



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NUREG-1022, Revision 3 Overview

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Outline

- **Purpose of Event Reporting**
- **Revision Process**
- **Schedule & Implementation**
- **Overview of Changes**
- **Going Forward**

Purpose of Event Reporting

- **10 CFR 50.72 and 50.73 event reports provide information to the Commission on significant events where Commission action may be needed to maintain or improve reactor safety or to respond to heightened public concern.**
- **The Commission made a determination as to which events were considered significant.**
- **The Commission acknowledged that the rule language cannot be precise enough to cover all the situations that might be governed by the rule. As a result, NUREG-1022 was developed.**

Purpose of Event Reporting

How Reports are Utilized by the NRC - Event Notifications

- **Submitted to the NRC Operations Center via the Emergency Notification System.**
- **The Operations Center distributes the information to NRC staff and management.**
- **NRC staff brief senior management daily on Event Notifications (ENs) and screen ENs for significant or generic implications.**

Purpose of Event Reporting

How Reports are Utilized by the NRC – Licensee Event Reports

- **Submitted to the NRC Document Control Desk which in turn processes the Licensee Event Report (LER) into the NRC's Agencywide Documents Access and Management System (ADAMS).**
- **NRC staff screen LERs for significant or generic implications.**

Purpose of Event Reporting

Relevant Guidance Documents

- **NUREG-1022, Revision 2, “Event Report Guidelines 10 CFR 50.72 and 50.73” (ML003762595) – Prior to July 1, 2013.**
- **NUREG-1022, Revision 3, “Event Report Guidelines 10 CFR 50.72 and 50.73” (ML13032A220) – On / After July 1, 2103**
 - **Federal Register Notice of Availability for NUREG-1022, Revision 3 (78 FR 9743)**
 - **Discussion of Final NUREG-1022 Revision 3 Changes (ML12216A185)**

Revision Process

Background

- **Several identified reporting issues could not be quickly resolved given ambiguities in NUREG-1022, Revision 2 guidance.**
- **Given time spent on issues, a decision was made to revise NUREG-1022.**
- **Goal of Revision: A majority of issues that required significant resources to resolve will be addressed.**

Revision Process

Highlights

- **Numerous public and internal meetings held to solicit stakeholder inputs and feedback.**
- **In resolving the ambiguities, the NRC considered the provisions of the rule itself, the associated statements of consideration, and other available guidance in that hierarchal order.**
- **Draft NUREG-1022, Revision 3, issued for public comment.**
- **Fourteen letters containing roughly 90 comments from external stakeholders were received.**
- **Peer review of disposition of comments conducted.**

