

## NUCLEAR REGULATORY COMMISSION

Notice of Opportunity to Comment on Model Safety Evaluation on  
Technical Specification Improvement to  
Eliminate Post Accident Sampling Requirements  
for Boiling Water Reactors  
Using the Consolidated Line Item Improvement Process

AGENCY: Nuclear Regulatory Commission.

ACTION: Request for comment.

SUMMARY: Notice is hereby given that the staff of the Nuclear Regulatory Commission (NRC) has prepared a model safety evaluation (SE) relating to the elimination of requirements on post accident sampling imposed on licensees through orders, license conditions, or technical specifications. The NRC staff has also prepared a model no significant hazards consideration (NSHC) determination relating to this matter. The purpose of these models is to permit the NRC to efficiently process amendments that propose to remove requirements for the Post Accident Sampling System [or Station] (PASS) for Boiling Water Reactors (BWRs). Licensees of nuclear power reactors to which the models apply could request amendments conforming to the models. In such a request, a licensee should confirm the applicability of the SE and NSHC determination to its reactor and provide the requested plant-specific verifications and commitments. The NRC staff is requesting comments on the model SE and model NSHC determination before announcing their availability for referencing in license amendment applications.

DATES: The comment period expires (insert date 30 days from date of publication in the Federal Register). Comments received after this date will be considered if it is practical to do

so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: Comments may be submitted either electronically or via U.S. mail.

Submit written comments to: Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, Mail Stop: T-6 D59, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Hand deliver comments to: 11545 Rockville Pike, Rockville, Maryland, between 7:45 a.m. and 4:15 p.m. on Federal workdays.

Copies of comments received may be examined at the NRC's Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland.

Comments may be submitted by electronic mail to [CLIIP@nrc.gov](mailto:CLIIP@nrc.gov).

FOR FURTHER INFORMATION CONTACT: William Reckley, Mail Stop: O-8H1, Division of Licensing Project Management, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone 301-415-1389.

SUPPLEMENTARY INFORMATION:

#### BACKGROUND

Regulatory Issue Summary 2000-06, "Consolidated Line Item Improvement Process for Adopting Standard Technical Specification Changes for Power Reactors," was issued on March 20, 2000. The Consolidated Line Item Improvement Process (CLIIP) is intended to improve the efficiency and transparency of NRC licensing processes. This is accomplished by processing proposed changes to the Standard Technical Specifications (STS) in a manner that supports subsequent license amendment applications. The CLIIP includes an opportunity for the public to comment on proposed changes to the STS following a preliminary assessment by the NRC staff and finding that the change will likely be offered for adoption by licensees. This

notice is soliciting comment on a proposed change to the STS that removes requirements for the PASS for BWRs. The CLIIP directs the NRC staff to evaluate any comments received for a proposed change to the STS and to either reconsider the change or to proceed with announcing the availability of the change for proposed adoption by licensees. Those licensees opting to apply for the subject change to technical specifications are responsible for reviewing the staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. Each amendment application made in response to the notice of availability would be processed and noticed in accordance with applicable rules and NRC procedures.

This notice involves the elimination of requirements for PASS and related administrative controls in technical specifications for BWRs. This proposed change was proposed for incorporation into the standard technical specifications by the BWR Owners Group (BWROG) participants in the Technical Specification Task Force (TSTF) and is designated TSTF-413. TSTF-413 is supported by the NRC staff's safety evaluation dated June 12, 2001, for the BWROG topical report NEDO-32991, "Regulatory Relaxation for BWR Post Accident Sampling Stations (PASS)," which was submitted to the NRC on November 30, 2000. The BWROG request followed the staff's approval of similar requests for elimination of PASS requirements from the Combustion Engineering Owners Group (CEOG) and the Westinghouse Owners Group (WOG).

#### APPLICABILITY

This proposed change to remove requirements for PASS from technical specifications (and other elements of the licensing bases) is applicable to BWRs.

