

Big Picture: Goals of NUREG-1022 Revision

Problem

- 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.
- Context: How big is the problem?

A limited five month review indicated that roughly 90% of all reports are submitted as expected, 5% of all reports could be considered potentially under-reported, and 5% of all reports could be considered potentially over-reported. This limited review seems to produce results consistent with previous studies conducted (ML043410335).

In general, reports are submitted as expected.

Process

- Issues identified and inputs solicited from external and internal stakeholders.
- Initial resolution of issues focused on the actual rule itself, it's associated Federal Register Notice (FRN), and staff guidance in that order. Enforcement or safety considerations then taken into account.
- Advisory Committee on Reactor Safeguards (ACRS) and the Committee to Review Generic Requirements informed of NUREG-1022 activities.
- Draft NUREG-1022, Revision 3, issued for public comment.

Goals

- A majority of issues that required significant resources to resolve will be addressed.
- Not all issues will be resolved. Items of a lesser significance or that occur infrequently will be evaluated on a case by case basis as they come up.
- After finalization of NUREG-1022, Revision 3, the U.S. Nuclear Regulatory Commission (NRC) to work with stakeholders if it is determined that issues need to be addressed.

Big Picture: Breakdown of Comments Received on Draft NUREG-1022, Revision 3

Comments Received

- Fourteen letters from external stakeholders.
- Internal comments from staff in Headquarters and Regions.
- 100+ comments received.

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.

Disposition of External Comments

- Agree – 40%
- Partial Agreement – 26%
- Disagree – 33%

Topic: Loss of Emergency Preparedness (EP) Capabilities

Draft NUREG-1022, Revision 3 Position

- A major revision was conducted by the Office of Nuclear Security and Incident Response (NSIR) on Section 3.2.13, "Loss of EP Capabilities" to reflect what constitutes a "major loss" that is reportable.
- The FRN associated with the rule lists some examples of systems within scope, but is unclear to what extent such losses would be reportable (i.e., how much degradation would have to occur for a loss to be considered "major"). In addition, NUREG-1022, Revision 2, appears to offer inconsistent and confusing guidance about reporting losses. Appendix F of "Discussion of NUREG-1022 Changes" (ML11068A030) contains additional information.

Main External Differences of Opinion

- Significance of systems within scope (i.e. Emergency Response Data System (ERDS), Emergency Notification System (ENS)).
- General acceptance criteria guidance vice site-specific criteria for determining what constitutes a major loss of a public alerting system (e.g., sirens, tone alert radios) should be provided.
- Preplanned maintenance that removes equipment associated with a licensee's Emergency Assessment Capability should not be reportable if the licensee has implemented proceduralized compensatory actions which provide the required function in a reasonably comparable manner (i.e. do not place a 72 hour limit on preplanned maintenance activities).

Recommendation

- NSIR to disposition comments associated with "Loss of EP Capabilities."

Topic: Systems within scope of "Events or Conditions That Could Have Prevented Fulfillment of a Safety Function."

Draft NUREG-1022, Revision 3 Position

- Systems and structures within scope of this criterion include systems required by the technical specifications to be operable to perform one of the four functions (A) through (D) specified in the rule, as well as their support systems that are also retained in the technical specifications.
- Considered to be a change in staff position that differs from previous staff positions found in existing and historic NUREG-1022 guidance. The change was proposed in order to facilitate the reporting of significant events for which NRC action may be needed to maintain or improve reactor safety or to respond to heightened public concern.

Main External Differences of Opinion

- Believed to be a NRC change in position that requires rulemaking to change (i.e. systems within scope currently include only those that perform a safety function credited in the accident analysis).
- Regulatory analysis is inadequate.

Recommendation

- Revise draft NUREG-1022, Revision 3 position to be consistent with the FRN associated with the rule. Systems within scope include only safety-related systems and structures that are intended to mitigate the consequences of an accident (i.e. systems and structures credited to mitigate the consequences of an accident as discussed in Chapters 6 and 15 of the Final Safety Analysis Report (or equivalent chapters)). This position would be consistent with the position found in Regulatory Issue Summary 2001-14, as well as current positions found in NUREG-1022, Revision 2.

Topic: TS system inoperabilities with regards to "Events or Conditions That Could Have Prevented Fulfillment of a Safety Function."

Draft NUREG-1022, Revision 3 Position

- For systems within scope, the inadvertent TS inoperability of a system in a required mode of applicability constitutes an event or condition for which there is no longer a reasonable expectation that equipment can fulfill its safety function (i.e. such events are reportable).
- Based on discussions in the FRN associated with the 2000 rule change, current and historic NUREG-1022 discussions, and presentations to the ACRS during the 2000 rule change. Appendix D of "Discussion of NUREG-1022 Changes" (ML11068A030) contains additional information.
- Not considered a change in staff position. A regulatory analysis was voluntarily performed on this topic in order to provide complete disclosure of the relevant information supporting decisions associated with changes found in Draft NUREG–1022, Revision 3.