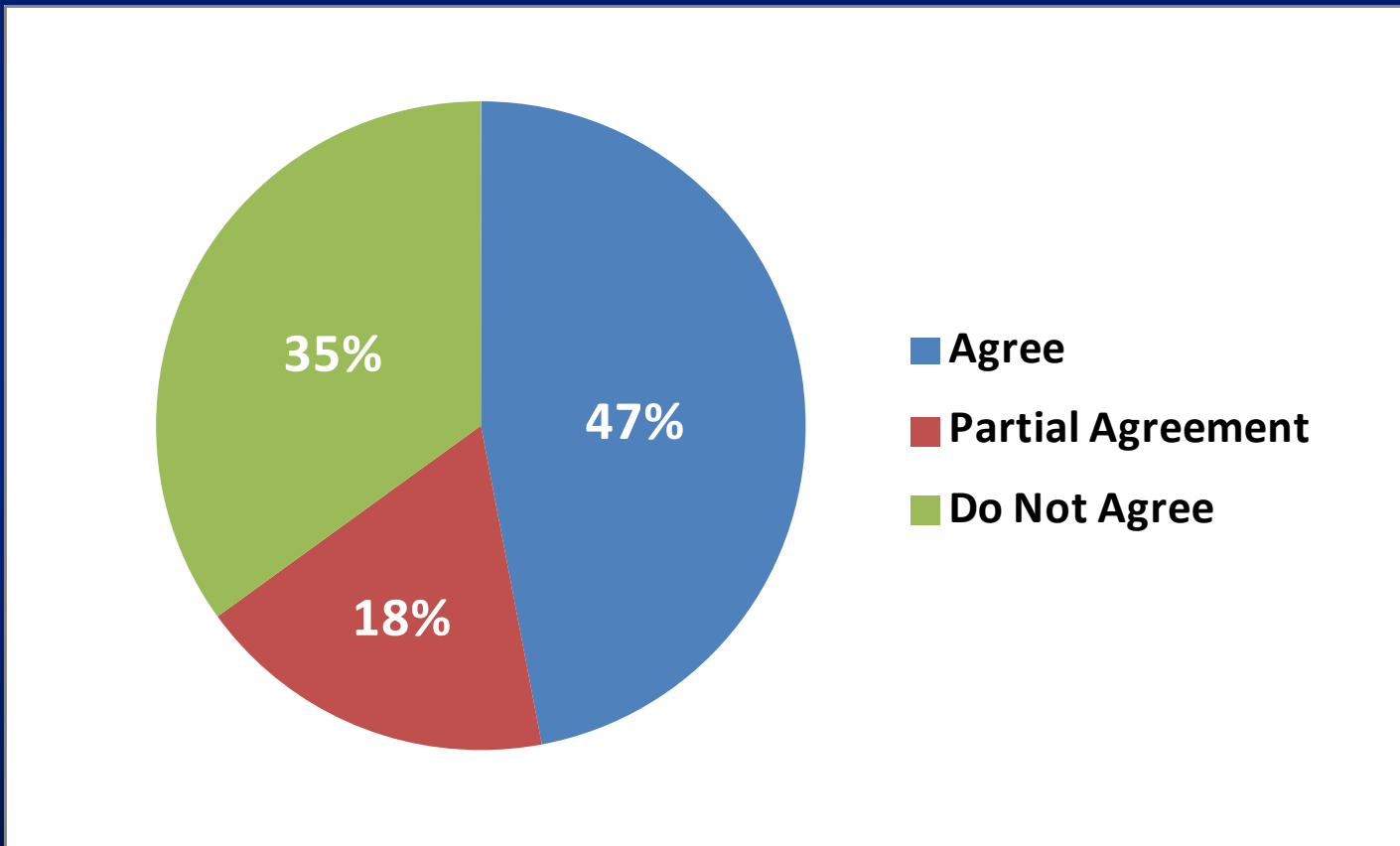
Revision Process

Top Three Areas of Stakeholder Concern

- **“Events or Conditions That Could Have Prevented Fulfillment of a Safety Function.” [50.72(b)(3)(v) and 50.73(a)(2)(v)]**
- **Historical Reporting Under 50.72 [50.72(a)(1)(ii)]**
- **Deletion of Part 21 guidance.**

Revision Process

Disposition of External Comments



Schedule & Implementation

Important Dates

- **NUREG-1022, Revision 3 published late January 2013.**
- **Federal Register Notice of Availability issued February 11, 2013.**
- **The effective date of NUREG-1022, Revision 3 is July 1, 2013.**

Schedule & Implementation

Considerations

- **NUREG-1022, Revision 2, will continue to be used by the NRC until Revision 3 becomes effective on July 1, 2013.**
- **NUREG-1022, Revision 3 guidance will be used by the NRC to evaluate the reportability of newly discovered events or conditions (whether ongoing or that may have occurred within 3 years prior to discovery) on / after July 1, 2013.**
- **There is no desire to re-evaluate event reports for which the NRC has already completed review.**
- **For criteria in which ambiguities exist in NUREG-1022, Revision 2, considerations for existing licensee evaluation methods should be taken into account until Revision 3 becomes effective.**

Overview of Changes

Highlights

- **A discussion of the changes in NUREG-1022, Revision 3, may be found in “Discussion of Final NUREG-1022 Revision 3 Changes” (ML12216A185).**
- **Any changes in NUREG-1022, Revision 3, that are not discussed in the “Discussion of Changes” document are to be considered editorial in nature and should not be construed to have any regulatory or technical significance.**

Section 2.2, “Differences in Tense between 10 CFR 50.72 and 50.73” & Section 2.5, “Time Limits for Reporting”

- **Changes in these sections reflect that, with the exception of “Events or Conditions that Could Have Prevented Fulfillment of a Safety Function,” notifications under 10 CFR 50.72 are required for any event that occurred within 3 years of the date of discovery, even if the event was not ongoing at the time of discovery (i.e. historical report).**
- **NRC position based on wording in the rule itself, discussions in the Federal Register Notice (FRN) associated with the 2000 rule change, NUREG-1022 Revision 2 discussions, and presentations to the Advisory Committee on Reactor Safeguards (ACRS) during the 2000 rule change.**
- **Appendix A of the “Discussion of Changes” document contains additional information.**

