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Protecting People and the Environment

Workshop on Application of Graded Approach on Regulating Nuclear Installations
9 – 12 December 2019
Vilnius, Lithuania

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Graded Approach in Rulemaking

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Development of Regulations in U.S.

- Example – Fukushima accident 2011
- Japan Lessons Learned Report recommendations
  - Requiring reliable hardened vent designs in BWR facilities with Mark I and Mark II containments.
  - Enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool.

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Development of Regulations in U.S.

- Step 1 - Identify the decision associated with the development or revision of regulations and/or guidance required.
  - Decision was whether to accept the recommendations in the Japan lessons learned report, and if accepting the recommendations, what were the appropriate regulatory tools to implement the recommendations.

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Development of Regulations in U.S.

- Step 2 - Determine which factors are applicable to the decision.
  - type of facility – BWR Mk I and II containments
  - industry experience based on significant events - unprecedented
  - urgency with respect to the issue being addressed – public health and safety
  - regulatory tools available - generic communications, orders, new regulation

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Development of Regulations in U.S.

- Step 3 - Integrate the applicable factors into the decision-making process. Commission decision to approve recommendations. What tools to use?
  - Urgency – overriding factor. Quickest tool = bulletin
  - Bulletins (1) request licensee actions and/or information to address significant issues regarding matters of safety, security, safeguards, or environmental significance that have great urgency, and (2) require a written response.

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Development of Regulations in U.S.

- Bulletin 11-01 (Mitigating Strategies) – issued prior to lessons learned report.
  - require verification of compliance with the regulatory requirements of 10 CFR Section 50.54(hh)(2).
  - need for information associated with licensee mitigating strategies under 10 CFR 50.54(hh)(2).
  - require that addressees provide a written response to the NRC in accordance with10 CFR 50.54(f).

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Development of Regulations in U.S.

- Orders
  - Orders were issued due to urgency; determined to be significant enhancement to the protection of public health and safety .

Development of Regulations in U.S.

- Orders
  - NRC Order on Mitigation Strategies (EA-12-049)
    - required provisions for mitigation strategies for beyond-design-basis external events.
  - NRC Order on Spent Fuel Pool Instrumentation (EA-12-051)
    - requiring all licensees have a reliable means of remotely monitoring wide-range spent fuel pool levels.
  - NRC Order for Containment Venting Systems (EA-13-109)
    - Required licensees with BWR Mk I and II containments to implement requirements for reliable hardened containment vents capable of operation under severe accident conditions at their facilities.

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Development of Regulations in U.S.

- Rulemaking – codify requirements described in the orders.
  - Rulemaking plan – Commission approval
  - Regulatory basis
  - Regulatory analysis
  - Stakeholder interactions

Development of Regulations in U.S.

- In August 2019, the NRC issued a new rule, 10 CFR 50.155, "Mitigation of beyond design basis events," makes NRC Order EA-12-049, "Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis Events" (Mitigation Strategies Order), and Order EA-12-051, "Order Modifying Licenses With Regard to Reliable Spent Fuel Pool Instrumentation" (Spent Fuel Pool Instrumentation Order), generically applicable
- The final rule was published in the *Federal Register* on August 9, 2019 (84 FR 39684) with an effective date of September 9, 2019.

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References

- Management Directive 6.3, "Rulemaking Process"
  https://www.nrc.gov/docs/ML0516/ML051680185.pdf
- Public web page – Fukushima enhancements:
  https://www.nrc.gov/reactors/operating/ops-experience/post-fukushima-safety-enhancements.html

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Graded Approach in Authorization

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Authorizations

- **Licensing example**

- Step 1- Identify the required authorization
  - initial construction and operating licenses for nuclear installations
  - renewed operating licenses
  - license amendments

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Authorizations

- Step 2 - Determine which factors are applicable to the decision
  - statutory requirements
  - type of facility
  - number of nuclear installations to be regulated
  - Life-cycle stage

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Authorizations

- Step 2 – Ranking factors
  - Statutory requirements most heavily weighted (by law)
  - Type of facility (risk-related). Fuel cycle facilities represent less risk to public; authorizations delegated.
  - Number of installations being regulated (resources, work load)
  - Life-cycle stage - (type of facility not a factor for initial construction/operating license (Commission approval), but it is for license extension and license amendments).

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Authorizations

- Step 3 - Integrate the applicable factors into the decision-making process
  - Statutory authority for licensing nuclear facilities in the U.S. originates in the Atomic Energy Act of 1954 (as amended). The Act authorizes the NRC to issue 40-year initial licenses for commercial power reactors.
  - 10 CFR Part 52 - authority for issuing early site permits, design certifications, combined construction and operating licenses for operating nuclear power plants rests with the Commission.

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Authorizations

- Step 3 - Integrate the applicable factors into the decision-making process
  - NPPs
    - License extensions – delegated to Director, Office of Nuclear Reactor Regulation
    - License amendments – delegated to lower level supervisors (Branch Chiefs) based on volume of actions.

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Authorizations

- Step 3 - Integrate the applicable factors into the decision-making process
  - Non-power reactors (research reactors)
    - License extensions - delegated to lower level supervisors due to the reduced risk associated with these facilities.
    - License amendments – delegated to lower level supervisors for same reason.

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Authorizations

- Step 3 - Integrate the applicable factors into the decision-making process
  - Fuel cycle facilities
    - authority to issue, renew, amend and terminate by-product, source and special nuclear material licenses resides at the Division Director level. This level is appropriate based on the reduced risk to the public posed by these facilities.