To efficiently process the incoming license amendment applications, the staff requests each licensee applying for the changes addressed by TSTF-413 using the CLIIP to address the following plant-specific verifications and regulatory commitments. The CLIIP does not prevent

licensees from requesting an alternative approach or proposing the changes without the requested verifications and regulatory commitments. Variations from the approach recommended in this notice may, however, require additional review by the NRC staff and may increase the time and resources needed for the review. In making the requested regulatory commitments, each licensee should address: (1) that the subject capability exists (or will be developed) and will be maintained; (2) where the capability or procedure will be described (e.g., severe accident management guidelines, emergency operating procedures, emergency plan implementing procedures); and (3) a schedule for implementation. The amendment request need not provide details about designs or procedures.

Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain):

- a. contingency plans for obtaining and analyzing highly radioactive samples from the reactor coolant system, suppression pool, and containment atmosphere;
- b. a capability for classifying fuel damage events at the Alert level threshold (typically this is 300  $\mu\text{Ci/ml}$  dose equivalent iodine). This capability may use a normal sampling system or correlations of radiation readings to coolant concentrations; and
- c. an I-131 site survey detection capability, including an ability to assess radioactive iodines released to offsite environs, by using effluent monitoring systems or portable sampling equipment.

## PUBLIC NOTICES

In a notice in the *Federal Register* dated August 11, 2000 (65 FR 49271), the staff requested comment on the use of the CLIIP to process requests to delete post-accident sampling requirements from plants with Westinghouse and Combustion Engineering designs. Following the disposition of comments, the staff published a notice of availability of the staff's SE and NSHC determination for referencing using the CLIIP (65 FR 65018, October 31, 2000).

Each request to eliminate PASS requirements by licensees for Westinghouse and CE plants using the CLIIP has also included notices prior to issuance of the subject license amendments and upon issuance.

This notice requests comments from interested members of the public within 30 days of the date of publication in the *Federal Register*. Following the staff's evaluation of comments received as a result of this notice, the staff may reconsider the proposed change or may proceed with announcing the availability of the change in a subsequent notice (perhaps with some changes to the safety evaluation or proposed no significant hazards consideration determination as a result of public comments). If the staff announces the availability of the change, licensees wishing to adopt the change will submit an application in accordance with applicable rules and other regulatory requirements. The staff will in turn issue for each application a notice of consideration of issuance of amendment to facility operating license(s), a proposed no significant hazards consideration determination, and an opportunity for a hearing. A notice of issuance of an amendment to operating license(s) will also be issued to announce the elimination of the PASS requirements for each plant that applies for and receives the requested change.

## PROPOSED SAFETY EVALUATION

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

Consolidated Line Item Improvement

Technical Specification Task Force (TSTF) Change TSTF-413

Elimination of Requirements for Post Accident Sampling System [or Station] (PASS)

### 1.0 Introduction

In the aftermath of the accident at Three Mile Island (TMI), Unit 2, the Nuclear Regulatory Commission (NRC) imposed requirements on licensees for commercial nuclear

power plants to install and maintain the capability to obtain and analyze post-accident samples of the reactor coolant and containment atmosphere. The desired capabilities of the Post Accident Sampling System [or Station] (PASS) were described in NUREG-0737, "Clarification of TMI Action Plan Requirements." The NRC issued orders to licensees with plants operating at the time of the TMI accident to confirm the installation of PASS capabilities (generally as they had been described in NUREG-0737). A requirement for PASS and related administrative controls was added to the technical specifications (TS) of the operating plants and was included in the initial TS for plants licensed during the 1980s and 90s. Additional expectations regarding PASS capabilities were included in Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident."

Significant improvements have been achieved since the TMI accident in the areas of understanding risks associated with nuclear plant operations and developing better strategies for managing the response to potentially severe accidents at nuclear plants. Recent insights about plant risks and alternate severe accident assessment tools have led the NRC staff to conclude that some TMI Action Plan items can be revised without reducing the ability of licensees to respond to severe accidents. The NRC's efforts to oversee the risks associated with nuclear technology more effectively and to eliminate undue regulatory costs to licensees and the public have prompted the NRC to consider eliminating the requirements for PASS in TS and other parts of the licensing bases of operating reactors.