Section 2.2, “Differences in Tense between 10 CFR 50.72 and 50.73” & Section 2.5, “Time Limits for Reporting” (continued)

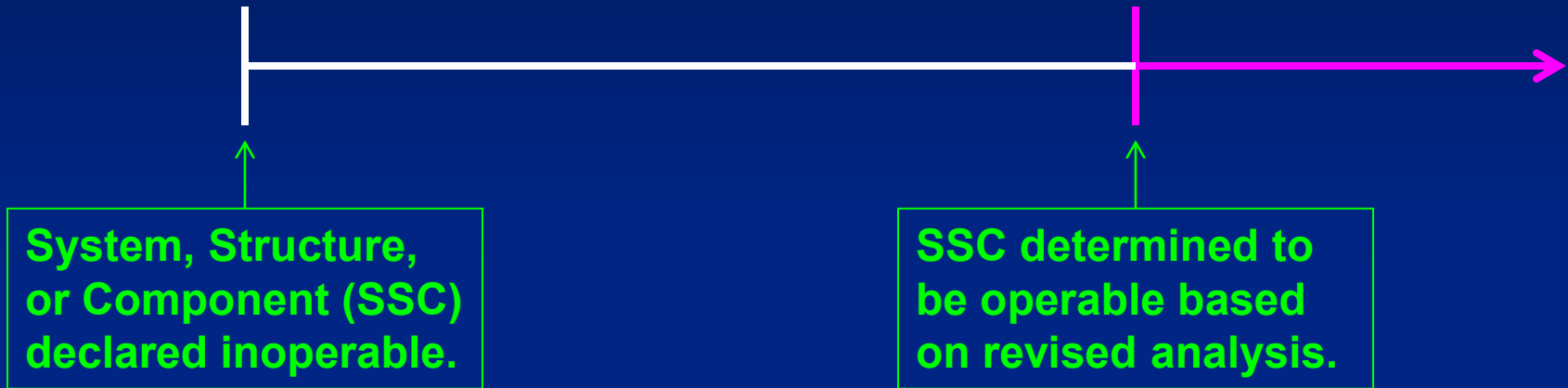
- **Specific information on historical reporting under 10 CFR 50.72 is also added in the beginning of each subsection of Section 3.2 “Specific Reporting Criteria.”**
- **Specific language in Section 3.2.4, “Degraded or Unanalyzed Condition,” reflects that it is expected that most historical reporting under 10 CFR 50.72 will be due to the discovery, while in a shutdown mode, of a previously unknown Unanalyzed Condition (~ 5 total reports per year).**
- **Many other subsections of Section 3.2 contain language that indicates that if the event or condition is reportable under 10 CFR 50.72, it should be apparent at the time of occurrence (i.e. historical reports under 10 CFR 50.72 not expected). For these subsections, this does not mean:**
 - **Historical reports under 10 CFR 50.72 are not required.**
 - **Historical reports under 10 CFR 50.72 are automatic violations for failure to report an on-going event.**

Section 2.8, “Retraction or Cancellation of Event Reports”

- **Retractions and cancellations not discussed in either the rule itself or associated Federal Register Notice (i.e. only discussed in NUREG-1022 guidance).**
- **Changes indicate that for reports that were submitted as a result of an operability determination, the retraction or cancellation should discuss why the operability determination was revised, as well as its impact on the associated reporting criteria.**
- **Consideration should be given to Technical Specification (TS) rules and usage as well as operability determination guidance associated with Regulatory Issue Summary (RIS) 2005-20, Revision 1.**
- **Discussion reiterated in Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function.”**

Retraction or Cancellation of Event Reports

Consideration



Question: Was SSC always operable?

Consideration: “...it would not be appropriate to presume operability based on the future results of an analysis when there is not a reasonable expectation that the system can perform its specified safety function during the interim.”

Retraction or Cancellation of Event Reports

NRC Review

- **Retractions and cancellations have high level of visibility.**
- **NRC senior management are briefed on all retractions.**
- **Likely to result in follow-up questions by the NRC.**

Section 3.2.2, “Operation or Condition Prohibited by Technical Specifications” When Do Such Conditions Exist?