Authorizations

- **Rulemaking example**

- Step 1- Identify the required authorization
  - Authorization to issue regulations

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Authorizations

- Step 2 - Determine which factors are applicable to the decision
  - statutory requirements
  - type of rulemaking
  - level of stakeholder involvement
  - resource impact on licensees

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Authorizations

- Step 2 – Ranking factors
  - Statutory requirements carry the greatest weight.
  - Type of rulemaking is another factor. Certain rules require routine revision because of updating of codes and standards, or establishing annual fees for licensees. These types of rulemakings are repetitive in nature and generally do not require changes in policy; therefore, the Commission may delegate these types of rulemakings to the NRC staff.

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Authorizations

- Step 2 – Ranking factors
  - Some types of rulemakings may elicit strong stakeholder interest that may result in the Commission retaining rulemaking authority instead of delegating to staff.
  - The Commission may retain authority for rulemakings that may have a significant impact on resource requirements for licensees.

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Authorizations

- Step 3 - Integrate the applicable factors into the decision-making process
  - Statutory authority - The Energy Reorganization Act of 1974 allows the Commission to delegate certain regulatory functions to the Directors of Nuclear Reactor Regulation (NRR), and Nuclear Material Safety and Safeguards (NMSS)

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Authorizations

- The Commission has exclusive authority to issue rules concerning the following:
  - A significant question of policy;
  - Title 10 of the *Code of Federal Regulations* (10 CFR) Part 7, “Advisory Committees;” and 10 CFR Part 9, Subpart C, “Government in the Sunshine Act Regulations,” concerning matters of policy; and
  - Issuance and revision of policy statements.

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Authorizations

- A rule involves a significant question of policy and must be submitted to the Commission for approval and issuance if it (a) represents a major change in existing Commission policy; (b) addresses a major new issue; or (c) would result in a major commitment of resources by a class of licensee.

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Authorizations

- Rules delegated to NRR
  - incorporation by reference of American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (BPV Code) and *Operation and Maintenance of Nuclear Power Plants* (OM Code) in 10 CFR 50.55a, “Codes and standards;” revisions to certificate-of-compliance rules; and rules that make corrections or administrative changes.
  - do not raise a significant policy issue or are corrective in nature or result in a rule of a minor, corrective, or nonpolicy nature that does not substantially modify existing precedent

References

- Management Directive 6.3, “Rulemaking Process”
  - https://www.nrc.gov/docs/ML1816/ML18169A097.pdf

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Graded Approach in Review and Assessment

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Review and Assessment

- Step 1- Determine the scope and depth of the review based on applicable requirements; resources to conduct the review and assessment
  - Standard Review Plans - communicate applicable requirements to be addressed in nuclear facility construction and operating license applications.

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Review and Assessment

- Standard Review Plans
  - NUREG-0800 - review of the safety analysis report (SAR) for nuclear power plants.
  - NUREG-1520 – fuel cycle facilities
  - NUREG-1537 – non-power reactors (research reactors)
  - NUREG-1567 - Spent Fuel Dry Storage Facilities

Review and Assessment

- Step 2 - Determine which factors are applicable to the decision
  - type of facility
  - experience and knowledge
  - alternative approaches, and novel design features
  - urgency for need of licensing action

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Review and Assessment

- Step 2 – Ranking factors
  - Type of regulated facility (design complexity and relative risk)
  - Experience and knowledge – reviewer experience with similar technologies results in more efficient and timely reviews
  - Alternative approaches and novel designs – require additional resource effort to review due to lack of experience
  - Urgency – generally involve licensees who require an immediate change to their technical specifications to avoid unnecessarily shutting down the plant

Review and Assessment

- Step 3 - Integrate the applicable factors into determining the optimal resource effort required commensurate with the scope and depth necessary for the review and assessment.
  - Review and assessment of NPPs requires the greatest resource effort due to the regulatory requirements, the complexity of design, and the relative risk to the public.

Review and Assessment

- Small Modular Reactors Example
  - NUREG-0800 revised to account for differences in new reactor designs, such as small modular reactors, specifically NuScale.
  - Risk-informed and integrated review framework utilizing a graded approach for R&A. Four review levels (labeled as A1 (safety-related, risk-significant), A2 (safety-related, non-risk-significant), B1 (non-safety-related, risk-significant), and B2 (non-safety-related, non-risk-significant) correlate to the safety classification and risk significance of the SSC under review.