Main External Differences of Opinion

- Believed to be a NRC change in position (i.e. inoperability does not necessarily result in a loss of safety function, especially in cases where the inoperability was due to administrative requirements).
- Regulatory analysis is inadequate.
- Useful examples are deleted.

Recommendation

- Maintain draft NUREG-1022, Revision 3 position.
- Maintain draft regulatory analysis. The draft regulatory analysis was considered voluntary on this topic in order to provide a complete disclosure of the relevant information supporting decisions associated with changes found in NUREG–1022, Revision 3.
- Provide a basis for removal of the "examples" upon publication of the final NUREG (i.e. via the FRN or a discussion of change document). The discussion will also detail why random single failures do not have to be considered (current staff position).
- Add discussion to the NUREG to indicate that declarations of inoperability due to Emergency Diesel Generator/Offsite Power Limiting Condition for Operation (LCOs) in which inoperability is declared as part of an Action statement that maintains defense in depth by assuming an additional single random failure would not be reportable under this criterion.

Topic: Historical Reporting Under 50.72

Draft NUREG-1022, Revision 3 Position

- With the exception of “Events or Conditions that Could Have Prevented Fulfillment of a Safety Function,” 10 CFR 50.72 notifications 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.
- Based on wording in the rule itself, discussions in the FRN associated with the 2000 rule change, NUREG-1022 Revision 2 discussions, and presentations to the ACRS during the 2000 rule change. Appendix A of "Discussion of NUREG-1022 Changes" (ML11068A030) contains additional information.
- Not considered a change in staff position. A regulatory analysis was voluntarily performed on this topic in order to provide complete disclosure of the relevant information supporting decisions associated with changes found in Draft NUREG–1022, Revision 3.

Main External Differences of Opinion

- Believed to be a NRC change in position (i.e. historic events not on-going at time of discovery should not be reportable under 50.72).
- Regulatory analysis is inadequate.

Recommendation

- Maintain draft NUREG-1022, Revision 3 position.
- Maintain draft regulatory analysis. The draft regulatory analysis was voluntary on this topic and provides a complete disclosure of the relevant information supporting decisions associated with changes found in NUREG–1022, Revision 3.
- Add more specific information in each subsection of Section 3.2 "Specific Reporting Criteria" and focus on the reporting of historical "Degraded or Unanalyzed Conditions."

Topic: Deletion of Part 21 Reporting Guidance

Draft NUREG-1022, Revision 3 Position

- Section 5.1.8, "10 CFR Part 21 Reports" was deleted because the NRC staff is currently in the process of clarifying 10 CFR Part 21 reporting requirements.
- The current NRC requirements and staff positions have not changed (i.e. stakeholders can use positions found in 10 CFR 21 FRN and NUREG-1022, Revision 2 while NRC determines course of action associated with Part 21).

Main External Differences of Opinion

- Will result in no guidance being available for defect reporting.
- No regulatory analysis presented.

Recommendation

- Recommend reinstating Section 5.1.8, "10 CFR Part 21 Reports," in the absence of any other staff guidance.

Topic: Initiation of Plant Shutdown Required by TS

Draft NUREG-1022, Revision 3 Position

- First Question & Answer in Example 3 of Section 3.2.1 “Plant Shutdown Required by Technical Specifications,” was revised to:

“Question: What about the situation where you have 7 days to fix a component or be shut down, but the plant must be shut down to fix the component? Assume the plant shuts down, the component is fixed, and the plant returns to power before the end of the 7-day period. Is that situation reportable?”

Answer: Yes, the shutdown is reportable because of the expected inability to restore equipment prior to exceeding the LCO action time.”

- The previous answer to the question was “No. If the shutdown was not required by the Technical Specifications, it need not be reported. However, other criteria in 50.73 may apply and may require that the event be reported.”

Main External Differences of Opinion

- Believed to be a NRC change in position (i.e. will result in reports for those cases where the shutdown was not required by Technical Specifications.)
- Regulatory analysis is inadequate in that none was provided.

Recommendation

- Maintain draft NUREG-1022, Revision 3 position. NUREG-1022, Revision 2 contains discussions and examples that indicate reports are required for the initiation of shutdowns if there is an expected inability to restore equipment prior to exceeding the LCO action time (i.e. these are considered shutdowns required by TS). The NUREG-1022, Revision 2 discussions do not conflict with the rule or its associated FRN discussions.
- Include a voluntary regulatory analysis on this topic in order to provide a complete disclosure of the relevant information supporting decisions associated with changes found in NUREG-1022, Revision 3.