The staff has completed its review of the topical report submitted by the Boiling Water Reactor (BWR) Owners Group (BWROG) that proposed the elimination of PASS. The justifications for the proposed elimination of PASS requirements center on evaluations of the various radiological and chemical sampling and their potential usefulness in responding to a severe reactor accident or making decisions regarding actions to protect the public from

possible releases of radioactive materials. As explained in more detail in the staff's safety evaluations for the topical report, the staff has reviewed the available sources of information for use by decision-makers in developing protective action recommendations and assessing core damage. Based on this review, the staff found that the information provided by PASS is either unnecessary or is effectively provided by other indications of process parameters or measurement of radiation levels. The staff agrees, therefore, with the owners group that licensees can remove the TS requirements for PASS, revise (as necessary) other elements of the licensing bases, and pursue possible design changes to alter or remove existing PASS equipment.

## 2.0 Background

In its letter dated November 30, 2000, the BWROG submitted for the NRC staff's review Topical Report NEDO-32991, "Regulatory Relaxation for BWR Post Accident Sampling Stations (PASS)," for eliminating PASS requirements from BWRs. The NRC staff's safety evaluation for the BWROG topical report is dated June 12, 2001 (ADAMS Accession Number ML011630016). The BWROG proposed that relaxation of the PASS requirements be incorporated into the standard technical specifications by submitting TSTF-413.

The NRC staff prepared this model safety evaluation (SE) relating to the elimination of requirements on post accident sampling for BWRs and solicited public comment [ FR ] in accordance with the CLIIP. The use of the CLIIP in this matter is intended to help the NRC to efficiently process amendments that propose to remove the PASS requirements from TS. Licensees of nuclear power reactors to which this model apply were informed [ FR ] that they could request amendments conforming to the model, and, in such requests, should confirm the applicability of the SE to their reactors and providing the requested plant-specific verifications and commitments.

### 3.0 Evaluation

The ways in which the requirements and recommendations for PASS were incorporated into the licensing bases of commercial nuclear power plants varied as a function of when plants were licensed. Plants that were operating at the time of the TMI accident are likely to have been the subject of confirmatory orders that imposed the PASS functions described in NUREG-0737 as obligations. The issuance of plant specific amendments to adopt this change, which would remove PASS and related administrative controls from TS, would also supercede the PASS specific requirements imposed by post-TMI confirmatory orders.

The technical evaluations for the elimination of PASS sampling requirements are provided in the safety evaluation dated June 12, 2001, for BWROG topical report NEDO-32991. As described in its safety evaluation for the topical report, the staff finds that the post-accident sampling requirements for the following may be eliminated for BWR plants:

1. Reactor coolant dissolved gases.
2. Reactor coolant hydrogen.
3. Reactor coolant oxygen.
4. Reactor coolant chlorides.
5. Reactor coolant pH.
6. Reactor coolant boron.
7. Reactor coolant conductivity.
8. Radioisotopes in the reactor coolant.
9. Containment hydrogen.
10. Containment oxygen.
11. Radioisotopes in the containment atmosphere.
12. Suppression pool pH.
13. Chlorides in the suppression pool.



14. Boron in the suppression pool.
15. Radioisotopes in the suppression pool.

The staff agrees that sampling of radioisotopes is not required to support emergency response decision making during the initial phases of an accident because the information provided by PASS is either unnecessary or is effectively provided by other indications of process parameters or measurement of radiation levels. Therefore, it is not necessary to have dedicated equipment to obtain this sample in a prompt manner.

The staff does, however, believe that there could be significant benefits to having information about the radioisotopes existing post-accident in order to address public concerns and plan for long-term recovery operations. As stated in the safety evaluation for the topical report, the staff has found that licensees could satisfy this function by developing contingency plans to describe existing sampling capabilities and what actions (e.g., assembling temporary shielding) may be necessary to obtain and analyze highly radioactive samples from the reactor coolant system (RCS), suppression pool, and containment atmosphere. (See item 4.1 under Verifications and Commitments.) The contingency plans for obtaining samples from the RCS, suppression pool, and containment atmosphere may also enable a licensee to derive information on parameters such as hydrogen concentrations in containment and the pH of water in the suppression pool. The staff considers the sampling of the suppression pool to be potentially useful in confirming calculations of pH and confirming that potentially unaccounted for acid sources have been sufficiently neutralized. The use of the contingency plans for obtaining samples would depend on the plant conditions and the need for information by the decision-makers responsible for responding to the accident.

