

Update to Radiation Safety Significance Determination Process

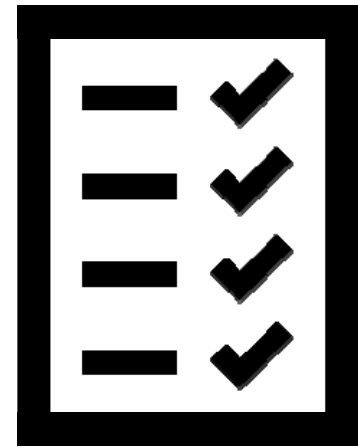
February 25, 2021

David Garmon
Health Physicist
NRR/DRA/ARCB

ADAMS Accession No. ML21055A021

Agenda

- Meeting Preliminaries
- Principles of Good Regulation
- Background of Oversight Process
- Review of Recent Activity
- Review Proposed Updates
- Looking Forward
- Discussion



Principles of Good Regulation

The NRC adheres to the following Principles of Good Regulation

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.

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.

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.

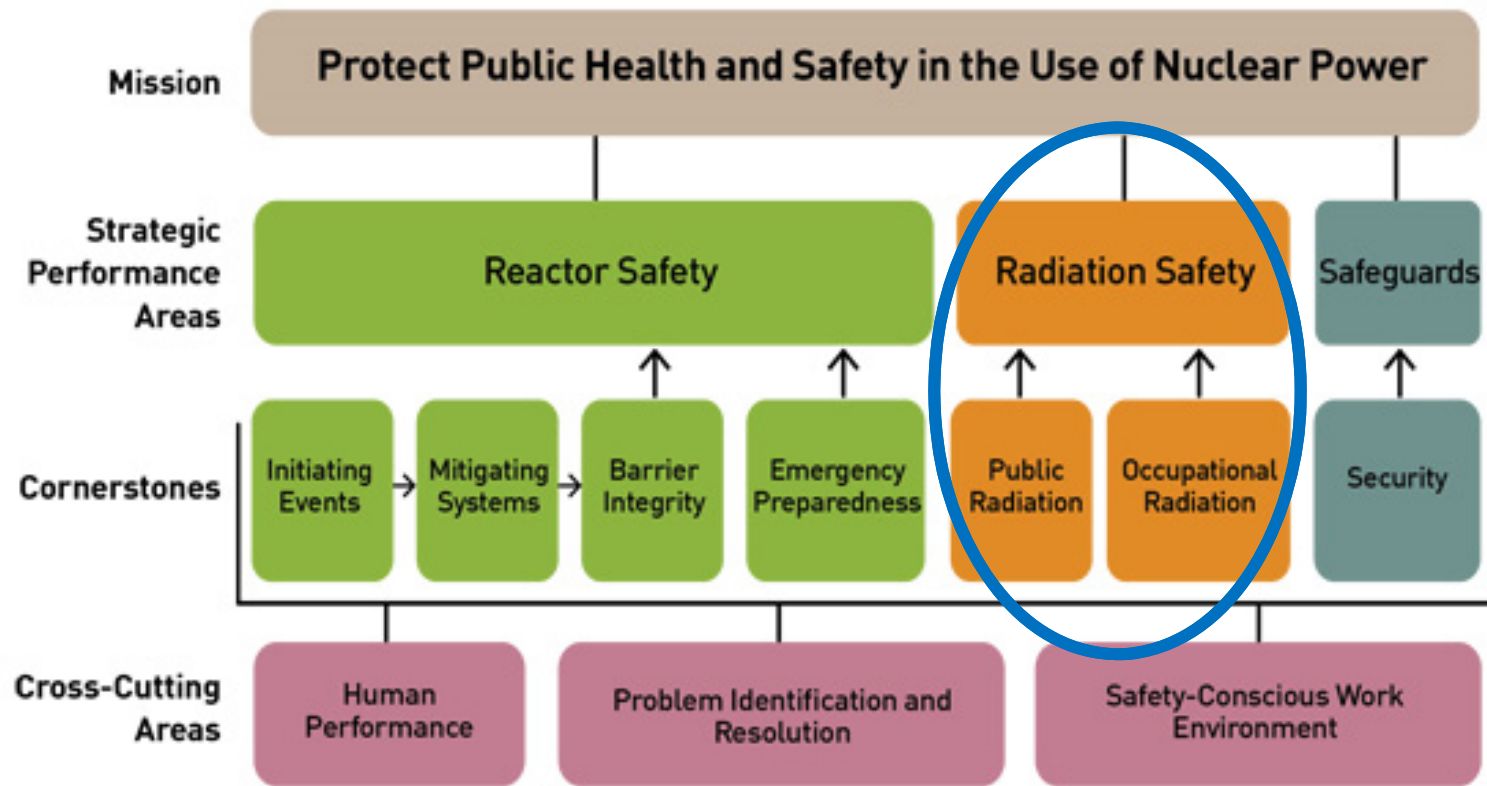
Reliability: Regulations should be based on the best available knowledge from research and operational experience. Systems interactions, technological uncertainties, and the diversity of licensees and regulatory activities must all be taken into account so that risks are maintained at an acceptably low 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.