- **Change indicates that an “Operation or Condition Prohibited by Technical Specifications” exists when the combined total allowed restoration and shutdown outage times are exceeded (regardless of time of discovery).**
- **NRC position reflects existing discussion found in Example 1.**
- **A new example 7 is created to illustrate a scenario in which the results of testing required by the Technical Specifications (TS) are available at a later time.**

Section 3.2.2, “Operation or Condition Prohibited by Technical Specifications”

LCO 3.0.3 Considerations

- **Another change indicates that entry into Limiting Condition for Operation (LCO) 3.0.3 does not constitute an “Operation or Condition Prohibited by Technical Specifications” unless associated shutdown completion times exceeded (regardless of time of discovery).**
- **A new example 6 is created to illustrate a LCO 3.0.3 entry scenario.**
- **Change results in LCO 3.0.3 actions being treated no differently than actions found in other LCOs.**
- **NRC position based primarily on presentations to the Advisory Committee on Reactor Safeguards (ACRS) during the 2000 rule change and Technical Specification (TS) rules and usage.**
- **Appendix B of the “Discussion of Changes” document contains additional information.**

Section 3.2.3, “Deviation from Technical Specifications under 10 CFR 50.54(x)”

- **Change indicates that deviations from license conditions under 10 CFR 50.54(x) are not reportable under this criterion.**
- **NRC position based on wording in the rule itself.**
- **Existing example was deleted since it was unclear.**
- **No new example determined to be needed since it should be clear when a deviation from Technical Specifications (TS) under 10 CFR 50.54(x) is implemented.**

Section 3.2.4, “Degraded or Unanalyzed Condition”

- **Change in this section broadens the discussion on what constitutes serious steam generator tube degradation to reflect adoption of Technical Specifications Task Force (TSTF)-449, Revision 4, “Steam Generator Tube Integrity.”**
- **Specific wording in NUREG-1022, Revision 2, should now be reflected in a licensee’s Technical Specifications (TS).**

Section 3.2.6, “System Actuation”

ECCS Discharges

- **Change reiterates that 10 CFR 50.72 notifications are required within 4 hours for events that result in, or should have resulted in, an emergency core cooling system (ECCS) discharge into the reactor coolant system (RCS) as a result of a valid signal (pre-planned evolutions excluded).**
- **NRC position based on wording in the rule itself, and discussions in the Federal Register Notice (FRN) associated with the original rule.**

Section 3.2.6, “System Actuation”

Valid Actuations

- **Change reiterates that valid signals are those signals that are initiated in response to actual plant conditions or parameters satisfying the requirements for initiation of the system.**
- **The mode of applicability (i.e. plant status) or plant specific classification of the system has no direct bearing on reportability under this criterion.**
- **NRC position is based on discussions in the Federal Register Notice (FRN) associated with the 2000 rule change, as well as the original rule.**
- **It is not the intent of this change to imply that all system actuations should automatically be considered “valid.”**

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

Systems within Scope

- **Changes reflect that structures, systems, and components (SSCs) within scope include only safety-related SSCs required by the Technical Specifications (TS) to be operable that are intended to mitigate the consequences of an accident as discussed in Chapters 6 and 15 of the Final Safety Analysis Report (or equivalent chapters).**
- **Accidents are identified as events of moderate frequency, infrequent incidents, or limiting faults as discussed in Regulatory Guide 1.70, “Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)” (or equivalent classifications of the three types of events).**
- **The American Nuclear Society (ANS) categorizes these events as Condition II, III and IV type events.**

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

Systems within Scope (continued)

- “...that are intended to mitigate the consequences of an accident as discussed in Chapters 6 and 15 of the Final Safety Analysis Report (or equivalent chapters)” was added since there may be scenarios in which safety-related structures, systems, and components (SSCs) are required to be operable per the Technical Specifications (TS) but are not needed for accident mitigation and are therefore not within scope. For example:
 - Non-credited defense in depth Reactor Protection System (RPS) instrumentation functions associated with a safety-related RPS card.
 - Safety-related SSCs in certain modes (i.e. Refueling) determined by the NRC to be required for defense in depth. TS associated with earlier Alternate Source Term amendments may have this scenario.
- It is not the intent of this discussion to allow for re-evaluation of the approved TS / design basis.

