

such a question without more information about the reliability of each individual train. Licensees are required to meet the requirements of the rule. Individual licensees may determine how they will meet the functionality, reliability, and capability requirements of the rule, using appropriate guidance such as the regulatory guide, and subject to NRC review and inspection.

A licensee requested that section C.2.2 of the draft regulatory guide indicate that oxygen monitors are only required for plants that inerted containments. The NRC agrees with the commenter that oxygen monitors are only required for inerted containments, but disagrees with the suggested addition. The first sentence of section C.2.2 already states: "The proposed Section 50.44 would require that equipment be provided for monitoring oxygen in containments that use an inerted atmosphere for combustible gas control." The final version of the regulatory guide continues to indicate that oxygen monitoring is only necessary for facilities that have inerted containments. Thus, the NRC believes that the existing guidance is sufficient. This licensee also requested that another statement in section C.2.2 of the draft regulatory guide regarding existing oxygen monitoring commitments be clarified to show that these systems meet the intent of the rule. The NRC agrees with the need for clarification. The statement has been revised to read: "Existing oxygen monitoring systems approved by the NRC prior to the effective date of the rule are sufficient to meet this criterion."

D. Purge

A licensee stated that the (model) safety evaluation (SE) should address the acceptability of eliminating containment purge as the design basis method for post-LOCA hydrogen control. The NRC disagrees. The NRC model SE only addresses requirements in the standard technical specifications or licensee technical specifications (TS). In this case, the NRC model SE is for the elimination of the requirements of hydrogen recombiners, and hydrogen and oxygen monitors from the TS. Because containment purging requirements are not in the standard technical specifications or licensees' technical specifications, the NRC model SE does not make conclusions regarding the acceptability of eliminating containment purging as the design basis method for post-LOCA hydrogen control. However, the following statement from the Statements of Considerations was added to the model SE to address the comment: "... the

NRC eliminated the hydrogen release associated with a design-basis LOCA from § 50.44 and the associated requirements that necessitated the need for the hydrogen recombiners and the backup hydrogen vent and purge systems."

E. Station Blackout/Generic Safety Issue 189

The citizens group stated that the proposed § 50.44 should require the deliberate ignition systems in Mark III and ice condenser containments to be available during station blackout. This comment pertains to resolution of GSI-189. The NRC disagrees with the commenter. The evaluation and resolution of GSI-189 is ongoing and proceeding independently of the rule as noted in Section II of this Supplementary Information.

F. Containment Structural Uncertainties

The citizens group argues that the NRC does not have an adequate non-destructive tool to eliminate concerns that containments were built with voids in their walls, that all steel reinforcement bar was improperly installed during construction to ensure uniform structural integrity of containment walls, and that the concrete used in containment walls is of sufficient quality that leaching of containment walls has not weakened the structure. The commenter states that without such non-destructive tools, it is unreasonable to reduce the defense-in-depth strategy with the proposed rule. The commenter provided no technical basis or information to support the assertion that containments were inadequately constructed. The commenter also asserts that the proposed rule creates an undue risk to the public health and safety to solely accommodate the financial interest of the regulated industry. Again, no technical basis was provided to support the assertion of increased risk.

The NRC disagrees with the commenter. The NRC relies on several layers of protection to prevent, detect, and repair defects discovered during construction of concrete containments, including voids, improperly installed reinforcement bar, and low quality concrete. These layers of protection include:

(1) The implementation by the licensee of their NRC-approved 10 CFR Part 50, Appendix B, Quality Assurance (QA) program and the licensee's Quality Control (QC) program;

(2) The requirements of 10 CFR 50.55(e) that holders of Construction Permits identify, evaluate, and report defects and failures to comply with NRC

requirements associated with substantial safety hazards to the NRC in a timely manner, generally within 60 days; and

(3) The verification by NRC inspectors as defined by the NRC's construction inspection program contained in NRC Inspection Manual Chapter 2512 that the construction is in accordance with approved design documents, that the licensee is properly and effectively implementing their QA/QC program, that construction defects are reported to NRC as required by 10 CFR 50.55(e), and that appropriate corrective actions are taken by the licensee.

Whenever there is a doubt about the proper locations of reinforcing bars, or voids in a concrete containment structure, appropriate non destructive examination methods and conservative analysis are used by the licensees to demonstrate that the containment and its vital components are able to perform their intended functions.

In addition, the pre-operational performance of the Structural Integrity Test (SIT) provides an added assurance by physically demonstrating the overall structural capability of a concrete containment. Also, 10 CFR 50.65, the maintenance rule, requires licensees to monitor the performance or condition of certain structures to provide reasonable assurance that the structures are capable of fulfilling their intended function throughout the life of the plant. Licensees must also periodically inspect and test their containments in accordance with the ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWL, and Appendix J to 10 CFR Part 50. Finally, at plants that have renewed their licenses, aging management programs are in effect to monitor containment structures to ensure that aging does not significantly degrade their functional capability.

G. PRA/Accident Analysis

An individual submitted questions in three areas. First, the commenter asked why the 30-minute initiation time for initiating hydrogen monitoring was overly burdensome and suggested that the proposed 90-minute initiation time was arbitrary. The NRC disagrees with the commenter. The 30-minute initiation time was developed following the TMI-2 accident based on engineering judgement on the time within which the hydrogen monitors needed to be made functional. Putting this equipment into service within 30 minutes, as directed in NUREG-0737, was found by some utilities during severe accident training (e.g., on nuclear power plant simulators) to be unnecessarily distracting to operators,