based on objective, unbiased assessments of all information, and must be documented with reasons explicitly stated.

Openness: Nuclear regulation is the public's business, and it must be transacted publicly and candidly. The public must be informed about and have the opportunity to participate in the regulatory processes as required by law. Open channels of communication must be maintained with Congress, other government agencies, licensees, and the public, as well as with the international nuclear community.



Principles of Good Regulation

Efficiency: The American taxpayer, the rate-paying consumer, and licensees are all entitled to the best possible management and administration of regulatory activities. The highest technical and managerial competence is required, and must be a constant agency goal. NRC must establish means to evaluate and continually upgrade its regulatory capabilities. Regulatory activities should be consistent with the degree of risk reduction they achieve. Where several effective alternatives are available, the option which minimizes the use of resources should be adopted. Regulatory decisions should be made without undue delay.

Clarity: Regulations should be coherent, logical, and practical. There should be a clear nexus between regulations and agency goals and objectives whether explicitly or implicitly stated. Agency positions should be readily understood and easily applied.

Reliability: Regulations should be based on the best available knowledge from research and operational experience. Systems interactions, technological uncertainties, and the diversity of licensees and regulatory activities must all be taken into account so that risks are maintained at an acceptably low level. Once established, regulation should be perceived to be reliable and not unjustifiably in a state of transition. Regulatory actions should always be fully consistent with written regulations and should be promptly, fairly, and decisively administered so as to lend stability to the nuclear operational and planning processes.



Independence

- We value independence in our safety decision making in licensing and oversight.
- We have the authorities and responsibilities to go with independence.
- Headquarters Office of Nuclear Reactor Regulation formulates oversight policies (about 400 people)
- Regional Offices implement the inspection program – 4 Regional Offices of about 200 inspections per Region.
- Training – under the theme of continuous improvement of the Regulator – adequate training and qualification time is provided – about two years to qualify.
- Requalification programs for each inspector.
- NRC budget is “fee-recover” Agency. There is a baseline fee for each plant and hourly costs for inspection and licensing.

Regulatory Philosophy

- Responsibility for safe operation of the NPP is with the licensee...NRC provide assurance that the licensee operates the NPP in a safety manner and within the regulation. We do that through multiple means...licensing, reactor oversight process, Significance Determination Process, Operating Experience, enforcement.
- NRC has continuous review of license basis of the NPPs, and a system of tools (i.e., programmes, procedures) to implement our authority. NRC will only authorize plant changes that do not increase risk significantly – must be demonstrated by the licensee and review and approved by NRC experts.



Licensing Decision Making (cont'd)

- Licensing Decision Procedures
 - The NRC has detailed guidelines for license reviewers for decision-making. Training and certification is required for license reviewers.
 - Examples of detailed procedures include:
 - License Amendment Review Process
 - Exemption from Regulations
 - Managing Regulatory Commitments
 - Issuance of Safety Orders
 - Acceptance Review Procedures
 - Procedures for Managing “Backfit”
 - Handling Requests to Withhold Information from Public Disclosure
 - New and Revised Generic Requirements
 - **INTEGRATED RISK-INFORMED DECISION-MAKING PROCESS (this procedure is used when others are non-applicable or do not apply)**

Principles of the Reactor Oversight Program

- **The reactor oversight process calls for:**
 - Focusing inspections on activities where the potential risks are greater.
 - Applying greater regulatory attention to nuclear power plants with performance problems, while maintaining a normal level of regulatory attention on facilities that perform well.
 - Using objective measurements of the performance of nuclear power plants.
 - Giving both the public and the nuclear industry timely and understandable assessments of plant performance.
 - Responding to violations of regulations in a predictable and consistent manner that reflects the potential safety impact of the violations.

Objectives of the Significance Determination Process

- Characterize the significance of inspection findings in support of the Reactor Oversight Process
- Provide a basis for assessment and enforcement actions associated with inspection findings thereby reducing subjectivity
- Provide stakeholders an objective and common framework for communicating the safety significance of inspection findings
- Provide the staff with plant specific risk information for use in risk-informing the inspection program

Reactor Safety

Significance Determination Process

- Three phase process
 - Phase 1 screens issues to Green, Phase 2, and/or Phase 3
 - Phase 2 evaluates issues using plant specific risk-informed inspection notebooks that are typically conservative yet representative of licensee PRA model
 - Phase 3 is a more detailed review using independent risk tools
- Phases 1 and 2 are generally performed by inspection staff, with assistance of a Senior Reactor Analyst (SRA), where necessary.
- Phase 3 is performed by an SRA or other risk analyst.