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

Systems within Scope (continued)

- **NRC position is based on discussions found in the Federal Register Notice (FRN) associated with the rule, Regulatory Issue Summary (RIS) 2001-14, and current guidance found in NUREG-1022, Revision 2.**
- **Appendix C of the “Discussion of Changes” document contains additional information.**

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

TS Operability Impact

- **Changes reflect that for Structures, Systems, or Component (SSCs) within the scope of this criterion, a report is required when :**
 - 1) there is a determination that the SSC is inoperable in a required mode or other specified condition in the Technical Specification (TS) Applicability;**
 - 2) the inoperability is due to one or more personnel errors, including procedure violations; equipment failures; inadequate maintenance; or design, analysis, fabrication, equipment qualification, construction, or procedural deficiencies; and**
 - 3) no redundant equipment in the same system was operable.**
- **The level of judgment for reporting an event or condition under this criterion is a “reasonable expectation” of preventing fulfillment of a safety function. For SSCs that has been declared inoperable, the SSC capability is degraded to a point where it cannot perform with reasonable expectation or reliability.**

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

TS Operability Impact (continued)

- Many of the discussions and examples found in NUREG-1022, Revision 2, have been deleted In order to ensure that it is understood that only one standard exists with regards to what constitutes a “reasonable expectation.”
- Although deleted, similar discussions and examples can be found in the Part 9900 attachment to RIS 2005-20, Revision 1 (which continues to be referenced in NUREG-1022, Revision 3).
- As an example, it is still not necessary to assume an additional random single failure. Technical Specifications (TS) typically allow a facility to continue to operate for a specified time with only one train of a two train safety system operable (i.e. no need to assume an additional random single failure).

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

TS Operability Impact (continued)

- **Unless a condition is discovered that would have resulted in the system being declared inoperable, reports are not required when:**
 - **Systems are declared inoperable as part of a planned evolution for maintenance or surveillance testing when done in accordance with an approved procedure and the plant’s Technical Specifications (TS), or**
 - **Systems are declared inoperable solely as a result of Required Actions for which the bases is the assumption of an additional random single failure (i.e. Structures, Systems, or Components (SSCs) supported by an inoperable Diesel Generator declared inoperable when its redundant SSCs are inoperable).**

Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function”

TS Operability Impact (continued)

- **NRC position is based discussions found in the Federal Register Notice (FRN) associated with the 2000 rule change, current and historic NUREG-1022 discussions, and presentations to the Advisory Committee on Reactor Safeguards (ACRS) during the 2000 rule change.**
- **Appendix D of the “Discussion of Changes” document contains additional information.**

Section 3.2.9, “Radioactive Releases”

- **Deletes guidance that Event Notifications (ENs) may be required as the 2000 rule change deleted 10 CFR 50.72 notifications under this criterion.**
- **Deletes reference to a Generic Letter (GL) 85-19, “Reporting Requirements on Primary Coolant Iodine Spikes,” that appears to have no bearing on reportability under this criterion.**

Section 3.2.12, “News Release or Notification of Other Government Agency”

When Does Reporting Clock Start?

- **Change indicates that for events or situations related to the health and safety of the public or onsite personnel, or protection of the environment, licensees are required to notify the NRC within 4 hours of whichever of the following occurs first:**
 - **A plan to report to either the press or another government agency is approved by an individual authorized to make the final decision, or**
 - **A report has actually been made to the press or another government agency.**

Section 3.2.12,
“News Release or Notification of Other Government Agency”
When Does Reporting Clock Start? (continued)

- **NRC position is based discussions found in previous NUREG-1022 guidance.**
- **Appendix E of the “Discussion of Changes” document contains additional information.**

Section 3.2.12, “News Release or Notification of Other Government Agency” Request for Early Notifications

- **Change indicates a request to submit required reports prior to conducting a news release.**
- **Similar guidance that previously existed in Section 2.5, “Time Limits for Reporting” has been relocated to this applicable section.**
- **The regulatory requirement remains a four hour report under 10 CFR 50.72.**

Section 3.2.13, “Loss of Emergency Preparedness Capabilities”

Big Picture

- **Many of the discussions contained in this section of Revision 2 to NUREG-1022 appeared to be based on potentially outdated equipment and also appeared to contain conflicting guidance on when equipment losses would be reportable.**
- **As a result, the entire section was rewritten in an attempt to provide clearer guidance that is in conformance with both the rule and its associated Federal Register Notice (FRN).**
- **The changes focus on reporting of major losses in capability as opposed to individual systems.**
- **In addition, guidance on planned activities is also provided.**

Section 3.2.13, “Loss of Emergency Preparedness Capabilities”

Big Picture (continued)

- **NRC positions documented in a manner as to not conflict with either the rule itself or its associated Federal Register Notice.**
- **Stakeholder feedback taken into account.**
- **Appendix F of the “Discussion of Changes” document contains additional information.**

Section 3.2.13, “Loss of Emergency Preparedness Capabilities”

