

June 4, 1999

FOR: The Commissioners

FROM: William D. Travers /s/  
Executive Director for Operations

SUBJECT: PROPOSED NRC GENERIC LETTER 83-11, SUPPLEMENT 1, "LICENSEE QUALIFICATION FOR PERFORMING SAFETY ANALYSES"

## PURPOSE:

To inform the Commission of the staff's intent to issue the subject generic letter supplement. The generic letter supplement notifies licensees and applicants of changes in the process by which the Office of Nuclear Reactor Regulation (NRR) qualifies licensees to perform their own safety analyses. A copy of the proposed generic letter supplement is attached ([Attachment 1](#)).

## DISCUSSION:

On February 8, 1983, NRC issued [Generic Letter \(GL\) 83-11](#), "Licensee Qualification for Performing Safety Analyses in Support of Licensing Actions." The generic letter presented guidance on the information that NRC needs to qualify licensees to perform their own safety analyses using approved computer codes.

The NRC encourages utilities to perform their own safety analyses, since such performance significantly improves licensee understanding of plant behavior. However, NRC's experience with licensee use of safety analyses involving large, complex computer codes shows that errors or discrepancies discovered in safety analyses are more likely to be traced back to the user rather than to the code itself. This realization has led the NRC to emphasize assuring the capabilities of the code users as well as the validity of the codes themselves. In the past, NRC has obtained this assurance by reviewing the code verification information submitted by the licensee. The NRC focused its reviews primarily on the licensee's quality assurance practices and the licensee's technical competence in setting up an input deck, executing a code, and interpreting the results. The information that was reviewed generally included comparisons (performed by the user of the code results) with experimental data, plant operational data, or other benchmarked analyses, as well as evidence of compliance with any restrictions or limitations stated in the generic NRC safety evaluation report (SER) that approved the code.

Since GL 83-11 was issued, many licensees have submitted information in the form of topical reports demonstrating their ability to perform their own safety analyses, such as reload analyses using NRC-approved methods and codes. Preparing and reviewing a qualification topical report can be resource intensive for both the licensee and the staff, and the reviews, usually having a low priority, are difficult to schedule for timely completion.

To help shorten the lengthy review and approval process, the NRC has adopted a generic set of guidelines which, if met, would eliminate the need to submit detailed topical reports for NRC review before a licensee could use approved codes and methods. These guidelines are presented in the attachment. Using this approach, which is consistent with the regulatory basis provided by Criteria II and III of [Appendix B to Part 50 of Title 10 of the Code of Federal Regulations \(10 CFR Part 50\)](#), the licensee would institute a program (such as training, procedures, and benchmarking) that follows the guidelines, and would notify NRC by letter that it has done this and that the documentation is available for NRC audit. The staff will incorporate oversight of this GL supplement into the NRC inspection program.

The revised guidance on licensee qualification for using safety analysis codes is intended for licensees who wish to perform their own licensing analyses using methods that have been reviewed and approved by the NRC, or that have otherwise been accepted as part of a plant's licensing basis.

This supplement does not involve a backfit as defined in [10 CFR 50.109\(a\)\(1\)](#), since it only offers guidance on how a licensee may verify to the NRC its qualifications to use approved codes and methods for performing safety analyses. Therefore, the staff has not prepared a backfit analysis.

A notice of opportunity for public comment was published on October 25, 1995, in the *Federal Register* (60 FR 54712). Comments were received from 13 licensees, 3 fuel vendors, and 3 industry interest groups. Copies of the comment letters received, as well as the staff's evaluation of these comments (see Attachment 2), will be made available in the NRC Public Document Room. Because of concurrent issues that arose at the Maine Yankee nuclear power reactor facility regarding the improper application of approved methods, the NRC decided to withdraw the issuance of the supplement to GL 83-11 pending a complete review of these issues. The specific issue that arose concerned the licensee's failure to comply with some of the restrictions and conditions stated in the staff's SER for proper application of a loss-of-coolant-accident (LOCA) code. Subsequent review of the lessons learned from Maine Yankee has indicated that the issue involved was adequately addressed in the GL 83-11 supplement as published for public comment since the supplement requires that licensees adhere to all limitations and restrictions defined in the staff's SER. Further, this supplement to GL 83-11 does not apply to LOCA codes. Therefore, the NRC has decided to issue the supplement. In addition to the proposed supplement to GL 83-11, the staff also requested comments on modified procedures for reducing the resource effort for acceptance of new or revised licensee or vendor analysis methods. These comments will be addressed in a future action.