Phase 3 SDP

- **Risk Significance Estimation Using Risk Basis That Departs from the Phase 1 or 2 Process**
 - If necessary, Phase 3 will refine or modify, with sufficient justification, the earlier screening results from Phases 1 and 2.
 - In addition, Phase 3 will address findings that cannot be evaluated using the Phase 2 process (e.g., external event contributors).
 - Phase 3 analysis will use appropriate PRA techniques and rely on the expertise of NRC risk analysts.

Action Matrix Concept

As plant performance declines – NRC involvement increases

Licensee Response	Regulatory Response	Degraded Cornerstone	Multiple/Rep. Degraded Cornerstone	Unacceptable Performance
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Increasing Safety Significance

Increasing NRC Inspection Efforts

Increasing NRC/Licensee Management Involvement

Increasing Regulatory Actions



NRC National Response

Headquarters Office

Rockville, MD



Region I
King of Prussia, PA



Region II
Atlanta, GA



Region III
Lisle, IL



Region IV
Arlington, TX



HISTORICAL PERSPECTIVE PRIOR TO THREE MILE ISLAND

- General Thinking: Significant off-Site consequences from a reactor incident were remotely possible, but unlikely
- Existing E-Plans were non-standardized, inconsistent, and incomplete (Organizational structure, coordination, public notification, ad-hoc response, etc.)
- State plans “Concurred-In”, there was no Federal approval process
- Exclusionary zone: Licensee owned property
- Low Population Zone: Ad-hoc planning 2 to 3 miles
- Three Mile Island occurred in March 1979, and the world of Emergency Preparedness for reactor events changed!



POST - THREE MILE ISLAND

NUREG 0654, NRC-FEMA, Rep 1 ENHANCEMENTS:

- Communications, Coordination, Standardization of E- Plans Organizational Structure, Uniform Emergency Classifications, Ability to Alert & Notify the Public Quickly, Defined Evacuation Routes, etc.
- Federal approval of State Radiological Emergency Response Plans
- Establish/Implement Ten-Mile & 50 Mile Emergency Planning Zones
- Promulgate the Federal Radiological Emergency Response Plan
- Federal Planning: Federal Radiological Emergency Response Plan, Federal Response Plan, and currently the National Response Plan



NATIONAL RESPONSE PLAN

- Describes the mechanism and structure by which the Federal Government mobilizes resources and conducts activities to address the consequences of any major disaster or emergency that overwhelms the capabilities of State and local governments
- NRP is an all –hazards plan
- NRP replaces the Federal Response Plan
- Consolidates / incorporates other Federal incident plans, i.e., Nuclear / Radiological Incident Annex