Topic: Operation or Condition Prohibited by TS

Draft NUREG-1022, Revision 3 Position

- An Licensee Event Report is required if a condition existed for a time longer than permitted by the TS (i.e., greater than the total allowed restoration and shutdown outage time (or completion time in the Standard Technical Specifications), even if the condition was not discovered until after the allowable time had elapsed and the condition was rectified immediately upon discovery.
- Reporting is not required if an event consists solely of a case of a late surveillance test in which the oversight is corrected, the test is performed, and the equipment is found to be capable of performing its specified safety functions. This position is already found in NUREG-1022, Revision 2, and is also found in the rule itself.

Significant External Comment Received

- An external stakeholder proposed that if a missed Surveillance Requirement listed in an Action Statement is subsequently performed successfully, then it can be treated as another example of a non-reportable TS violation for a missed surveillance.

Recommendation

- Maintain current NUREG-1022, Revision 2 position (retained in draft NUREG-1022, Revision 3 as well). The rule and its associated FRN are clear that an exception is allowed only if “the event consisted solely of a case of a late surveillance test where the oversight was corrected, the test was performed, and the equipment was found to be capable of performing its specified safety functions.” If a licensee is in an Action Statement not solely as a result of a late SR, the exception would not be applicable.

Topic: System Actuations

Draft NUREG-1022, Revision 3 Position

- An actuation of any of the systems named in 10 *Code of Federal Regulation* (CFR) 50.73(a)(2)(iv)(B) is reportable unless the actuation resulted from and was part of a preplanned sequence during testing or reactor operation or the actuation was invalid and occurred while the system was properly removed from service or occurred after the safety function had been already completed.
- Emergency service water systems that do not normally run and that serve as ultimate heat sinks are listed under 10 CFR 50.73(a)(2)(iv)(B).
- The requirements / positions have not been modified in NUREG-1022, Revision 3 (i.e. guidance in NUREG-1022, Revision 2 was not changed), however an external comment was received.

Significant External Comment Received

- NUREG-1022 should be clarified to indicate that reporting of system actuations of emergency service water (ESW) systems that do not normally run, and serve as ultimate heat sinks is only required for those ESW systems which are specified in the plant's accident analysis or included in Technical Specifications.

Recommendation

- Maintain current NUREG-1022, Revision 2 position (retained in draft NUREG-1022, Revision 3 as well). As discussed in the FRN associated with the rule, the NRC's need to evaluate the event is independent of the classification of the system.

Topic: Degraded and Unanalyzed Conditions

Draft NUREG-1022, Revision 3 Position

- The FRN associated with the rule as well as current NUREG-1022 Revision 2 guidance contains examples of what constitutes a “Degraded and Unanalyzed Condition.”
- Many of the examples are very specific. One area that is unclear is a discussion that states “events should be reported only if they involve functionally related components or if they significantly compromise plant safety.” This item was briefly discussed during public meetings associated with Draft NUREG-1022, Revision 3, but was not pursued.
- The requirements / positions have not been modified in NUREG-1022, Revision 3 (i.e. guidance in NUREG-1022, Revision 2 was not changed), however an external comment was received.

Significant External Comment Received

- The term "significantly degrades /degraded plant safety" contained in the reportability criteria of 50.72(b)(3)(ii) and 50.73(a)(2)(ii)(B) is not defined. Providing a definition for this term in the NUREG-1022 guidance would aid licensees in providing consistent reporting of events or conditions with safety significance.

Recommendation

- Maintain current NUREG-1022, Revision 2 position (retained in draft NUREG-1022, Revision 3 as well). Many of the listed examples are clear. While it is agreed that the example on “events that involve functionally related components or that significantly compromise plant safety” is unclear, there are other reporting criteria that have similar considerations and provide more clearer guidance (i.e. Declaration of an Emergency Class, Events or Conditions that Could Have Prevented Fulfillment of a Safety Function, Common Cause Inoperability of Independent Trains or Channels, etc).
- If there is a desire to clarify what constitutes “events that involve functionally related components or that significantly compromise plant safety,” recommend issuing the NUREG as is to avoid delay and working with stakeholders in the near future.

Topic: Phase in Period / Enforcement Considerations

Discussion:

- 10 CFR 50.72 & 50.73 require reports for discovered events that have occurred within the previous three years.
- Enforcement considerations requested by external stakeholders:
 - Revision 3 to become effective 90 days after publication.
 - No need to undertake "look-back" reviews for previously identified conditions.

Path Forward

- Brief the Office of Nuclear Reactor Regulation Executive Team.
- Continue to involve internal and external stakeholders.
- Publication of final NUREG-1022, Revision 3 is estimated in September 2012.
- NRC to work with stakeholders to set up workshops after publication of Revision 3.
- NRC to work with stakeholders if it is determined that newly identified issues need to be addressed.