In addition, the staff considers radioisotope sampling information to be useful in classifying certain types of events (such as a reactivity excursion or mechanical damage) that could cause fuel damage without having an indication of a loss of reactor coolant inventory.

However, the staff agrees with the topical report's contentions that other indicators of failed fuel, such as radiation monitors, can be correlated to the degree of failed fuel. (See item 4.2 under Verifications and Commitments.)

In lieu of the information that would have been obtained from PASS, the staff believes that licensees should maintain or develop the capability to monitor radioactive iodines that have been released to offsite environs. This information would be useful for decision makers trying to assess a release of and limit the public's exposure to radioactive materials. (See item 4.3 under Verifications and Commitments.)

The staff believes that the changes related to the elimination of PASS that are described in the topical report, related safety evaluation and this proposed change to TS are unlikely to result in a decrease in the effectiveness of a licensee's emergency plan. Each licensee, however, must evaluate possible changes to its emergency plan in accordance with 10 CFR 50.54(q) to determine if the change decreases the effectiveness of its site-specific plan. Evaluations and reporting of changes to emergency plans should be performed in accordance with applicable regulations and procedures.

The staff notes that redundant, safety-grade, containment hydrogen concentration monitors are required by 10 CFR 50.44(b)(1), are addressed in NUREG-0737 Item II.F.1 and Regulatory Guide 1.97, and are relied upon to meet the data reporting requirements of 10 CFR Part 50, Appendix E, Section VI.2.a.(ii)(3). The staff concludes that during the early phases of an accident, the safety-grade hydrogen monitors provide an adequate capability for monitoring containment hydrogen concentration. The staff sees value in maintaining the capability to obtain grab samples for complementing the information from the hydrogen monitors in the long term (i.e., by confirming the indications from the monitors and providing hydrogen measurements for concentrations outside the range of the monitors). As previously mentioned, the licensee's contingency plan (see item 4.1) for obtaining highly radioactive

samples will include sampling of the containment atmosphere and may, if deemed necessary and practical by the appropriate decision-makers, be used to supplement the safety-related hydrogen monitors.

[Note 1 - Each licensee should specify a desired implementation period for its specific amendment request. The implementation period would be that period necessary to develop and implement the items in 4.1 through 4.3 and, as necessary, to make other changes to documentation or equipment to support the elimination of PASS requirements. As an alternative, the licensee may choose to have a shorter implementation period and include the scheduling of items 4.1 through 4.3 as part of the regulatory commitments associated with this amendment request. Amendment requests that include commitments for implementation of the items in Section 4 within 6 months of the implementation of the revised TS will remain within the CLIIP.]

[Note 2 - There may be some collateral changes to the TS as a result of the removal of the administrative controls section for PASS. The following paragraphs address three potential changes that the staff is aware of (editorial changes, mention of PASS as a potential leakage source outside containment, and revision of the bases section for post accident monitoring instrumentation).

(A) The elimination of the TS and other regulatory requirements for PASS would result in additional changes to TS such as [e.g., the renumbering of sections or pages or the removal of references]. The changes are included in the licensee's application to revise the TS in order to take advantage of the CLIIP. The staff has reviewed the changes and agrees that the revisions are necessary due to the removal of the TS section on PASS. The changes do not revise technical requirements beyond that reviewed by the NRC staff in connection with the supporting topical reports or the preparation of the TS improvement incorporated into the CLIIP.