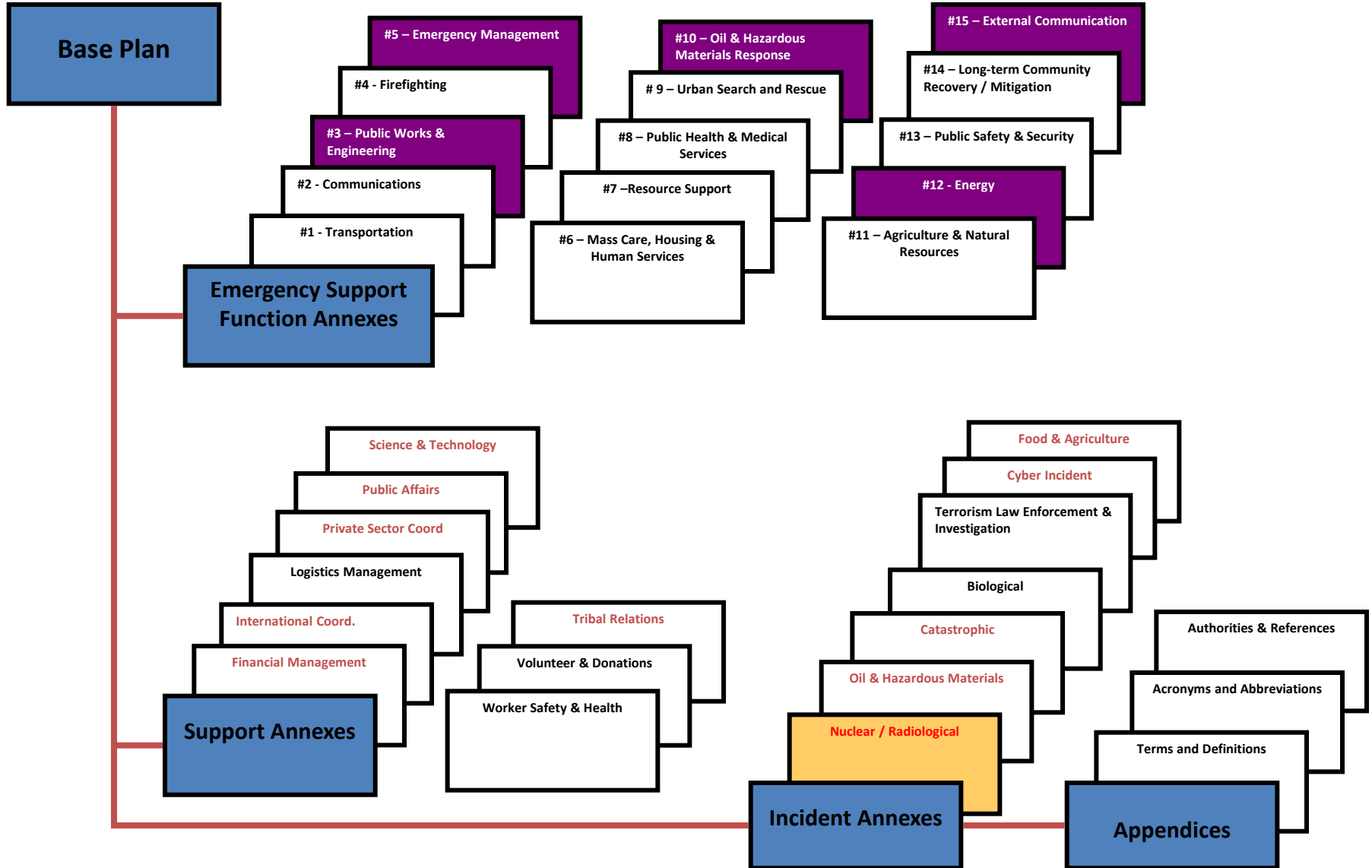
NATIONAL RESPONSE PLAN KEY CONCEPTS

NRC AUTHORITIES & RESPONSIBILITIES PRESERVED

- Incident of National Significance
- Homeland Security Operations Center
- Interagency Incident Management Group
- Nuclear / Radiological Incident Annex
- Principal Federal Official
- Joint Field Office
- Interagency Modeling / Atmospheric Assessment Center
- Annexes: Emergency Support Functions



National Response Plan Contents





NATIONAL RESPONSE PLAN NUCLEAR/RADIOLOGICAL INCIDENT ANNEX

- Supersedes the Federal Radiological Emergency Response Plan (FRERP) promulgated after TMI
- Establishes an organized & integrated capability for timely, coordinated response by Federal agencies to peacetime radiological events by:
 - * Defining the Federal government's concept of operations for responding to radiological emergencies
 - * Outlines Federal policies and planning considerations on which agency specific response plans are based
 - * Specifies agencies authorities and responsibilities

STAND ALONE PLAN ABSENT NRP ACTIVATION



INCIDENT OF NATIONAL SIGNIFICANCE

Homeland Security Presidential Directive # 5

- Federal department or agency requests DHS assistance
- State/locals overwhelmed, Federal assistance requested
- Multi Federal department/agencies substantially involved
- Secretary, DHS directed by the President to assume Incident Management Responsibilities



INCIDENT OF NATIONAL SIGNIFICANCE

Nuclear / Radiological Incident Annex “Criteria”

- Nuclear power plant: Non-terrorist General Emergency incident/accident due to natural disaster, equipment failure, operator error, etc.
- Nuclear facility / radioactive materials: Terrorist Incident, i.e., direct attack on facility, radiological dispersal device, etc

Who is Leading the Federal Response?