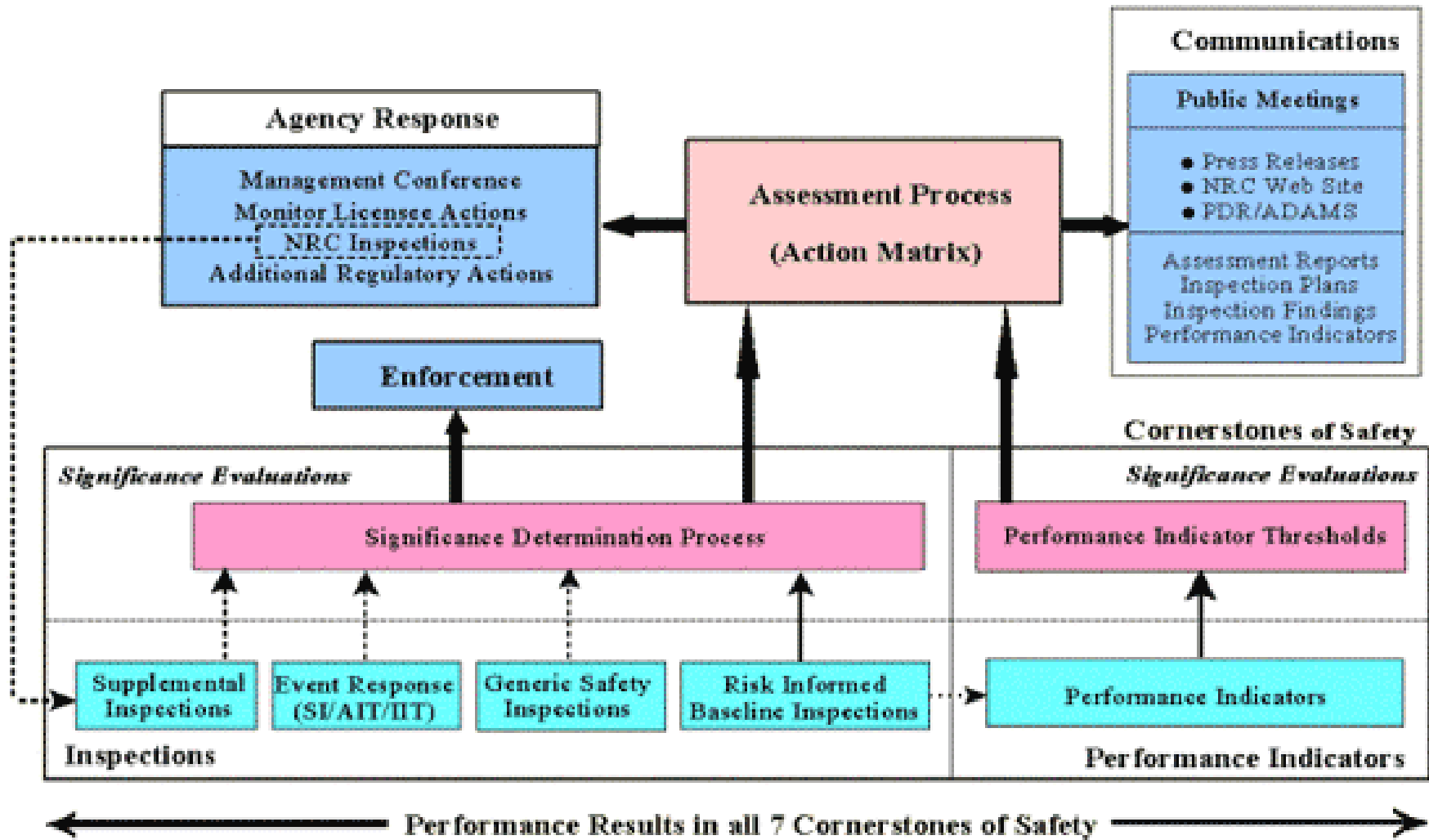


NRR Letter dated October 15, 2019: <https://www.nrc.gov/docs/ML1926/ML19260E683>
NRC Values: <https://www.nrc.gov/about-nrc/values.html>