The proposed generic letter does not involve a backfit and does not constitute a significant relaxation of safety and thus the Committee To Review Generic Requirements decided it did not warrant its review.

The Office of the General Counsel reviewed this generic letter supplement and has no legal objection to it.

The staff intends to issue this generic letter supplement approximately 5 working days after the date of this information paper.

William D. Travers  
Executive Director for Operations

Contact: Laurence Kopp, NRR  
301-415-2879

Attachments: 1. Proposed Generic Letter 83-11, Supplement 1, "Licensee Qualification for Performing Safety Analyses"  
2. NRC Staff Resolution of Public Comments

ATTACHMENT 1

OMB Control No. 3150-0011

GL 83-11, Supp. 1  
May xx, 1999

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, DC 20555-0001

(DATE)

NRC GENERIC LETTER 83-11, SUPPLEMENT 1: LICENSEE QUALIFICATION FOR PERFORMING SAFETY ANALYSES

#### ADDRESSEES

All holders of operating licenses for nuclear power plants, including those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

#### PURPOSE

The U.S. Nuclear Regulatory Commission (NRC) is issuing this [supplement to Generic Letter \(GL\) 83-11](#) to notify licensees and applicants of modifications to the Office of Nuclear Reactor Regulation (NRR) practice regarding licensee qualification for performing their own safety analyses. This includes the analytical areas of reload physics design, core thermal-hydraulic analysis, fuel mechanical analysis, transient analysis (non-LOCA), dose analysis, setpoint analysis, containment response analysis, criticality analysis, statistical analysis, and Core Operating Limit Report (COLR) parameter generation. It is expected that recipients will review the information for applicability to their facilities. However, suggestions contained in this supplement to the generic letter are not NRC requirements; therefore, no specific action or written response is required.

#### BACKGROUND

Over the past decade, substantially more licensees have been electing to perform their own safety analyses to support such tasks as reload applications and technical specification amendments, rather than to contract the work out to their nuclear steam supply system (NSSS) vendor, fuel vendor, or some other organization. The NRC encourages utilities to perform their own safety analyses, since doing this significantly improves licensee understanding of plant behavior. GL 83-11 presented guidance on the information that NRC needs in order to qualify licensees to perform their own safety analyses using approved computer codes.

NRC's experience with safety analyses using large, complex computer codes has shown that errors or discrepancies discovered in safety analyses are more likely to be traced to the user rather than to the code itself. This realization has led the NRC to place additional emphasis on assuring the capabilities of the code users as well as on assuring the codes themselves. In the past, NRC obtained this assurance by reviewing the code verification information submitted by the licensee. The reviews focused primarily on the licensee's quality assurance practices and the technical competence of the licensee with respect to their ability to set up an input deck, execute a code, and properly interpret the results. The information which was reviewed generally included comparisons (performed by the user of the code results) with experimental data, plant operational data, or other benchmarked analyses, as well as compliance with any restrictions or limitations stated in the generic NRC Safety Evaluation Report (SER) that approved the code.

Since GL 83-11 was issued, many licensees have submitted information in the form of topical reports demonstrating their ability to perform their own safety analyses, such as reload analyses using NRC-approved methods and codes. Preparation and review of a qualification topical report is resource intensive on the part of the staff and the licensee, and because the review is usually assigned a low priority, it is difficult to schedule the review for timely completion.

#### DISCUSSION

To help shorten the lengthy review and approval process, the NRC has adopted a generic set of guidelines which, if met, would eliminate the need to submit detailed topical reports for NRC review before a licensee could use approved codes and methods. These guidelines are presented in the Appendix. Using this approach, which is consistent with the regulatory basis provided by Criteria II and III of Appendix B to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 50), the licensee would institute a program (such as training, procedures, and benchmarking) that follows the guidelines, and would notify NRC by letter that it has done this and that the documentation is available for NRC audit.

#### SUMMARY

The revised guidance on licensee qualification for using safety analysis codes is intended for licensees who wish to perform their own licensing analyses using methods that have been reviewed and approved by the NRC, or that have otherwise been accepted as part of a plant's licensing basis.

## BACKFIT DISCUSSION

This supplement does not involve a backfit as defined in 10 CFR 50.109(a)(1), since it does nothing more than offer guidance as to an acceptable means by which a licensee may verify to the NRC its qualifications to use approved codes and methods for performing safety analyses. Therefore, the staff has not prepared a backfit analysis.