Loss of Emergency Assessment Capability

- **“A major loss of emergency assessment capability includes those events that would significantly impair the licensee’s emergency assessment capability if an emergency were to occur. Some engineering judgment is needed to determine the significance of the loss of particular equipment.”**
- **During the NUREG-1022 revision process, there were no identified issues in this area warranting the creation of more specific guidance.**
- **Like Revision 2, NUREG-1022, Revision 3 continues to contain discussions on reporting Loss of Emergency Preparedness that affords licensees engineering judgment in determining if reports are required under 50.72(b)(3)(xiii).**

Section 3.2.13, “Loss of Emergency Preparedness Capabilities”

Loss of Emergency Assessment Capability (continued)

- **The NRC will document (typically via an Inspection Report) if it disagrees with a licensee’s engineering judgment.**
- **Such determinations by the NRC should be considered applicable only to the specific issue at that specific site, and should not be considered a generic NRC position on reporting under 50.72(b)(3)(xiii).**
- **Efforts underway to provide more specific guidance.**

Section 3.2.13, “Loss of Emergency Preparedness Capabilities”

Planned vs. Unplanned Evolutions of ERFs

- Unplanned significant degradations of a primary Emergency Response Facility (ERF) would not be reportable if the ERF’s assessment capabilities **were restored** to service within the facility activation times specified in the emergency plan.
- Planned losses are not reportable if:
 1. The ERF’s assessment capabilities **could be restored** to service within the facility activation time specified in the emergency plan in the event of an accident or the licensee had implemented viable compensatory actions; and
 2. The planned outage is not expected to, and subsequently did not, exceed 72 hours.

Section 3.2.14, “Single Cause that Could Have Prevented Fulfillment of the Safety Functions of Trains or Channels in Different Systems”

Big Picture

- **This section was revised to reflect discussions contained in Section 3.2.7, “Event or Condition that Could Have Prevented Fulfillment of a Safety Function,” because the wording under both of these criteria is identical with regard to (1) systems within scope and (2) preventing fulfillment of a safety function.**

Section 3.2.14, “Single Cause that Could Have Prevented Fulfillment of the Safety Functions of Trains or Channels in Different Systems”

Big Picture (continued)

- **Briefs to the Advisory Committee on Reactor Safeguards (ACRS) in 2000 indicate that the NRC staff was interested in non-routine operable but degraded or nonconforming events and conditions.**
- **However, the intent appears to conflict with passages found in the 2000 FRN and current NUREG-1022 guidance that set the threshold for reporting as a “reasonable expectation of preventing fulfillment of the safety function.”**
- **Appendix G of the “Discussion of Changes” document contains additional information.**

Section 5.1.8, “10 CFR Part 21 Reports”

- **Section was deleted because the NRC staff is currently evaluating the need for potential rulemaking associated with 10 CFR Part 21 reports.**
- **The current NRC requirements and staff positions have not changed (i.e. stakeholders can use positions found in the 10 CFR 21 FRN and NUREG-1022, Revision 2, while the NRC determines the course of action associated with Part 21).**
- **Above discussions found in Federal Register Notice (FRN) of Availability associated with the NUREG-1022, Revision 3.**

Going Forward

- **A goal of the Revision was that a majority of issues that required significant resources to resolve will be addressed.**
- **Engineering judgment is still afforded in some areas of the rule and its associated guidance (i.e. no specific guidance developed).**
- **Items of a lesser significance or that occur infrequently will be evaluated on a case by case basis as they come up.**
- **This presentation, as well as materials discussed during a recent NEI NUREG-1022 conference, should not be considered official NRC positions. Consider raising concern if NUREG-1022 guidance is still unclear.**
- **NRC will work with stakeholders if it is determined that issues need to be addressed.**

Going Forward

Loss of Emergency Preparedness Capabilities

- During the NUREG-1022 revision process, there were no identified issues regarding Loss of Emergency Assessment Capability warranting the creation of more specific guidance.
- NUREG-1022, Revision 3 continues to contain discussions on reporting Loss of Emergency Preparedness that affords licensees engineering judgment .
- Recent violations that took issue with a licensee's engineering judgment have resulted in increased reporting as well as a desire for more specific guidance.

Going Forward

Loss of Emergency Preparedness Capabilities (continued)

- **NEI has a task force that is developing a document that outlines more specific guidance for determining reportability under 10 CFR 50.72(b)(3)(xiii).**
- **Document will be submitted to NRC for review and endorsement.**
- **In order to achieve consistency in the meantime, inspectors are highly encouraged to seek inputs from Regional and HQ Emergency Planning staff in making a determination on reportability.**

Questions?