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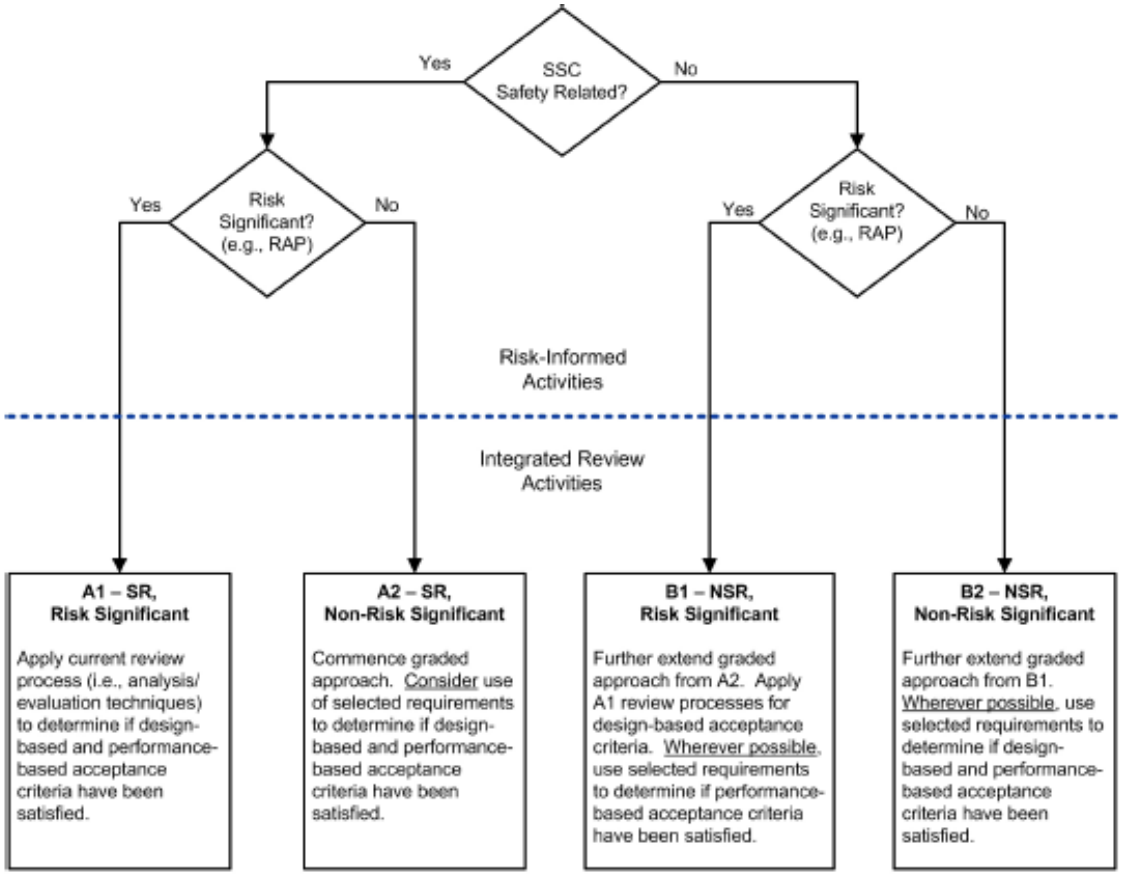
Review and Assessment



Review and Assessment

- Timeliness goals - goals for completion times for different types of license applications
  - Design certification safety reviews for large light-water reactors – 42 months
  - SMRs – 39 months
  - License extension – 22 months (w/o hearing); 30 months (w/hearing)
  - License amendments – 12 months

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Review and Assessment

- Factors affecting efficiency of reviews:
  - staff resource management
  - work prioritization
  - support for hearings
  - review phase discipline
  - critical skills availability
  - budgetary limitations
  - computational tool availability for unique reactor designs
  - overall staff workload and capacity, and
  - resolution of policy issues that may require rulemaking.

References

- NUREG-0800, “SRP for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition”
  - https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/
- NUREG-1520, “Standard Review Plan for Fuel Cycle Facilities License Applications”
  - https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1520/
- NUREG-1537, “Guidelines for Preparing and Reviewing Applications for the Licensing of Non-Power Reactors”
  - https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1537/

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Graded Approach in Inspection

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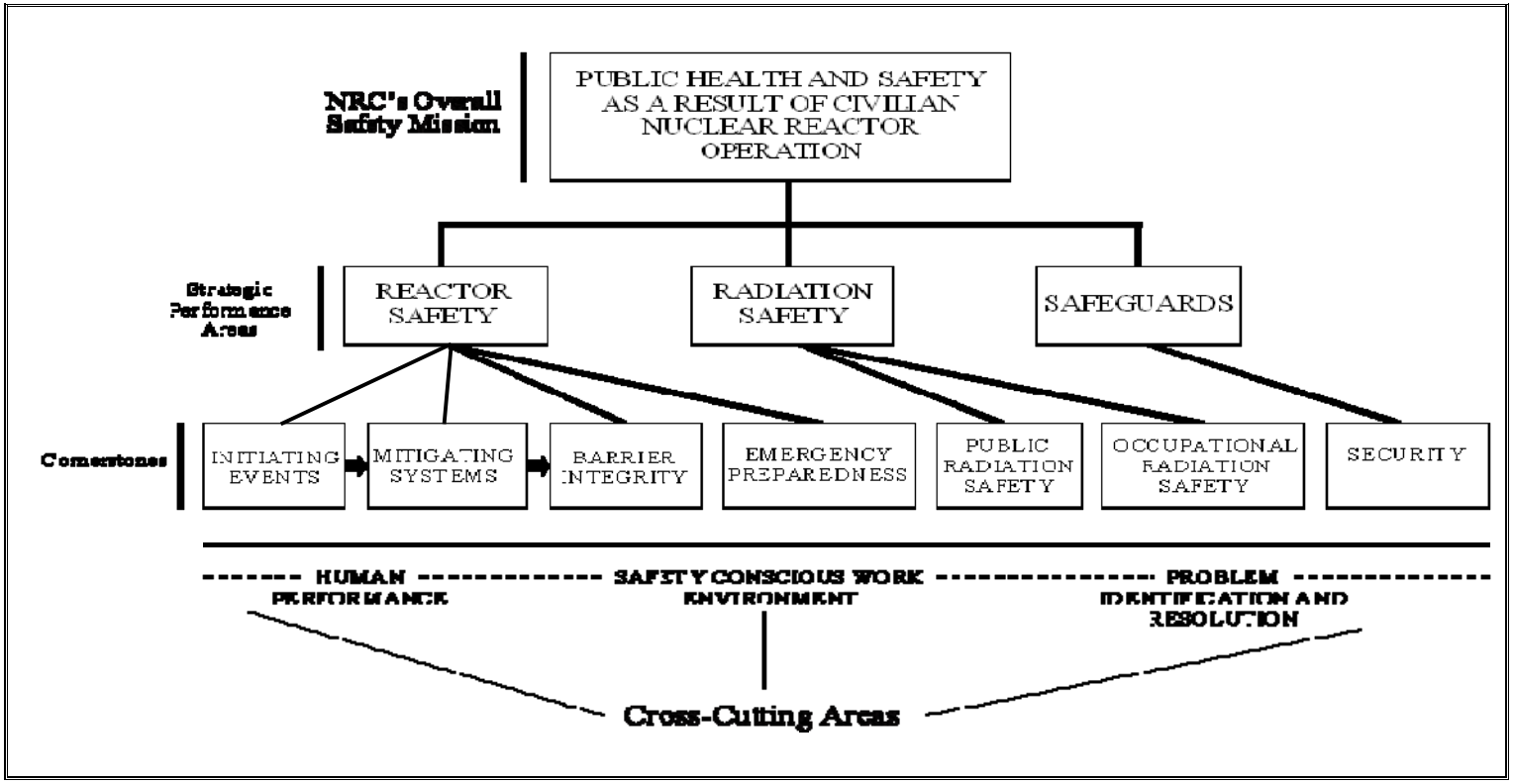
Inspection