**Department of
Homeland Security**

(Principle Federal Official)

incident of National Significance

**Nuclear Regulatory
Commission**

Technical Response

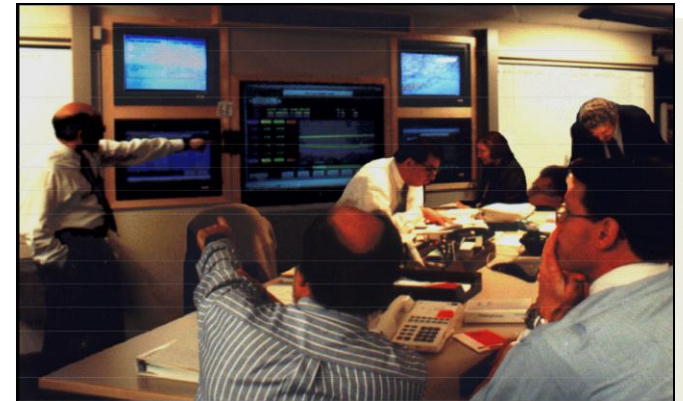
NRC Incident Response



NRC's Responsibilities

• Provide assistance to the licensee – knowledge and equipment

- Assess plant conditions
- Evaluate Protective Action Recommendations
- Support off-site officials
- Keep other Federal agencies informed
- Keep news media informed



Response Decisions and Modes

Based upon NRC's independent assessment:

- Remain in Normal Mode
- Monitoring Mode
- Activation Mode
- Expanded Activation Mode
- **Full Federal Activation***



• **Not a response mode. Full Federal Activation might take place in response to a major emergency in accordance with the National Response Plan**

Support & Communications Teams



- Government Liaison
- News Center Team/Public Affairs
- Safeguards/Security





Open Government

KEY MESSAGE:

NRC values stakeholder input and proactively includes it in our processes for our routine licensing decisions.

- Public Involvement**
- About Meetings Open to the Public
 - Conferences and Symposia
 - Documents for Comment
 - Stakeholder Involvement
 - Information Quality Guidelines
 - Handy Bookmarks
 - Subscribe to E-mail Notices



NRC Contacts

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- Other Useful Contacts
- Telephone Directory
- Our Organization
- Organization Chart

Home > Public Involvement > The NRC Approach to Open Government

The NRC Approach to Open Government



As an independent regulatory agency that prides itself on openness, the U.S. Nuclear Regulatory Commission (NRC) is pleased to take an active role in President Barack Obama's Open Government Initiative [\[EXIT\]](#), with its focus on open, accountable, and accessible government. The NRC has a long history of, and commitment to, transparency, participation, and collaboration in our regulatory activities.

For details on these and other aspects of the NRC Approach to Open Government, please see the NRC's High-Value Datasets and Selected NRC Information Resources (below), as well as the following pages:

- Open Government Philosophy, Plan, and News
- Transparency
- Public Participation
- Collaboration
- Evaluating Our Progress
- Share Your Ideas About Open Government
- NRC Contacts for Open Government

For more information, see Key External Audience Needs for NRC High-Value Datasets , as well as Other Federal Open Government Initiatives.

NRC's High-Value Datasets

Power Reactors	+
Contract Awards	+
Research & Test Reactors	+
Reactor Status	-

Power reactor status for the past year, for each of the operating commercial nuclear power reactors in the United States.

[Access the Dataset](#) (raw data text file)
[Data Dictionary](#) (Excel File)

Selected NRC Information Resources

The Commission	+
Plans, Budget, and Performance	+
Congressional Affairs	+
News, Information, & Media Resources/Policies	+
Electronic Reading Room	+
Records Management	+
Declassification Program	+
Inspector General Program and Reports	+
FOIA/Privacy Act Requests/Reports	-

Information about the NRC's Freedom of Information Act and Privacy Act Programs, including what to include in a request, how to submit it, and how the NRC will process the request. Also provides the [Open Government Assessment of the NRC's FOIA Process](#), a subject list of recent requests, and the NRC's annual reports.