Radiation Safety Cornerstones

Reactor Oversight Framework



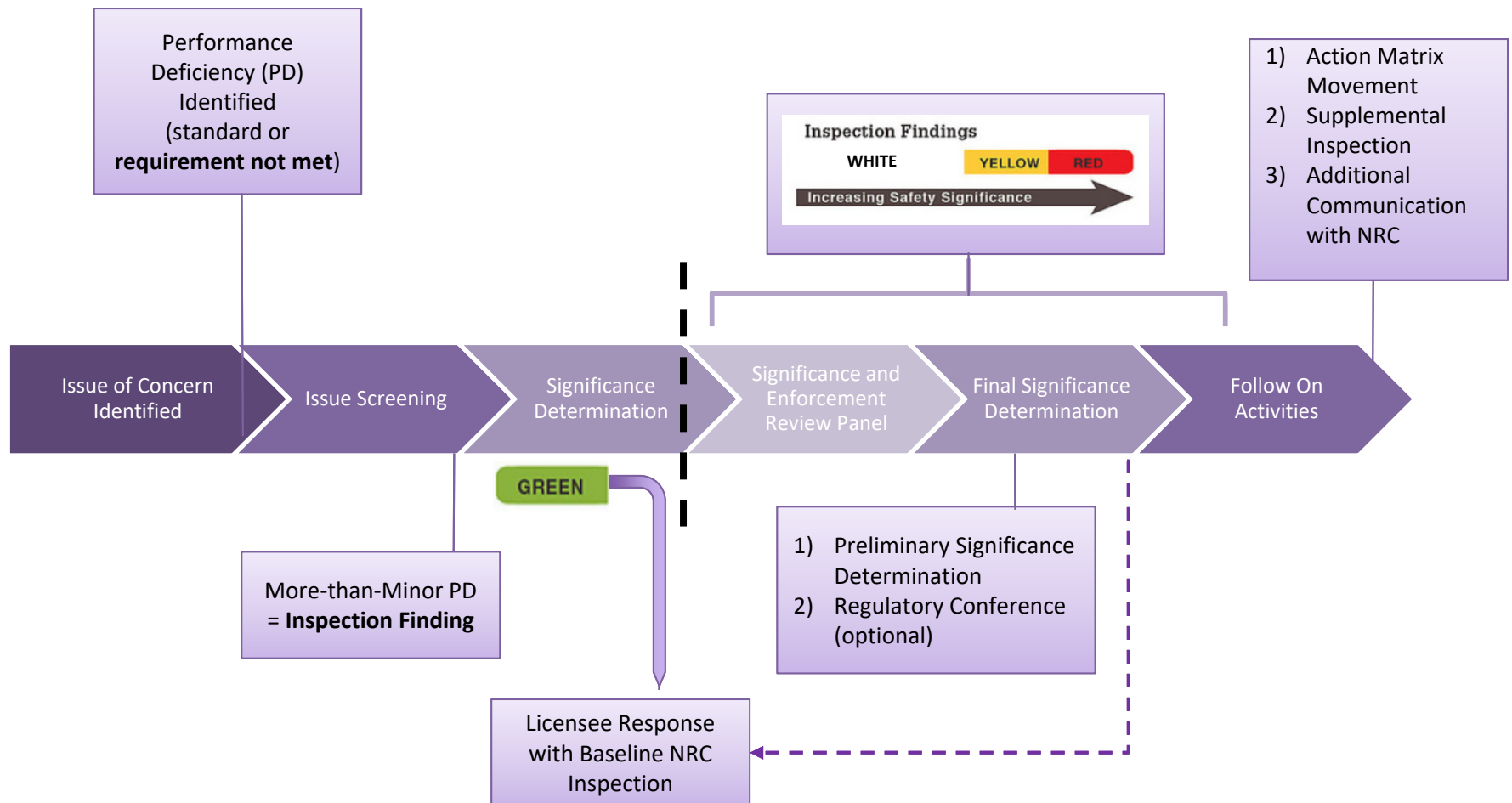


Significance Determination Process

- How the NRC categorizes inspection findings
- Purposes
 - Determine and Communicate Risk
 - Guide inspection resources



Inspection Finding Process



Documents we will be discussing

1. Inspection Manual Chapter (IMC) 0609
2. IMC 0609, Appendix D – Public Radiation Safety SDP
3. IMC 0308, Attachment 3, Appendix D – Technical Basis for Public Radiation Safety SDP
4. Draft documents available at: ML21049A364*
5. Active documents available at:
<https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/>

* <https://adams.nrc.gov/wba/>

Review of recent activity

- Published draft revision to App D in 2018 (ML18178A100)
- Received comments from NEI (ML18264A305)
- Public meeting October 21, 2020 (<https://www.nrc.gov/pmns/mtg?do=details&Code=20201205>)