## FEDERAL REGISTER NOTIFICATION

A notice of opportunity for public comment was published on October 25, 1995, in the *Federal Register* (60 FR 54712). Comments were received from 13 licensees, 3 fuel vendors, and 3 industry interest groups. Copies of the comment letters received and of the staff's evaluation of these comments will be made available in the NRC Public Document Room. Because of concurrent issues that arose at the Maine Yankee nuclear power reactor facility regarding the improper application of approved methods, the NRC decided to withdraw the issuance of the supplement to GL 83-11 pending a complete review of these issues. Subsequent review of the lessons learned from Maine Yankee has indicated that the issues involved were adequately addressed in the GL 83-11 supplement as published for public comment. Therefore, the NRC has decided to issue the supplement in final form. In addition to the proposed supplement to GL 83-11, the staff also requested comments on modified procedures for reducing the resource effort for acceptance of new or revised licensee or vendor analysis methods. These comments will be addressed in a future action.

## PAPERWORK REDUCTION ACT STATEMENT

This generic letter contains a voluntary collection that is subject to the Paperwork Reduction Act of 1995 (22 U.S.C. 3501 et seq.). This information collection was approved by the Office of Management and Budget, approval number 3150-0011, through September 30, 2000.

The public reporting burden for this collection of information is estimated to average 100 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The NRC is seeking public comment on the potential impact of the collection of information contained in the generic letter and on the following issues:

- (1) Is the proposed collection of information necessary for the proper performance of the functions of the NRC, including consideration of whether the information will have practical utility?
- (2) Is the estimate of burden accurate?
- (3) Is there a way to enhance the quality, utility, and clarity of the information to be collected?
- (4) How can the burden of the collection of information be minimized, including consideration of the use of automated collection techniques?

Send comments on any aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch, T-6 F33, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011), Office of Management and Budget, Washington, D.C. 20503.

The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

This generic letter requires no specific action or written response. If you have any questions about this matter, please contact the technical contact or the lead project manager listed below.

David B. Matthews, Director  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Technical contact: Laurence I. Kopp, NRR  
(301) 415-2879

Lead project manager: Steven Bloom, NRR  
(301) 415-1313

Appendix: [Guidelines for Qualifying Licensees to Use Generically Approved Analysis Methods](#)

APPENDIX

## GUIDELINES FOR QUALIFYING LICENSEES TO USE GENERALLY APPROVED ANALYSIS METHODS

### 1.0 INTRODUCTION

This appendix presents a simplified approach for qualifying licensees to use NRC-approved analysis methods. Typically, these methods are developed by fuel vendors, utilities, national laboratories, or organizations such as the Electric Power Research Institute, Incorporated, (EPRI). To use these approved methods, the licensee would institute a program (e.g., training, procedures) that follows the guidelines below and notify the NRC that it has done so.

The words "code" and "method" are used interchangeably within this document, i.e., a computer program. In many cases, however, an approved method may refer not only to a set of codes, an algorithm within a code, a means of analysis, a measurement technique, a statistical technique, etc., but also to selected input parameters which were specified in the methodology to ensure conservative results. In some cases, due to limitations or lack of appropriate data in the model, the code or method may be limited to certain applications. In these cases, the NRC safety evaluation report (SER) specifies the applicability of the methodology.

## 2.0 GUIDELINES

A commitment on the part of a licensee to implement the guidelines delineated in this document is sufficient information for the NRC to accept the licensee's qualification to use an approved code or method to perform safety-related evaluations such as reload physics design, core thermal-hydraulic analysis, fuel mechanical analysis, non-LOCA transient analysis, dose analysis, setpoint analysis, containment response analysis, criticality analysis, statistical analysis, and Core Operating Limit Report (COLR) parameter generation. To document its qualification in this manner, the licensee should send the NRC a notification of its having followed the guidelines at least 3 months before the date of its intended first licensing application.

### 2.1 ELIGIBILITY

The only codes and methods that are addressed by this process are those that NRC has reviewed and approved generically, or those that have been otherwise accepted as part of a plant's licensing basis. The use of a new methodology or a change to an existing methodology is not applicable to this process.