Learn More
Access Our Related Reports:

- [Recent FOIA Requests](#)
- [Frequently Requested Records](#)
- [Closed FOIA/PA Requests](#)
- [Annual FOIA Reports](#) (MS Excel & CSV formats)
- [Annual Chief FOIA Officer Report](#) (steps to facilitate information disclosure)
- [Annual FOIA Backlog Reduction Goals](#)

NRC Open Government News and Updates

- Open Government Plan: PDF | XML | Share Your Ideas

Featured Innovations

- Web Conferencing for Public Meetings [\[EXIT\]](#)
- Live Meeting Webcasts
- Flagship Initiative

Other Federal Open Government Initiatives

- [OPEN.GOV](#) [\[EXIT\]](#)
- [WHITTEHOUSE.GOV/OPEN](#)
- [Data.gov](#) [\[EXIT\]](#)
- [Regulations.gov](#) [\[EXIT\]](#)
- [USAspending.gov](#) [\[EXIT\]](#)
- [Grants.gov](#) [\[EXIT\]](#)
- [Recovery.gov](#) [\[EXIT\]](#)
- [ExpectMore.gov](#) [\[EXIT\]](#)





Backup Slides

Implementation of Regulation

INPUTS

PROCESS

OUTPUT

Statutes
Court Orders
Events
Petitions
Research
Questions



Rulemaking



10 CFR Rules
Reg. Guide
Branch Technical Positions



License Applications
License Amendments
Applications
NRC Orders



Licensing



Reactor Licenses
Special, byproduct,
source, other licenses
License Amendment



Safety

Observations (NRC,
licensee, employees,
other) Routine
Inspections Reactive
Inspections Inspection
Reports Construction
Reports Licensee Event
Reports