(B) The TS include an administrative requirement for a program to minimize to levels as low as practicable the leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident. The program includes preventive maintenance, periodic inspections, and leak tests for the identified systems. PASS is specifically listed in TS [5.5.2] as falling under the scope of this requirement. The applicability of this specification depends on whether or not PASS is maintained as a system that is a potential leakage path. [Note that several options (see following) exist for handling the impact that eliminating PASS requirements would have on the specification for the program to control leakage outside containment]

(i) The licensee has stated that a plant change would be implemented such that PASS would not be a potential leakage path outside containment for highly radioactive fluids (e.g., the PASS piping that penetrates the containment would be cut and capped). The modification would be made during the implementation period for this amendment such that it is appropriate to delete the reference to PASS in TS [5.5.2]. Requirements in NRC regulations (e.g., 10 CFR Part 50, Appendix J) and other TS provide adequate regulatory controls over the licensee's proposed modification to eliminate PASS as a potential leakage path.

(ii) The licensee has stated that a plant change might be implemented such that PASS would not be a potential leakage path outside containment for highly radioactive fluids (e.g., the PASS piping that penetrates the containment might be cut and capped). The modification would not be made during the implementation period for this amendment. The licensee has proposed to add the following phrase to the reference to PASS in TS [5.5.2]:

“(until such time as a modification eliminates the PASS penetration as a potential leakage path).”

The above phrase would make clear that TS [5.5.2] remains applicable to the PASS as long as it is a possible leakage path and reflects that the actual modification of the piping

system may be scheduled beyond the implementation period for this amendment.

Requirements in NRC regulations (10 CFR Part 50, Appendix J) and other TS provide adequate regulatory control over the licensee's modification to eliminate PASS as a potential leakage path. Following the modification to eliminate PASS as a potential leakage path, the licensee may elect (in order to maintain clarity and simplicity of the requirement) to revise TS [5.5.2] to remove the reference to PASS, including the phrase added by this amendment.

(iii) The licensee has stated that the configuration of the PASS will continue to be a potential leakage path outside containment for highly radioactive fluids (e.g., the PASS piping will penetrate the containment with valves or other components in the system from which highly radioactive fluid could leak). The licensee has [not proposed to change TS (5.5.2) or has changed TS (5.5.2) to revise the reference to this system from PASS to ( )]. The staff agrees [that TS 5.5.2 is not affected or that the change to revise the reference from PASS to ( )] is acceptable. A separate amendment request will be required if the licensee, subsequent to this amendment, decides to modify the plant to eliminate this potential leakage path and proposes to change the requirements of TS [5.5.2].

(C) [Note-optional section if licensee provides markup of affected Bases pages] The elimination of PASS requires that the licensee revise the discussion in the Bases section for TS [3.3.3, "Post Accident Monitoring Instrumentation"]. The current Bases mention the capabilities of PASS as part of the justification for allowing both hydrogen monitor channels to be out of service for a period of up to 72 hours. Although the licensee's application included possible wording for the revised Bases discussion for TS [3.3.3], the licensee will formally address the change to the Bases in accordance with [the Bases Control Program or its administrative procedure for revising Bases]. The staff does not believe that the Bases change will require prior NRC approval when evaluated against the criteria in 10 CFR 50.59, "Changes, tests, and experiments," and, therefore, agrees that the revision of the Bases to TS [3.3.3] should be

addressed separately from this amendment and should be included in a future update of the TS Bases in accordance with [the Bases Control Program or the licensee's administrative controls].

#### 4.0 Verifications and Commitments

As requested by the staff in the notice of availability for this TS improvement, the licensee has addressed the following plant-specific verifications and commitments.

- 4.1 Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain), contingency plans for obtaining and analyzing highly radioactive samples of reactor coolant, suppression pool, and containment atmosphere.

The licensee has [verified that it has or made a regulatory commitment to develop] contingency plans for obtaining and analyzing highly radioactive samples from the RCS, suppression pool, and containment atmosphere. The licensee has committed to maintain the contingency plans within its [specified document or program]. The licensee has [implemented this commitment or will implement this commitment by (specified date)].

- 4.2 Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain), a capability for classifying fuel damage events at the Alert level threshold (typically this is 300  $\mu\text{Ci/ml}$  dose equivalent iodine). This capability may utilize the normal sampling system and/or correlations of radiation readings to radioisotope concentrations in the reactor coolant.