Oversight framework



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Inspection

- Step 1- Identify activities, structures, systems, and components (SSCs) that are important to safety.
  - License application
  - FSAR
  - Probabilistic Safety Analyses (NPPs)
  - Inspection experience
  - Operating experience – historical problems

Inspection

- Step 2 - Determine which factors are applicable to the decision
  - type of facility (PWRs have different ISI requirements)
  - Stage in life cycle (construction inspection requirements differ from operations inspections
  - Operating experience - focus inspections on areas where safety-significant SSCs have a higher failure probability, informing the sample size requirements for inspections of licensee surveillances.
  - Inspector experience
  - Special and infrequently performed activities

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Inspection

- Step 3 - Integrate the applicable factors into the determining the optimal resource effort required to ensure licensees are operating their facilities in a manner that protects public health and safety, and the environment. Regulator determines the appropriate inspection sample size and frequency.
  - Baseline inspection program – minimum inspection to assure licensee performance satisfies cornerstone objectives. (What to inspect, frequency of inspection, how to inspect)

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Inspection

- Process described in SECY-99-007.
- Risk Information Matrices (RIMs) developed in determining which activities, systems, or components are to be inspected in the baseline inspection program.
- Each cornerstone has several attributes from which the inspectable areas are derived. These inspectable areas were selected based on their risk significance

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Inspection

- RIM

CORNERSTONE			INSPECTABLE AREA	PERFORMANCE INDICATOR	FREQUENCY	HOURS FOR 2-UNIT SITE PER YEAR	LEVEL OF EFFORT	BASES
I 30	M 60	B 10	Equipment Alignment	None	Semiannual and as required by maintenance	76 hrs/yr	One system walkdown every 6 months. If available system success criteria from the site specific risk study, and the system design basis should be reviewed to focus the inspection. RIM2 should be used for system selection if plant specific information has not yet been developed. In conjunction with maintenance on higher risk systems, validate critical features on lineup of the train or system providing the backup function. Hours based on 8 hrs semiannually for a complete risk important system walkdown; 4 hrs/month in walkdowns to support verification of operable system train because other train is OOS, and 1 hr/month for Identification and Resolution of Problems/Issues.	High risk configurations may occur during normal operations and on- line maintenance activities due to multiple out-of-service SSCs, and such configurations can lead to high Core Damage Probability.
I 10	M 90	B	Fire Protection	None	Triennial	36 hours/3 yrs 12 hr/yr Residents	Selection of areas inspected should consider insights from the plant specific fire risk analysis. Regional SRA to provide input. Walkdown all accessible areas of high significance. Hours are based on a regional based Program Implementation Review, and 4 hours of Identification and Resolution of Problems/Issues. Residents should perform a monthly walkdown of high fire risk areas (hours based on One hr/walkdown) to verify transient combustible loading and fire doors/barriers.	Estimated fire risk is comparable to many internal initiating events. If potential fire initiators, aids to propagation, or fire barrier breaches exist, safe shutdown of the plant may not be possible due to the failures of the inspectable features and areas.

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Inspection

- Sample size and number of hours were developed based on expert judgement and relevant risk information on how much inspection activities would be sufficient to ensure verification that the licensee was meeting the objectives of all seven cornerstones.
- IMC 0308, Attachment 2, “Technical Basis for Inspection Program,” documents scope and basis for each inspectable area.

Inspection

CORNERSTONE	INSPECTION HOURS PER YEAR (2-UNIT SITE*)
Initiating Events	182
Mitigating Systems	1151
Barrier Integrity	183
Emergency Preparedness	88
Occupational Radiation Exposure	123
Public Radiation Exposure	40
Physical Security	244
Total	2011

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Inspection

- Inspection program incorporates additional inspection in response to declining licensee performance using a graded approach. Plants, whose performance is declining based on inspection results and performance indicators will receive additional plant specific inspection, referred to as supplemental inspections.
- Described by Action Matrix

Action Matrix Concept

Licensee Response	Regulatory Response	Degraded Performance	Multiple/Repetitive Degraded Cornerstone	Unacceptable Performance
Column 1	Column 2	Column 3	Column 4	Column 5

- Increasing safety significance
- Increasing NRC inspection efforts
- Increasing NRC/licensee management involvement
- Increasing regulatory actions