Independence

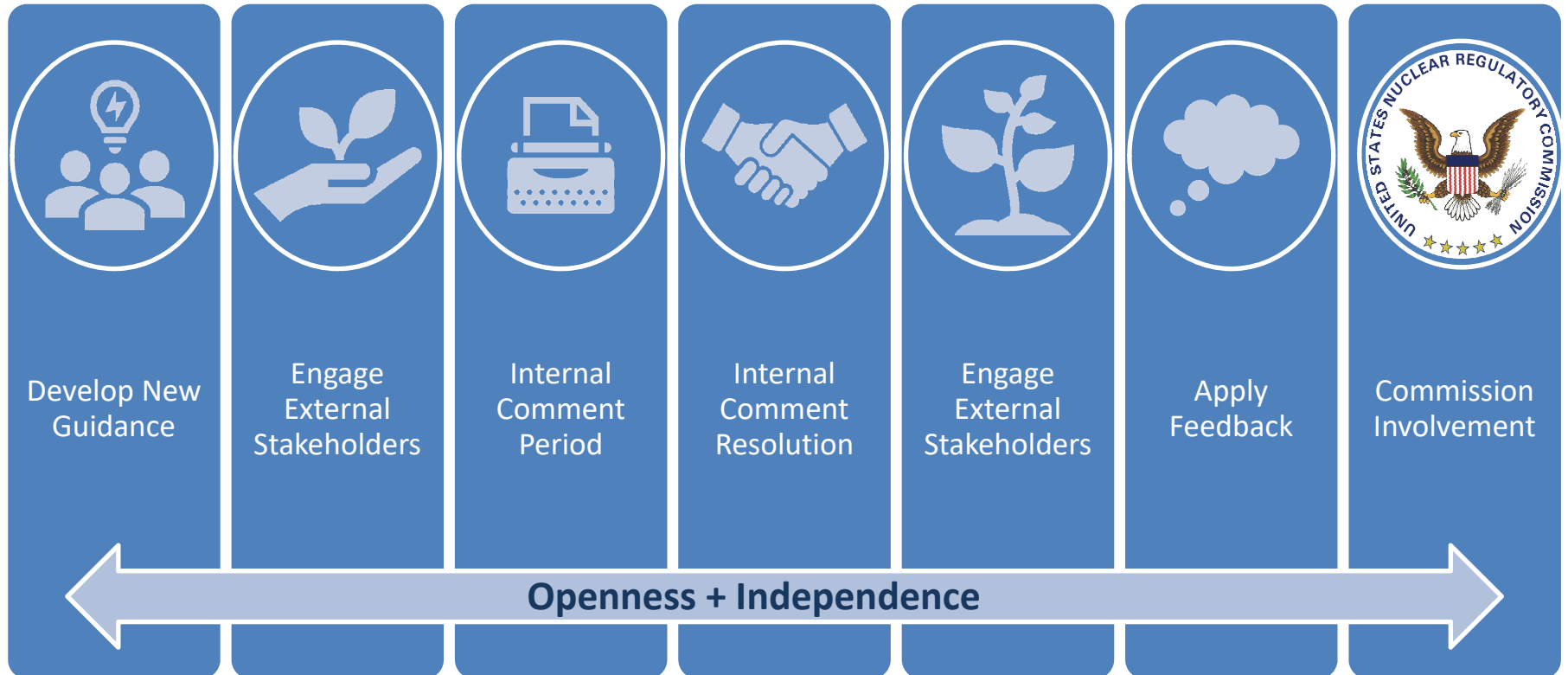
Clarity

Openness

Reliability

Efficiency

Key Steps for Updating SDP



Proposed Updates

- Addition of guidance to help dispositioning transportation inspection findings
 - Incorrect Packaging
 - Emergency Response Information
- Incorporation of Part 37 into the SDP
- Additional basis information and miscellaneous revisions as reflected in draft documents