Inspecting
&
Enforcing



Compliance with
Requirements
Violations remedied
Violations penalized



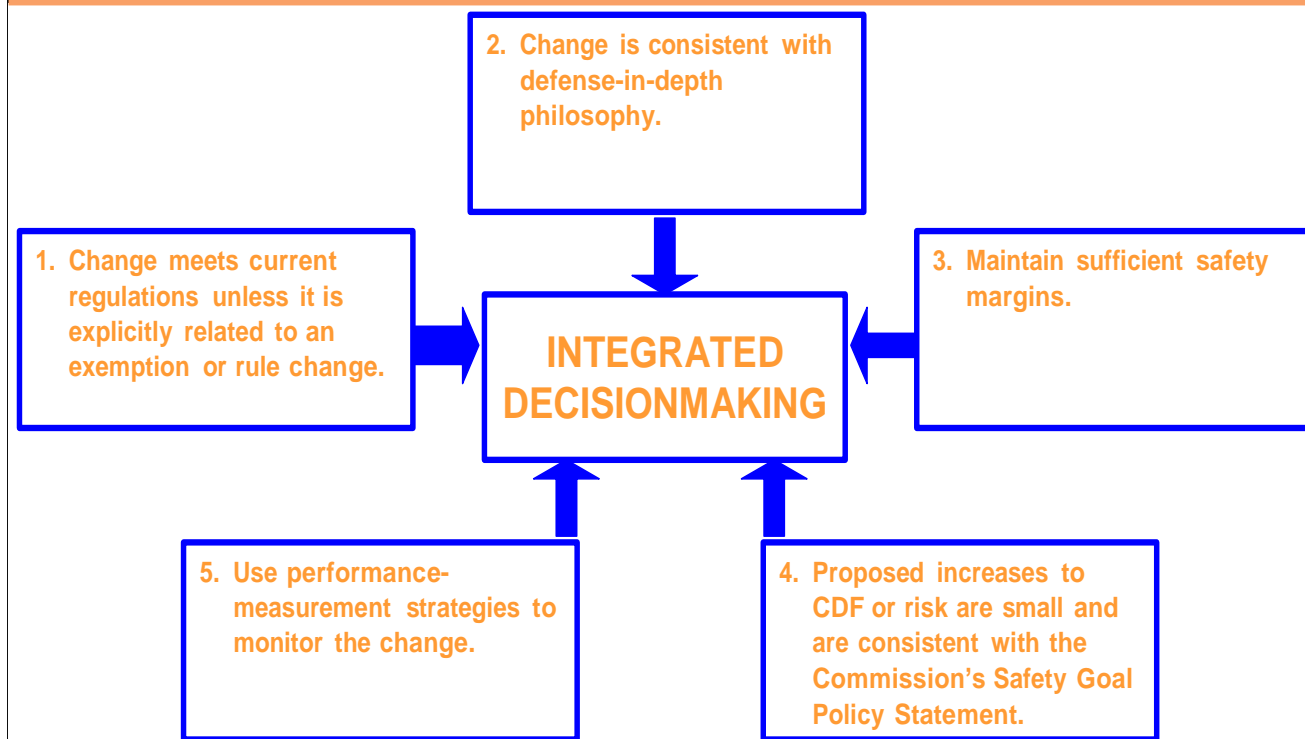
Public
Confidence

Feedback

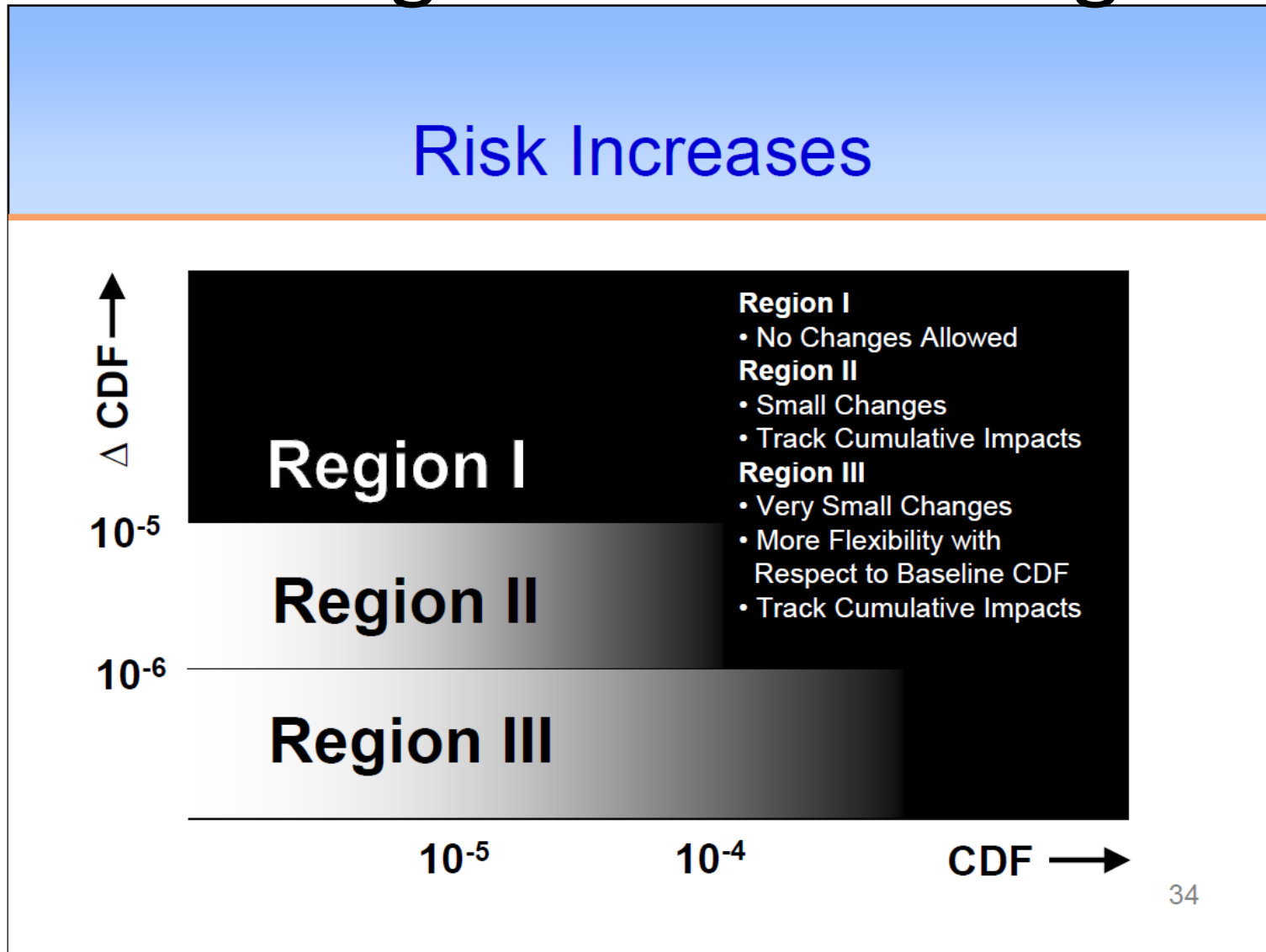


Licensing Decision Making