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Action Matrix

		Licensee Response Column (Column 1)	Regulatory Response Column (Column 2)	Degraded Performance Column (Column 3)	Multiple/Repetitive Degraded Cornerstone Column (Column 4)	Unacceptable Performance Column (Column 5)	IMC 0350 Process[1]
RESULTS		All assessment inputs (performance indicators and inspection findings) green; Cornerstone objectives fully met	One or Two white inputs in a strategic performance area; Cornerstone objectives met with minimal degradation in safety performance	One degraded cornerstone (3 white inputs or 1 yellow input), or Any 3 white inputs in a strategic performance area; Cornerstone objectives met with moderate degradation in safety performance	Repetitive degraded cornerstone, Multiple degraded cornerstones, Multiple yellow inputs, or One red input; Cornerstone objectives met with longstanding issues or significant degradation in safety performance	Overall unacceptable performance; Plants not permitted to operate within this band; Unacceptable margin to safety	Plants in a shutdown condition with performance problems are placed in the IMC 0350 process
RESPONSE	Regulatory Performance Meeting	None	Branch Chief or Division Director meets with licensee	Regional Administrator or designee meets with senior licensee management.	EDO/DEDO or designee meets with senior licensee management	EDO/DEDO or designee meets with senior licensee management	RA/EDO or designee meets with senior licensee management
	Licensee Action	Licensee corrective action	Licensee root cause evaluation and corrective action with NRC oversight	Licensee cumulative root cause evaluation with NRC oversight	Licensee performance improvement plan with NRC oversight		Licensee performance improvement & restart plan with NRC oversight
	NRC Inspection	Risk-informed baseline inspection program	Baseline and supplemental inspection (IP 95001)	Baseline and supplemental inspection (IP 95002)	Baseline and supplemental inspection (IP 95003)		Baseline and supplemental as practicable; Special inspections per restart checklist.
	Regulatory Actions[2]	None	Supplemental inspection only	Supplemental inspection only; Plant discussed at AARM if conditions met	10 CFR 2.204 DFI; 10 CFR 50.54(f) letter; CAL/Order; Plant Discussed at AARM	Order to modify, suspend, or revoke license; Plant discussed at AARM	CAL/Order requiring NRC approval for restart; Plant discussed at AARM
COMMUNICATION	Assessment Letters	Branch Chief or Division Director reviews and signs assessment letter w/ inspection plan	Division Director reviews/signs assessment letter w/ inspection plan	Regional Administrator reviews/signs assessment letter w/ inspection plan	Regional Administrator reviews/signs assessment letter w/ inspection plan		N/A. RA or 0350 Panel Chairman review/ sign 0350-related correspondence
	Annual Involvement of Public Stakeholders	Various public stakeholder options involving the senior resident inspector or Branch Chief	Various public stakeholder options involving the BC or DD	Regional Administrator or designee discusses performance with senior licensee management	EDO/DEDO or designee discuss performance with senior licensee management		N/A. 0350 Panel Chairman conducts periodic public status meetings
	External Stakeholders[3]	None	State Governors	State Governors, DHS, Congress	State Governors, DHS, Congress	State Governors, DHS, Congress	
	Commission Involvement	None	None	Possible Commission meeting if licensee remains for 3 years	Commission meeting with senior licensee management within 6 months.[4]	Commission meeting with senior licensee management	Commission meetings as requested; Restart approval in some cases.
	INCREASING SAFETY SIGNIFICANCE →						

Inspection

- Supplemental Inspections
  - Column 2 – IP 95001 supplemental inspection (40-120 hours)
  - Column 3 – IP 95002 supplemental inspection (200 hours)
  - Column 4 – IP 95003 supplemental inspection (3000 hours) – diagnostic inspection

Inspection

- Near-Surface Low-Level radioactive waste disposal facilities
- Inspection program should define specific requirements.
  - Step 1 - Identify activities, structures, systems, and components (SSCs) that are important to safety. (What is important to inspect, and how often)
    - Phases of inspection program
      - Construction
      - Pre-operations
      - Operations
      - Closure
      - Post-Closure

Inspection

- Near-Surface Low-Level radioactive waste disposal facilities
- Step 2 – Identify and prioritize factors
  - Risk to public (low due to low levels of radiation)
  - Stage in the life-cycle – inspection requirements differ based on phase.
  - Licensee performance – may increase or decrease effort based on performance
  - Operating experience
  - Inspector experience
  - Events – will likely require increased inspection effort.

Inspection

- Near-Surface Low-Level radioactive waste disposal facilities
- Step 3 – Integrate factors to determine optimal inspection effort and frequency.
  - Life-cycle stage most important factor. Construction inspection requirements are significantly different than operations inspection.
    - Examine operational phase alone for this example.
  - Inspector experience – next most important
  - Operating experience – lessons learned from similar facilities
  - Licensee performance – important for adjusting effort

Inspection

- Near-Surface Low-Level radioactive waste disposal facilities
- What to inspect (operations) – determined by panel of experts, based on ensuring adequate protection of the public.
  - Receipt and inspection of waste
  - Retention in secure temporary storage
  - Emplacement for disposal
  - Placement of cover
  - Record-keeping in accordance with management controls and quality assurance procedures.

Inspection

- Near-Surface Low-Level radioactive waste disposal facilities
- Inspection frequency (operations) – determined by panel of experts, based on ensuring adequate protection of the public.
  - Semi-annual for most inspectable areas (radiation protection, operations review, facility engineering, solid waste management and transportation, management organization and controls, surveillance testing, environmental programs, emergency planning)
  - May be decreased to annual based on licensee performance (no more than 2 very low safety significance violations; no significant program changes since preceding inspection.

Inspection

- Near-Surface Low-Level radioactive waste disposal facilities
- Inspection frequency (operations)
  - Sampling inspection except for review of changes, and tracing of lost or overdue shipments
  - Any inspection effort greater than normal should be established at a level commensurate with whatever is needed to resolve identified problems and their importance to safety.
    - Events – inspectors should review reportable and non-reportable events that involve contamination, releases, equipment malfunctions, or other similar events that have generic significance. Should review corrective actions.