Independence

Clarity

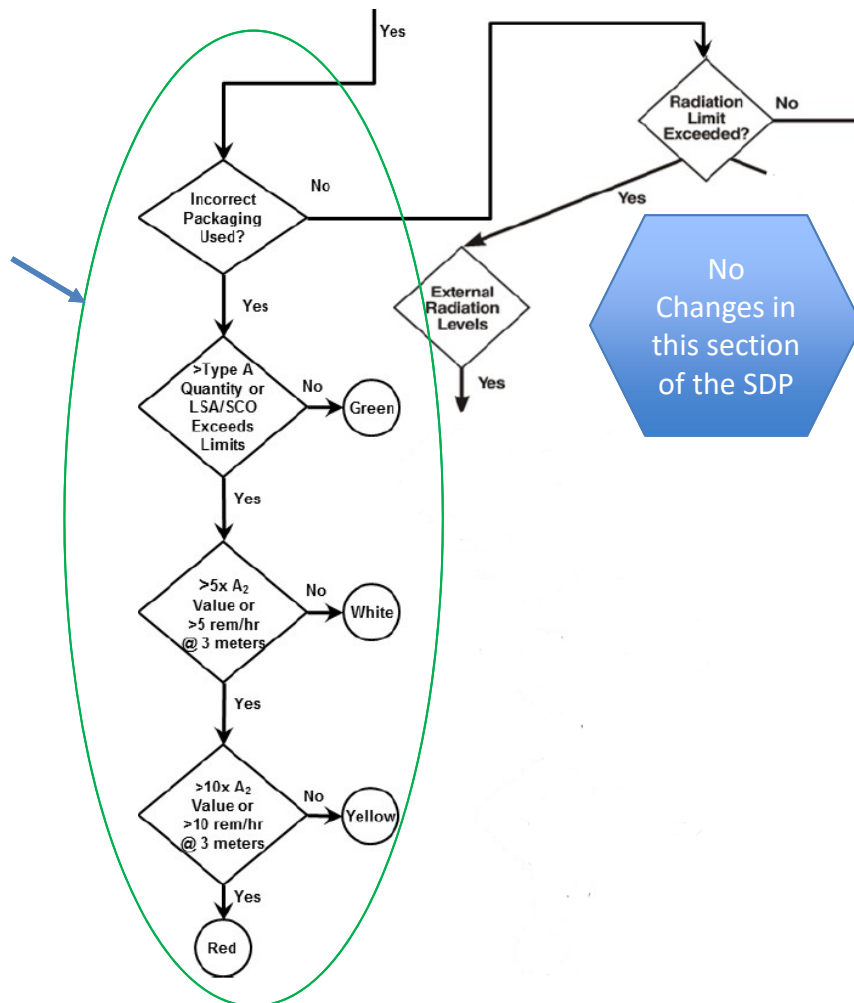
Openness

Reliability

Efficiency

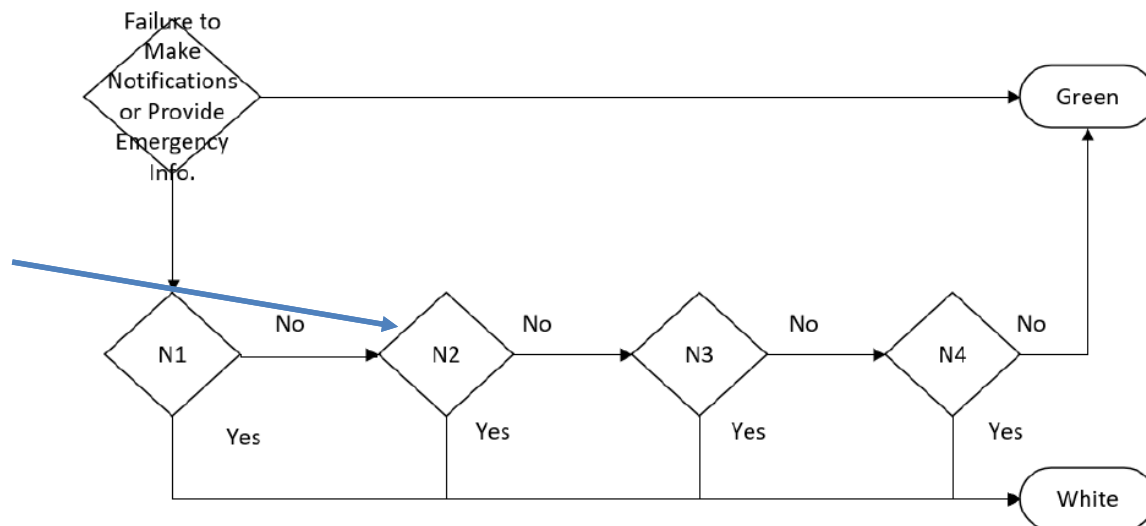
Transportation

New process for dispositioning findings where incorrect packaging is used



Transportation

Clarification that failure should have potential to seriously hamper emergency response efforts



N1 – Failure to comply with 10 CFR 71.97 – Made shipment without notifying state governor prior to shipment entering state

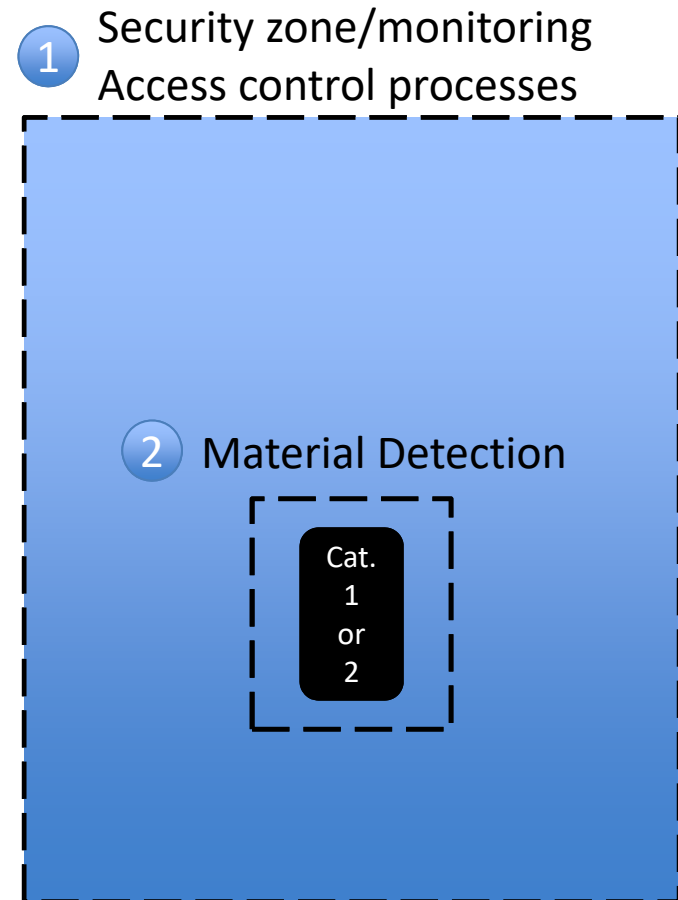
N2 – Failure to provide emergency response info resulting in serious hampering of emergency response efforts