The licensee has [verified that it has or made a regulatory commitment to develop] a capability for classifying fuel damage events at the Alert level threshold. The licensee has committed to maintain the capability for the Alert classification within its [specified document or program]. The licensee has [implemented this commitment or will implement this commitment by (specified date)].

- 4.3 Each licensee should verify that it has, and make a regulatory commitment to maintain (or make a regulatory commitment to develop and maintain), an I-131 site survey detection capability, including an ability to assess radioactive iodines released to offsite environs, by using effluent monitoring systems or portable sampling equipment.

The licensee has [verified that it has or made a regulatory commitment to develop] an I-131 site survey detection capability, including an ability to assess radioactive iodines released to offsite environs, by using effluent monitoring systems or portable sampling equipment. The licensee has committed to maintain the capability for monitoring iodines within its [specified document or program]. The licensee has [implemented this commitment or will implement this commitment by (specified date)].

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitments are provided by the licensee's administrative processes, including its commitment management program. Should the licensee choose to incorporate a regulatory commitment into the emergency plan, final safety analysis report, or other document with established regulatory controls, the associated regulations would define the appropriate change-control and reporting requirements. The staff has determined that the commitments do not warrant the creation of regulatory requirements, which would require prior NRC approval of subsequent changes. The NRC staff has agreed that NEI 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," provides reasonable guidance for the control of regulatory commitments made to the NRC staff. (See Regulatory Issue Summary 2000-17, Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff, dated September 21, 2000 [ADAMS Accession Number ML003741774].) The commitments should be controlled in accordance with the industry guidance or comparable criteria employed by a specific licensee. The staff may choose to

verify the implementation and maintenance of these commitments in a future inspection or audit.

#### 5.0 State Consultation

In accordance with the Commission's regulations, the [ ] State official was notified of the proposed issuance of the amendments. The State official had [(1) no comments or (2) the following comments - with subsequent disposition by the staff].

#### 6.0 Environmental Consideration

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding ( FR ). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 7.0 Conclusion

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.



## PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Description of Amendment Request: The proposed amendments delete requirements from the Technical Specifications (and, as applicable, other elements of the licensing bases) to maintain a Post Accident Sampling System [or Station] (PASS). Licensees were generally required to implement PASS upgrades as described in NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," and Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." Implementation of these upgrades was an outcome of the lessons learned from the accident that occurred at TMI, Unit 2. Requirements related to PASS were imposed by Order for many facilities and were added to or included in the technical specifications (TS) for nuclear power reactors currently licensed to operate. Lessons learned and improvements implemented over the last 20 years have shown that the information obtained from PASS can be readily obtained through other means or is of little use in the assessment and mitigation of accident conditions.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), an analysis of the issue of no significant hazards consideration is presented below:

Criterion 1 - The Proposed Change Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.

The PASS was originally designed to perform many sampling and analysis functions. These functions were designed and intended to be used in post accident situations and were put into place as a result of the TMI-2 accident. The specific intent of the PASS was to provide a system that has the capability to obtain and analyze samples of plant fluids containing potentially high levels of radioactivity, without exceeding plant personnel radiation exposure limits. Analytical results of these samples would be used largely for verification purposes in

aiding the plant staff in assessing the extent of core damage and subsequent offsite radiological dose projections. The system was not intended to and does not serve a function for preventing accidents and its elimination would not affect the probability of accidents previously evaluated.

In the 20 years since the TMI-2 accident and the consequential promulgation of post accident sampling requirements, operating experience has demonstrated that a PASS provides little actual benefit to post accident mitigation. Past experience has indicated that there exists in-plant instrumentation and methodologies available in lieu of a PASS for collecting and assimilating information needed to assess core damage following an accident. Furthermore, the implementation of Severe Accident Management Guidance (SAMG) emphasizes accident management strategies based on in-plant instruments. These strategies provide guidance to the plant staff for mitigation and recovery from a severe accident. Based on current severe accident management strategies and guidelines, it is determined that the PASS provides little benefit to the plant staff in coping with an accident.