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References

- IMC 0305, “Operating Reactor Assessment Program”
- IMC 0308, Attachment 2, “Technical Basis for Inspection Program”
- Inspection Procedure 95001, “Supplemental Inspection Response to Action Matrix Column 2 Inputs
- Inspection Procedure 95002, “Supplemental Inspection for One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area
- Inspection Procedure 95003, “Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs or One Red Input
- IMC 2401, “Near-Surface Low-Level Radioactive Waste Disposal Facility Inspection Program”

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Graded Approach in Enforcement

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Enforcement

Step 1 – Identify the non-compliance and determine safety significance or severity level

- Non-compliances and inspection findings (failure to meet a requirement or standard (a standard includes a self-imposed standard such as a voluntary initiative or a standard required by regulation) that was reasonably within the licensee's ability to foresee and correct and should have been prevented)

Enforcement

Step 1 – Screen for significance

- Traditional enforcement – severity levels
  - Willful, impeding the regulatory process, actual safety consequence
  - SL determined by criteria described in Enforcement Manual
- Reactor oversight process findings – significance levels
  - Significance Determination Process (SDP) – IMC 0609

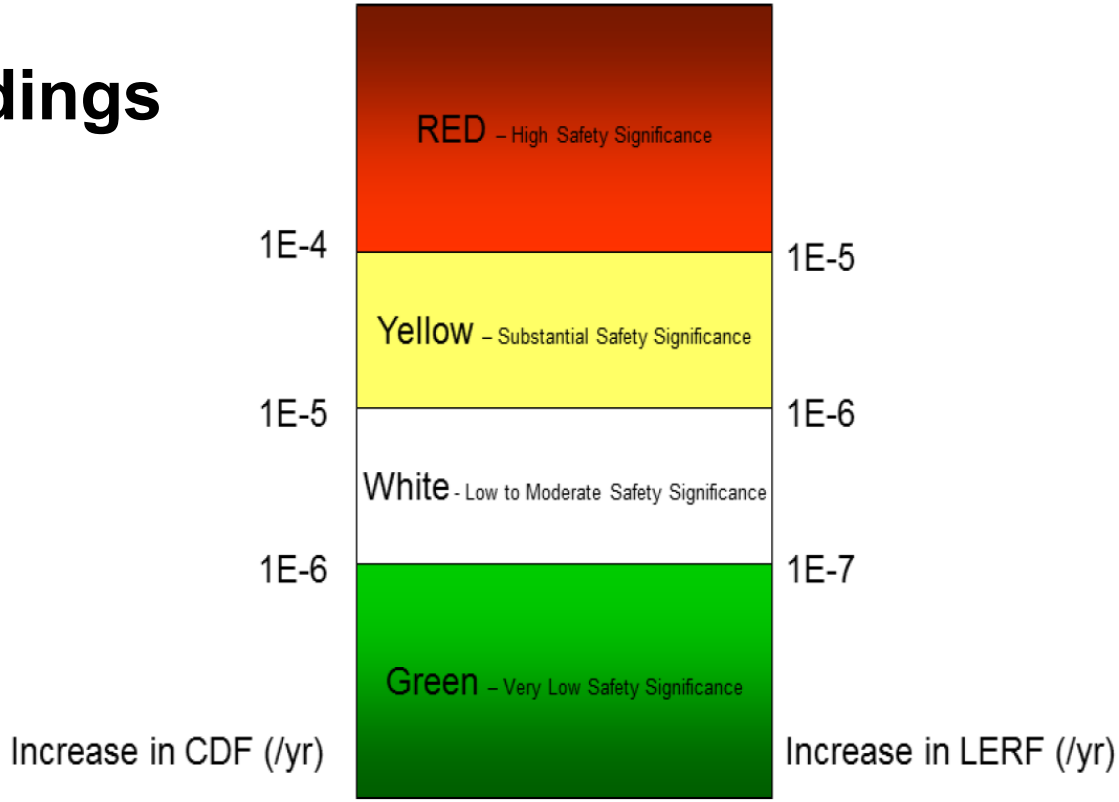
Enforcement

Traditional enforcement

- Severity Level I - violations are those that resulted in or could have resulted in serious safety or security consequences
- Severity Level II violations are those that resulted in or could have resulted in significant safety or security consequences
- Severity Level III violations are those that resulted in or could have resulted in moderate safety or security consequences
- Severity Level IV violations are those that are less serious, but are of more than minor concern, that resulted in no or relatively inappreciable potential safety or security consequences

Enforcement

SDP Findings



Enforcement

- Step 2 – Identify applicable factors to consider
  - The safety significance or seriousness of the violation or non-compliance;
  - Who identified and reported the non-compliance, i.e., whether the non-compliance was self-reported or identified during an independent inspection;
  - Timeliness of corrective actions to restore compliance with the requirements;
  - The frequency and number of deficiencies;
  - Whether or not the identified deficiency is repetitive; and
  - Willfulness

Enforcement

- Step 3 - Integrate factors into decision-making process to determine appropriate enforcement action
  - Enforcement tools:
    - Minor violation (entered into licensee corrective action program)
    - Non-cited violation (NCV = non-escalated enforcement)
    - Notice of violation (NOV = escalated enforcement)
    - Civil penalty
    - Orders