### 2.2 APPLICATION PROCEDURES

In-house application procedures, which ensure that the use of approved methods is consistent with the code qualification and, in most instances, with the approved application of the methodology, should be established and implemented. Because of the bounding nature of many licensing transient analyses, it may not be necessary to have formulated application procedures for each transient. These procedures should contain a section describing the application of the code and a section delineating the code limitations and restrictions, including any defined in the licensing topical report, correspondence with the NRC, and the SER. The applicability of a particular method to either a specific fuel design or to a core which contains a mixture of fuel types is important. For example, the use of one vendor's hot channel analysis code with a different vendor's transient codes may not necessarily yield conservative results and, in fact, may not be consistent with the NRC-approved reload analysis package. Therefore, in-house application procedures should have the proper controls to preclude such a misapplication but should also include the flexibility to allow comparison tests between the different methodologies to show that a conservative assessment can be made.

### 2.3 TRAINING AND QUALIFICATION OF LICENSEE PERSONNEL

A training program should be established and implemented to ensure that each qualified user of an approved methodology has a good working knowledge of the codes and methods, and will be able to set up the input, to understand and interpret the output results, to understand the applications and limitations of the code, and to perform analyses in compliance with the application procedure. Training should be provided by either the developer of the code or method, or someone who has been previously qualified in the use of the code or method.

### 2.4 COMPARISON CALCULATIONS

Licensees should verify their ability to use the methods by comparing their calculated results to an appropriate set of benchmark data, such as physics startup tests, measured flux detector data during an operating cycle, higher order codes, published numerical benchmarks, analyses of record, etc. These comparisons should be documented in a report which is part of the licensee's quality assurance (QA) records. Significant, unexpected, or unusual deviations in the calculations of safety-related parameters should be justified in the report. All comparisons with startup test data should agree within the acceptance criteria defined in the plant startup test plan.

### 2.5 QUALITY ASSURANCE AND CHANGE CONTROL

All safety-related licensing calculations performed by a licensee using NRC-approved codes and methods should be conducted under the control of a QA program which complies with the requirements of Appendix B to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 50). The licensee's QA program should also include the following:

- (1) a provision for evaluating vendor (or other code developer) updates and implementing those updates, if applicable, in codes, methods, and procedures; and
- (2) a provision for informing vendors (or code developers) of any problems or errors discovered while using their codes, methods, or procedures.

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ATTACHMENT 2

## NRC STAFF RESOLUTION OF PUBLIC COMMENTS

Comments were received from 13 licensees, 3 fuel vendors, and 3 industry interest groups. Following are the staff responses to the comments received on the proposed GL 83-11 supplement:

STUDSVIK OF AMERICA, INC.

Comment: Clarify that "safety analysis" includes the physics parameters and codes used to generate them.

Response: Clarification has been made in both the Purpose section and 2.0 Guidelines section.

Comment: For physics codes, approval of code should be separate from the application method.

Response: Section 2.2 has been modified to clarify that in some instances the approval of the code is separate from the application method.

Comment: Clarification of what constitutes NRC approval of a code and/or method would be helpful.

Response: Section 2.1 has been modified to clarify the eligibility of codes and methods for this process.

Comment: Clarify what constitutes a significant code and/or methodology update that must be reviewed by the NRC.

Response: What constitutes a significant code or methodology update that must be reviewed by the NRC is too complex a topic to fully address in a generic manner at this time. However, as mentioned in the *Federal Register* notice (October 25, 1995 (60 FR 54712)), the NRC is also investigating modified procedures for reducing the resource effort for acceptance of new or revised licensee or vendor analysis methods. Therefore, it is anticipated that this topic will be addressed at a future date.

#### WESTINGHOUSE ELECTRIC CORPORATION

Comment: Reemphasize that NRC's experience has shown that a large percentage of all errors or discrepancies discovered in safety analyses can be traced to the user rather than the code itself.

Response: The fact that NRC's experience has shown that many times errors or discrepancies discovered in safety analyses can be traced to the user rather than the code itself is stated in the Description of Circumstances section.

#### FLORIDA POWER & LIGHT COMPANY

Comment: NRC should allow licensees to modify the Core Operating Limit Report (COLR) without specific NRC review so long as the methods and codes have already been approved by the NRC.

Response: The issuance of this supplement would allow this modification as long as the approved methodology is referenced in the technical specifications. The Introduction and Section 2.0 have been modified to address this.

#### DUKE POWER COMPANY

Comment: NRC should generically lift restrictions included in topical report SERs that restricted application of the methodology to the plants operated or supported by the licensee of the methodology.