The 5 Key Principles of Risk-Informed Regulation

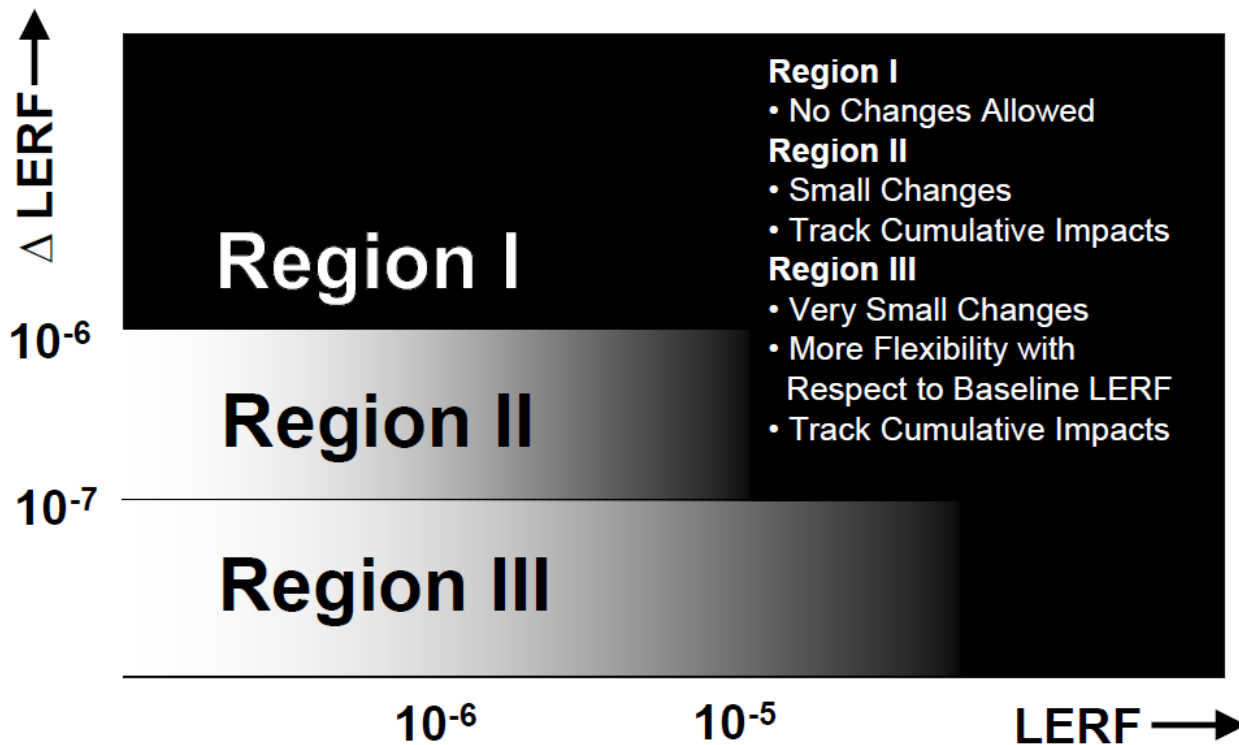


Licensing Decision Making (cont'd)



Licensing Decision Making (cont'd)

Risk Increases



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