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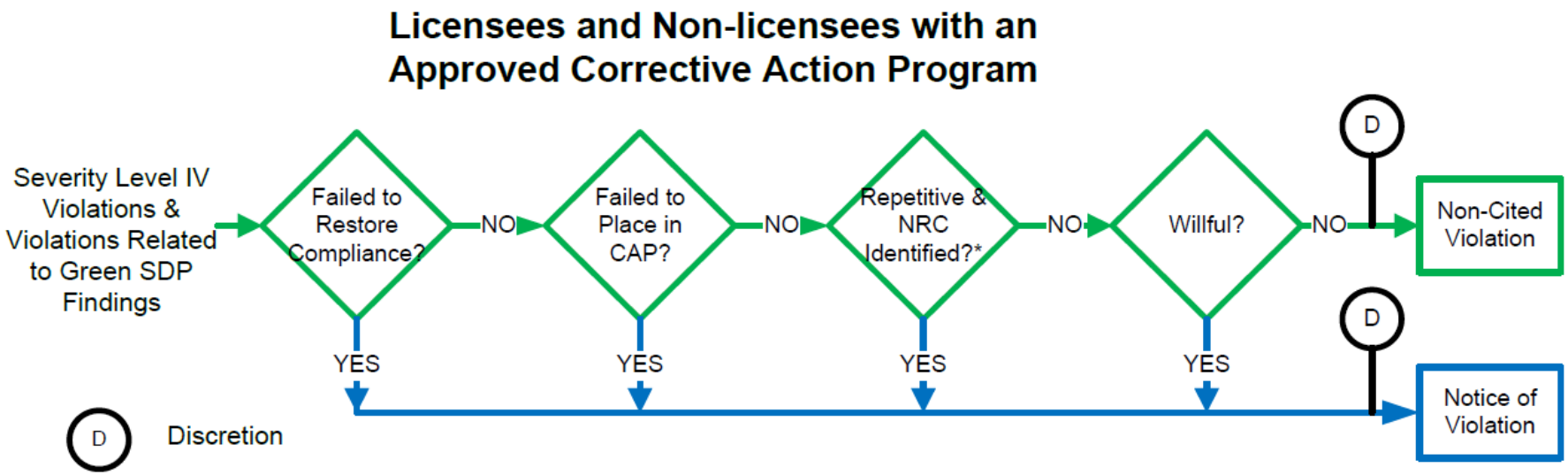
Enforcement

Step 3 – safety significance of the non-compliance is the primary factor in determining the appropriate tool.

- Other factors mitigate or exacerbate the significance
- Licensee-identified mitigates – encourages licensees to find and fix problems before regulator finds them.
- Repetitive exacerbates – corrective actions untimely or ineffective
- Willful exacerbates – knowingly and deliberately violates regulations

Enforcement



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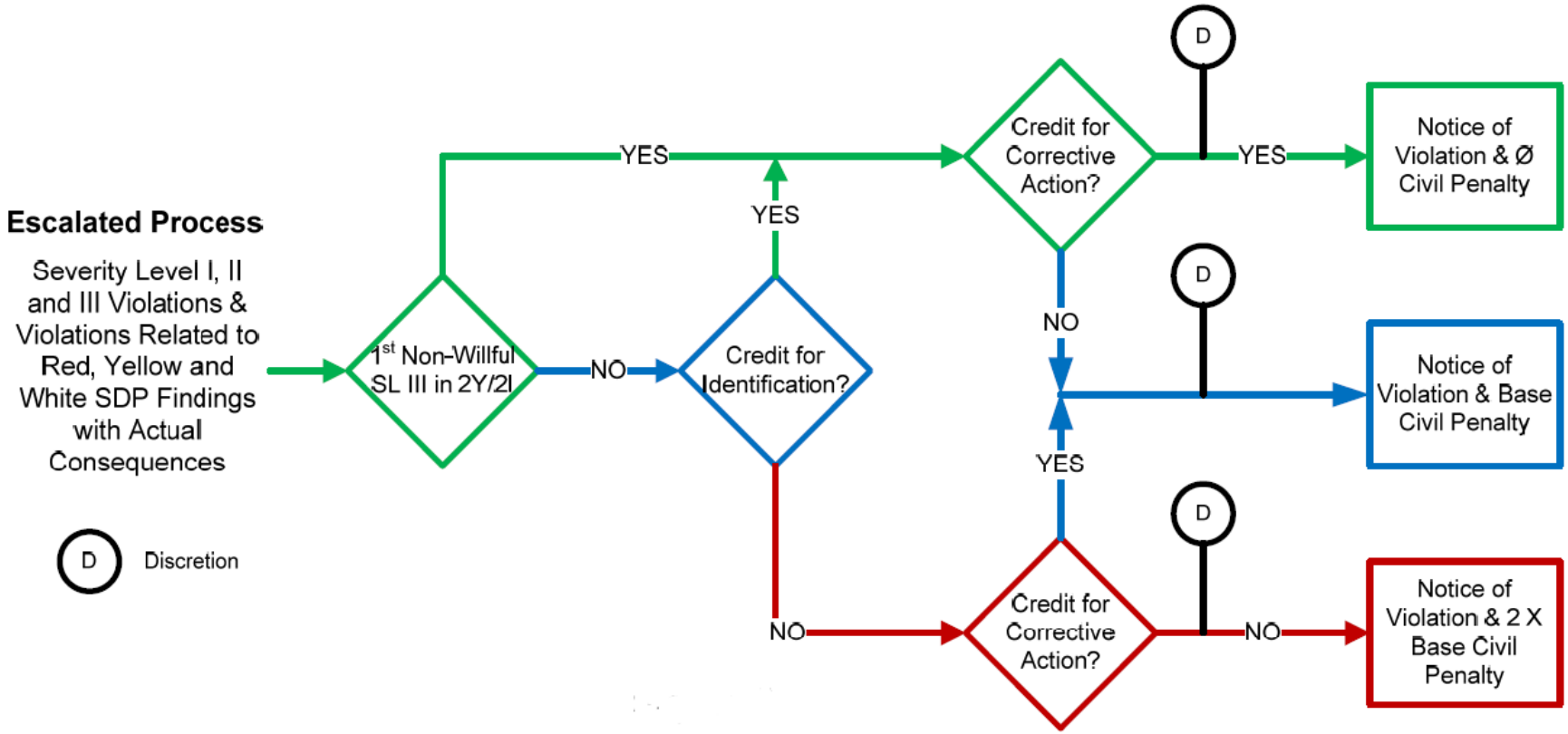
Enforcement



Enforcement

- Specific guidance located in NRC Enforcement Manual
  - https://www.nrc.gov/about-nrc/regulatory/enforcement/guidance.html#manual