N3 – Failure to respond during actual request IAW 49 CFR 172.604

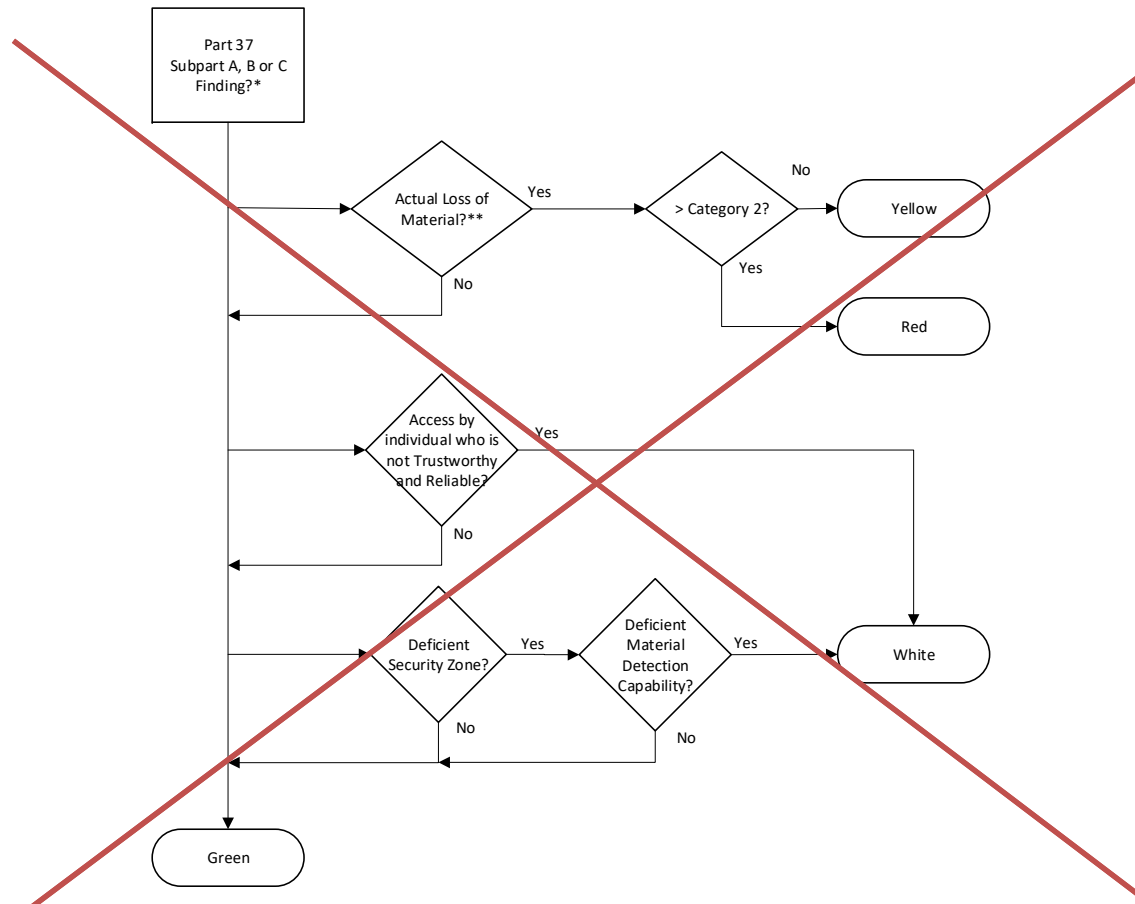
N4 – Failure to make notification of 5x limits exceeded as required by 10 CFR 20.1906

Part 37

- Provides reasonable assurance of the security of category 1 or category 2 quantities of radioactive material by protecting these materials from theft or diversion
- Rule provides defense-in-depth and redundancy
- Power reactor-specific considerations
 - EGM 2014-001
 - RIS 2015-15
- Oversight Experience
 - RIS 2018-01
 - Temporary Instruction Final Report (ML19106A157)