The regulatory requirements for the PASS can be eliminated without degrading the plant emergency response. The emergency response, in this sense, refers to the methodologies used in ascertaining the condition of the reactor core, mitigating the consequences of an accident, assessing and projecting offsite releases of radioactivity, and establishing protective action recommendations to be communicated to offsite authorities. The elimination of the PASS will not prevent an accident management strategy that meets the initial intent of the post-TMI-2 accident guidance through the use of the SAMGs, the emergency plan (EP), the emergency operating procedures (EOP), and site survey monitoring that support modification of emergency plan protective action recommendations (PARs).

Therefore, the elimination of PASS requirements from Technical Specifications (TS) (and other elements of the licensing bases) does not involve a significant increase in the consequences of any accident previously evaluated.

Criterion 2 - The Proposed Change Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated.

The elimination of PASS related requirements will not result in any failure mode not previously analyzed. The PASS was intended to allow for verification of the extent of reactor core damage and also to provide an input to offsite dose projection calculations. The PASS is not considered an accident precursor, nor does its existence or elimination have any adverse impact on the pre-accident state of the reactor core or post accident confinement of radioisotopes within the containment building.

Therefore, this change does not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3 - The Proposed Change Does Not Involve a Significant Reduction in the Margin of Safety.

The elimination of the PASS, in light of existing plant equipment, instrumentation, procedures, and programs that provide effective mitigation of and recovery from reactor accidents, results in a neutral impact to the margin of safety. Methodologies that are not reliant on PASS are designed to provide rapid assessment of current reactor core conditions and the direction of degradation while effectively responding to the event in order to mitigate the consequences of the accident. The use of a PASS is redundant and does not provide quick recognition of core events or rapid response to events in progress. The intent of the requirements established as a result of the TMI-2 accident can be adequately met without reliance on a PASS.

Therefore, this change does not involve a significant reduction in the margin of safety.

Based upon the reasoning presented above and the previous discussion of the amendment request, the requested change does not involve a significant hazards consideration.

Dated at Rockville, Maryland, this 18<sup>th</sup> day of December 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

William D. Beckner, Chief  
Technical Specification Branch  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Criterion 3 - The Proposed Change Does Not Involve a Significant Reduction in the Margin of Safety.

The elimination of the PASS, in light of existing plant equipment, instrumentation, procedures, and programs that provide effective mitigation of and recovery from reactor accidents, results in a neutral impact to the margin of safety. Methodologies that are not reliant on PASS are designed to provide rapid assessment of current reactor core conditions and the direction of degradation while effectively responding to the event in order to mitigate the consequences of the accident. The use of a PASS is redundant and does not provide quick recognition of core events or rapid response to events in progress. The intent of the requirements established as a result of the TMI-2 accident can be adequately met without reliance on a PASS.

Therefore, this change does not involve a significant reduction in the margin of safety. Based upon the reasoning presented above and the previous discussion of the amendment request, the requested change does not involve a significant hazards consideration.

Dated at Rockville, Maryland, this 18th day of December 2001.

FOR THE NUCLEAR REGULATORY COMMISSION  
**/RA/**  
 William D. Beckner, Chief  
 Technical Specification Branch  
 Division of Regulatory Improvement Programs  
 Office of Nuclear Reactor Regulation

**DISTRIBUTION:**

Hard Copy

PUBLIC  
 OGC

DLPM R/F  
 ACRS

RTSB R/F  
 CRGR

EMail

SCollins/JJohnson  
 JZwolinski  
 WReckley  
 JShea, OEDO

BSheron  
 OPA  
 RDennig  
 WBeckner

WBorchardt  
 TMarsh  
 OGC  
 JMoore, OGC

**Accession Number: ML013530137**

**ADAMS Template: ADM-012**

File Name: C:\Program Files\Adobe\Acrobat 4.0\PDF Output\BWROG-notice.wpd

\*See Previous Concurrence

<b>OFC</b>	<b>NRR/DLPM/LPM</b>	<b>NRR/RTSB</b>	<b>NLO w/comment</b>	<b>NRR/RTSB</b>
<b>NAME</b>	W Reckley	*R Dennig	OGC (RWeisman)	W Beckner
<b>DATE</b>	10/9/01	12/10/01	11/23/01	12/13/01

**OFFICIAL RECORD COPY**