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Graded Approach in Communication and Consultation

Dan Merzke

U.S. Nuclear Regulatory Commission

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Communication

Stakeholders:

- The general public
- National government
- State or provincial government
- Local government
- Licensees
- Nuclear industry
- International counterparts
- Media
- Radiation workers
- Activist groups
- Civic groups

Communication

Communication Tools:

- Press releases
- Social media
- News media (newspapers, television, radio)
- Internet
- Public meetings
- Inspection reports
- Documents for public comment
- Community outreach
- Information seminars or conferences
- Regulator generic communications

Communication

Communicating with Stakeholders on Licensee Performance - Annual local public meetings for all reactor licensees to discuss performance

Communication

Step 1: Identify Stakeholder Involvement

- The purpose of these annual meetings is to meet with the public to discuss licensee operating performance during previous year.
- Public
- Licensee
- Media
- Local government officials
- Activists

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Communication

Step 2: Determine which factors are applicable

- Public interest (historical and current)- primary factor
- Operating performance – if notably declining, interest increases
- Perceived safety significance of any recent events
- Timeliness – confidence in regulator

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Communication

Step 3: Integrate the applicable factors into the decision-making process (determine appropriate communications tools, who delivers message, and timing)

- IMC 0305, “Operating Reactors Assessment Program,” describes graded approach for annual perf. meetings.
- Communication activities are dictated by the Action Matrix.

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Action Matrix

		Licensee Response Column (Column 1)	Regulatory Response Column (Column 2)	Degraded Performance Column (Column 3)	Multiple/Repetitive Degraded Cornerstone Column (Column 4)	Unacceptable Performance Column (Column 5)	IMC 0350 Process[1]
RESULTS		All assessment inputs (performance indicators and inspection findings) green; Cornerstone objectives fully met	One or Two white inputs in a strategic performance area; Cornerstone objectives met with minimal degradation in safety performance	One degraded cornerstone (3 white inputs or 1 yellow input), or Any 3 white inputs in a strategic performance area; Cornerstone objectives met with moderate degradation in safety performance	Repetitive degraded cornerstone, Multiple degraded cornerstones, Multiple yellow inputs, or One red input; Cornerstone objectives met with longstanding issues or significant degradation in safety performance	Overall unacceptable performance; Plants not permitted to operate within this band; Unacceptable margin to safety	Plants in a shutdown condition with performance problems are placed in the IMC 0350 process
RESPONSE	Regulatory Performance Meeting	None	Branch Chief or Division Director meets with licensee	Regional Administrator or designee meets with senior licensee management.	EDO/DEDO or designee meets with senior licensee management	EDO/DEDO or designee meets with senior licensee management	RA/EDO or designee meets with senior licensee management
	Licensee Action	Licensee corrective action	Licensee root cause evaluation and corrective action with NRC oversight	Licensee cumulative root cause evaluation with NRC oversight	Licensee performance improvement plan with NRC oversight		Licensee performance improvement & restart plan with NRC oversight
	NRC Inspection	Risk-informed baseline inspection program	Baseline and supplemental inspection (IP 95001)	Baseline and supplemental inspection (IP 95002)	Baseline and supplemental inspection (IP 95003)		Baseline and supplemental as practicable; Special inspections per restart checklist.
	Regulatory Actions[2]	None	Supplemental inspection only	Supplemental inspection only; Plant discussed at AARM if conditions met	10 CFR 2.204 DFI; 10 CFR 50.54(f) letter; CAL/Order; Plant Discussed at AARM	Order to modify, suspend, or revoke license; Plant discussed at AARM	CAL/Order requiring NRC approval for restart; Plant discussed at AARM
COMMUNICATION	Assessment Letters	Branch Chief or Division Director reviews and signs assessment letter w/ inspection plan	Division Director reviews/signs assessment letter w/ inspection plan	Regional Administrator reviews/signs assessment letter w/ inspection plan	Regional Administrator reviews/signs assessment letter w/ inspection plan		N/A. RA or 0350 Panel Chairman review/ sign 0350-related correspondence
	Annual Involvement of Public Stakeholders	Various public stakeholder options involving the senior resident inspector or Branch Chief	Various public stakeholder options involving the BC or DD	Regional Administrator or designee discusses performance with senior licensee management	EDO/DEDO or designee discuss performance with senior licensee management		N/A. 0350 Panel Chairman conducts periodic public status meetings
	External Stakeholders[3]	None	State Governors	State Governors, DHS, Congress	State Governors, DHS, Congress	State Governors, DHS, Congress	
	Commission Involvement	None	None	Possible Commission meeting if licensee remains for 3 years	Commission meeting with senior licensee management within 6 months.[4]	Commission meeting with senior licensee management	Commission meetings as requested; Restart approval in some cases.
	INCREASING SAFETY SIGNIFICANCE →						

Communication

Tools (type of public meeting)

- Formal public meeting with licensee
- Open house
- Poster board session
- Round-table meeting
- Webinar

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The most appropriate meeting type will be determined by consensus at the annual internal end-of-cycle assessment meeting. The primary consideration will be historical public interest. Where interest is low, the meeting will generally be informal. Where interest is high, a more formal meeting will be held, with possible use of facilitators.

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Second most important factor is licensee performance. Guidance specifies that more formal public meetings should be considered for licensees in Columns 3 or 4 of the Action Matrix.

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Who delivers the message:

- Action Matrix dictates level of regulator management involvement. The further to the right in the Matrix (declining performance), the higher level of management is expected to be present.

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Timing:

- IMC 0305 provides guidance on timing of annual public meetings.
  - Column 1 or 2 plants – anytime during the year to get greatest public participation
  - Column 3 or 4 plants – meeting should be held within 16 weeks of the end of the assessment period. Higher stakeholder interest expected due to declining performance.

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Questions