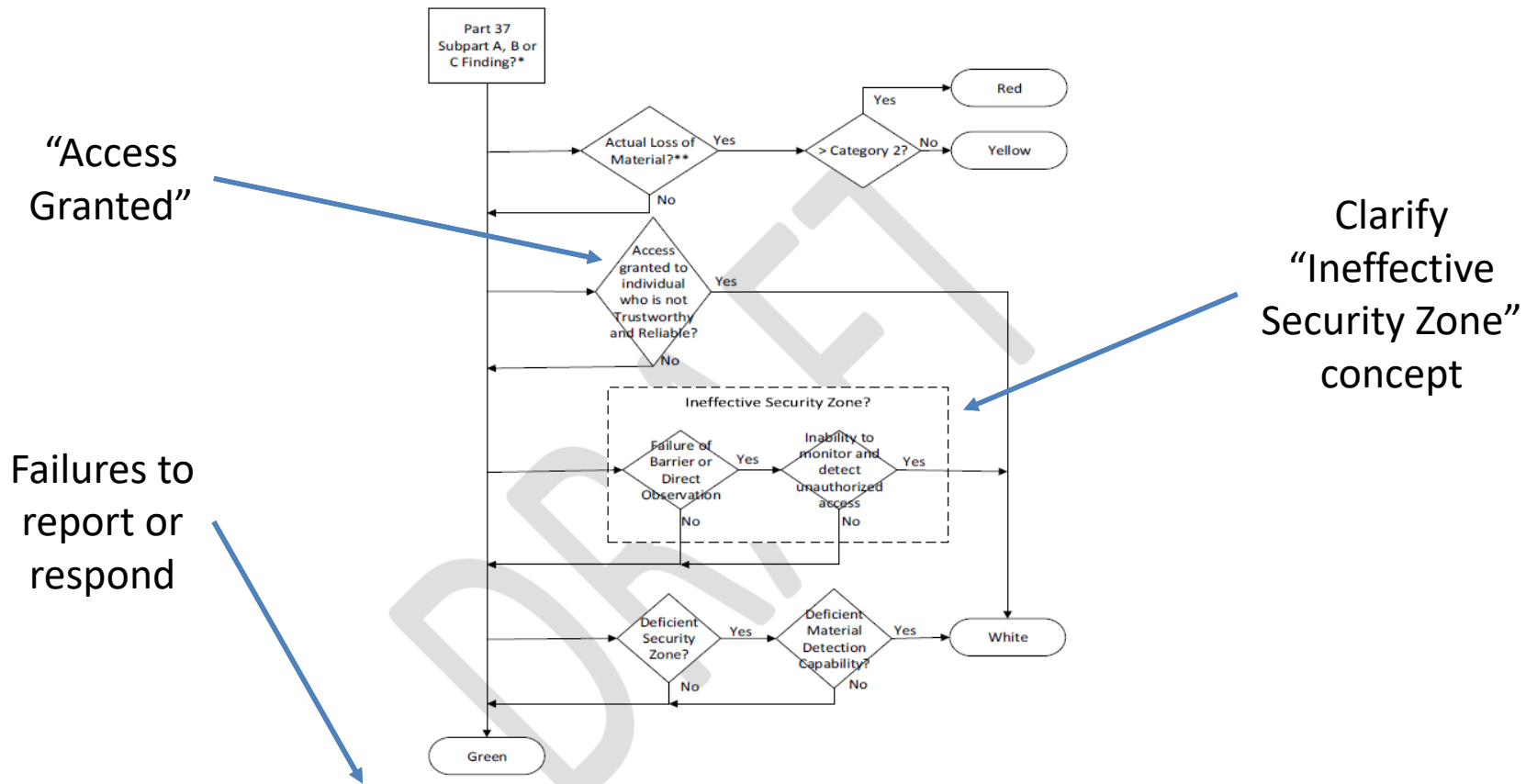


Initial Draft Part 37 SDP Diagram (1 of 2)



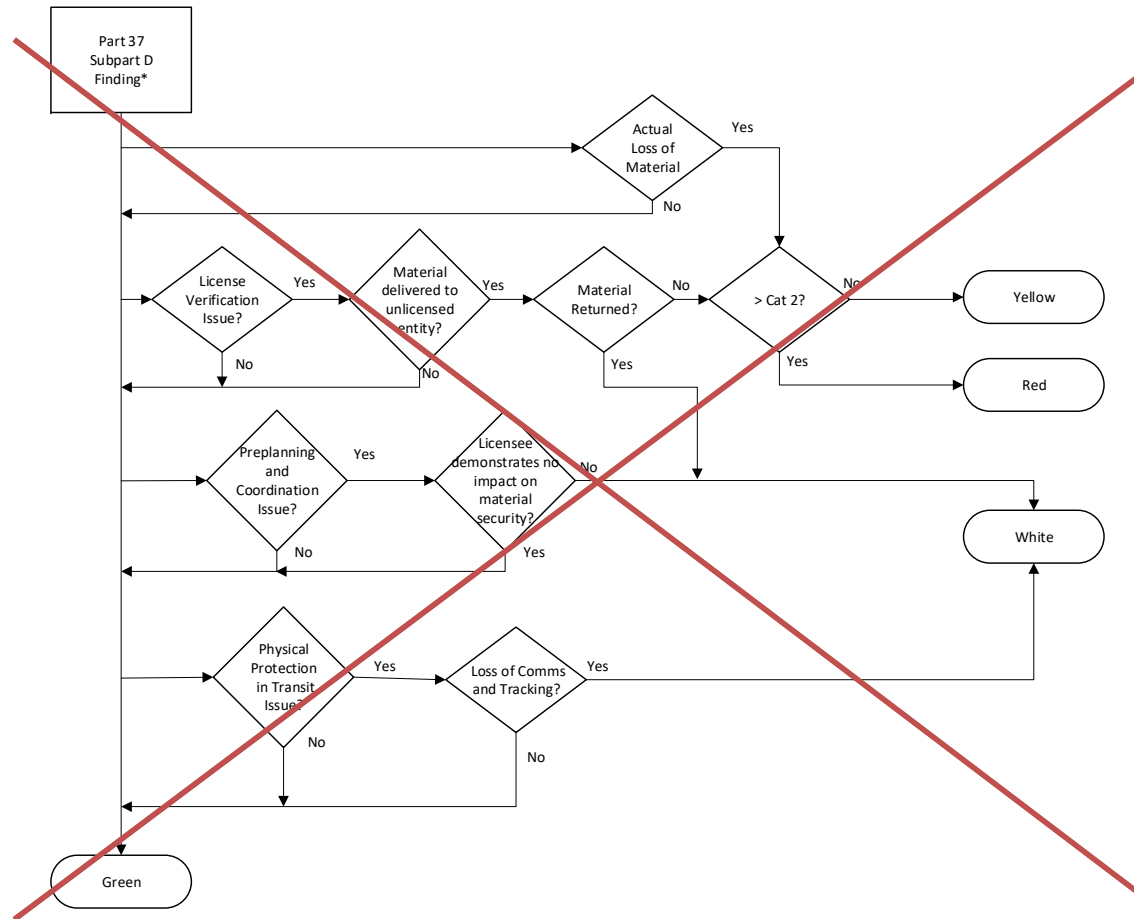
*Failures to conduct an investigation or notify the NRC when required by Part 37 shall be dispositioned IAW the NRC Enforcement Policy
**Consult with NRC Office of Investigations prior to dispositioning findings associated with actual cases of theft, diversion or sabotage of radioactive materials

Final Draft Part 37 SDP Diagram (1 of 2)



*Failures to respond or report per 10 CFR 37.49(d) or 10 CFR 37.81 shall be dispositioned using Traditional Enforcement as violations that may impact the ability of the NRC to perform its regulatory oversight function
 **Consult with NRC Office of Investigations prior to dispositioning findings associated with actual cases of theft, diversion or sabotage of radioactive materials

Initial Draft Part 37 SDP Diagram (2 of 2)

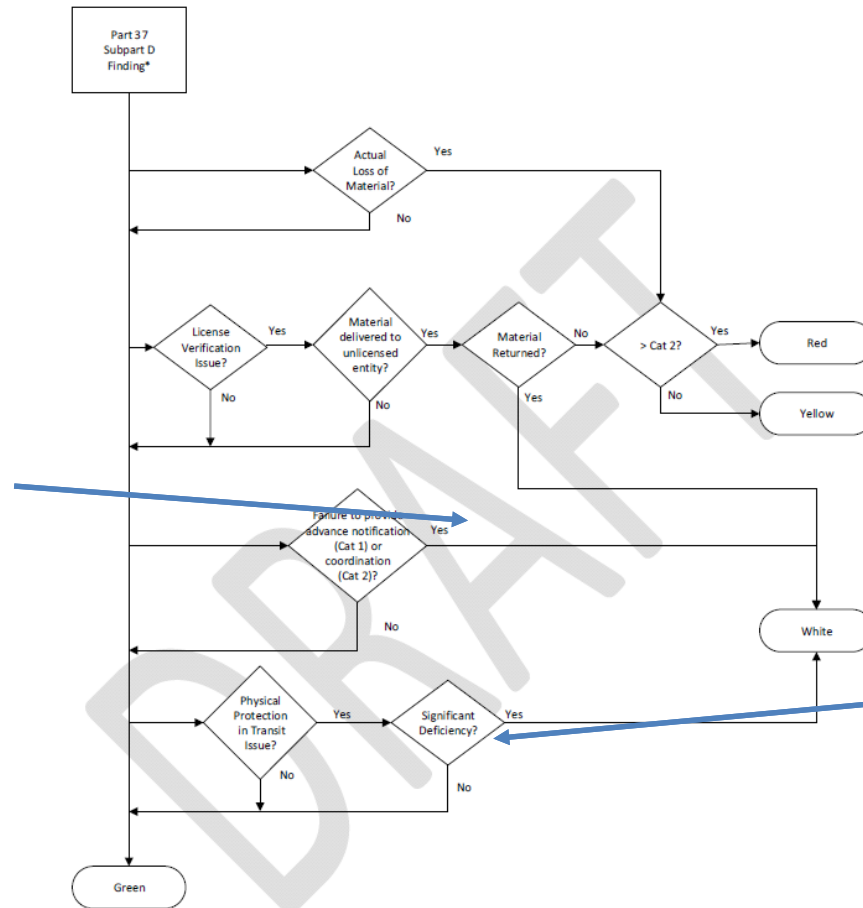


*Failures to conduct an investigation or notify the NRC when required by Part 37 shall be dispositioned IAW the NRC Enforcement Policy

Draft Part 37 SDP Diagram (2 of 2)

Removed provision for licensee to demonstrate no impact on material security.

However, retained guidance for NRC consideration during SERP process



Expanded types of violations that could result in White finding

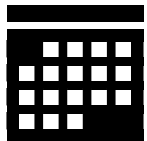
*Failures to investigate or report per 10 CFR 37.79(3) or 10 CFR 37.81 shall be dispositioned using Traditional Enforcement as violations that may impact the ability of the NRC to perform its regulatory oversight function

Tabletop (Selected Examples)

| Example | Notes |
|--|--|
| <p>The inspectors identified a violation of 37.43(c)(2), for the licensee's failure to train radiation protection personnel that had access to and worked with Category 2 materials on the security program for Category 2 material.</p> | |
| <p>The licensee satisfies the Part 37 Subpart B requirements through its Part 73 Access Authorization process. Per 73.56(n), the licensee conducts 24-month audits of its program, in lieu of the annual review required by 37.33(a). During the most recent audit, the licensee discovered that an adequate criminal history review had not been conducted on an individual prior to providing unescorted access to a room that contained category 2 material. The information that was not reviewed would have been relevant to the access approval determination.</p> | <p>Variations:</p> <ol style="list-style-type: none"> 1. The room was in a building that was in the Owner Controlled Area of the facility, outside of the Protected Area. <ul style="list-style-type: none"> • The licensee determined that the deficiency in the criminal history check would have precluded them from permitting the individual unescorted access, i.e., the individual could not have been declared to be trustworthy and reliable (or, the licensee did not supplement the non-compliant background investigation) • The licensee determined that the deficiency would not have precluded them from determining that the individual was trustworthy and reliable 2. The room was in a building that was located within the Protected Area |
| <p>Licensee staff prepared a liner for shipment to a waste processor. The liner, containing spent resin, was determined to have a total activity of 1300 curies (including 40.9 curies of cobalt (Co-60) as indicated on the Uniform Low-Level Radioactive Waste Manifest (NRC Form 541). However, at the time the shipment was offered for transport, the licensee did not identify that the 40.9 curies of Co-60 exceeded the category 2 limit of 8.1 Ci.</p> | |

Looking Ahead

- Continue providing updates and receiving external feedback through monthly ROP public meetings
- Staff decision on Commission interaction and development of communication tool (e.g., COMSECY, CA Note)



| February 2021 | March 2021 | ~April-May 2021 |
|--|--|---|
| <ul style="list-style-type: none">• Public Meeting | <ul style="list-style-type: none">• Final decision on Commission interaction | <ul style="list-style-type: none">• Communicate with Commission |

Independence

Clarity

Openness

Reliability

Efficiency

Discussion

Questions/Feedback

Micheal Smith

micheal.smith@nrc.gov

David Garmon

david.garmon@nrc.gov