Response: The issuance of this supplement would generically lift these restrictions. However, any other limitations stated in the SERs should be adhered to.

Comment: The introduction should state that the codes are developed by vendors, utilities, national labs, or organizations like EPRI.

Response: The proposed statement has been added to the Introduction.

Comment: The scope of safety analyses should be defined to cover any analytical areas including reload physics design, core thermal-hydraulics, fuel mechanical analysis, transient analysis, dose analysis, setpoint analysis, containment analysis, criticality analysis, statistical methods, and any other analytical area for which topical reports have been approved by the NRC.

Response: The suggested clarification has been incorporated in the Purpose and 2.0 Guidelines sections, with the exception of LOCA analysis codes.

#### NUCLEAR ENERGY INSTITUTE

Comment: Recommends deletion of last two items in Section 2.5.

Response: The NRC believes that the two items emphasized are of sufficient significance to be explicitly stated.

Comment: Recommends rewording of Section 2.4 so as not to imply all of the suggested set of benchmark data is required.

Response: The wording in Section 2.4 has been modified to clarify that these are examples of appropriate benchmark data and are not all required.

#### COMMONWEALTH EDISON COMPANY

Comment: Terminology and criteria are open to interpretation. For example, in Section 2.4, what the licensee may think is appropriate justification for an observed deviation in comparison calculations may satisfy one reviewer but not another.

Response: Suggested rewording for benchmark deviations has been added to Section 2.4 to eliminate ambiguity.

Comment: The intent of the term "application procedure" in Section 2.2 could be misinterpreted.

Response: Section 2.2 has been revised for clarification.

Comment: Section 2.4 should be revised to read "Significant, unexpected, or unusual deviations should be..."

Response: The suggested rewording has been added to Section 2.4.

Comment: Vendor update implementation in Section 2.5 should be clarified so as not to imply that all changes that a vendor makes must be implemented.

Response: Section 2.5 Item (1) has been modified to allow an evaluation of updates to determine if implementation is required.

#### ELECTRIC POWER RESEARCH INSTITUTE

Comment: Questions whether a licensee must base the methodology on a previously approved plant SER or can develop a "new" topical based only on the generic code SER?

Response: By adhering to the guidelines in the supplement, a licensee can perform its own analyses using any approved code or method.

Comment: For clarity, the words "application of the" should be deleted from Section 2.2.

Response: The in-house application procedures should be consistent with the code qualification and approved application of the methodology. Therefore, this has been retained in Section 2.2.

Comment: Training should be performed by either the developer or someone who has been previously qualified.

Response: The proposed wording has been added to Section 2.3.

Comment: "Vendor" analysis should be changed to "analysis of record."

Response: The proposed rewording has been added to Section 2.4.

Comment: An appropriate set of benchmark data should include analysis of events, using higher order codes or published numerical benchmarks.

Response: The proposed wording has been added to Section 2.4.

Comment: In Section 2.4, "Any deviations" should be explained.

Response: A revision has been made to Section 2.4 to more clearly define deviations that must be explained.

#### SOUTHERN NUCLEAR OPERATING COMPANY

Concurs with NEI comments.

#### GPU NUCLEAR CORPORATION

Comment: It seems appropriate to identify existing codes and methodologies that have been developed by national labs for the NRC that can be considered NRC approved codes and methods.

Response: The identification of existing codes and methodologies developed by national labs that can be considered as NRC approved codes and methods, even though formal NRC review and approval has never been performed, is beyond the scope of this proposed supplement.

Comment: Suggests that the terms "codes", "methods", and "applications" be clearly defined.

Response: A definition of codes, methods, and applications has been added to the Introduction.

#### SIEMENS POWER CORPORATION

Supports the approaches described in the proposed supplement.

#### VIRGINIA POWER

Endorses the proposed supplement.

#### PACIFIC GAS AND ELECTRIC COMPANY

Comment: Concept should not be limited to core analysis.

Response: The specific analytical areas that the GL refers to have been added to the Purpose Section.

Comment: NRC should allow the training requirement to be met by on-the-job training.

Response: A new user can be qualified by on-the-job training as well as by formal classroom instruction. In many cases, user qualification will be accomplished by a combination of both

#### YANKEE ATOMIC ELECTRIC COMPANY (YAEC)

Comment: It is YAEC's understanding that the supplement will only apply to licensees who use another organization's methods and codes, and not to an organization that receives approval for its own codes and methods, and conducts safety analyses using those codes and methods.

Response: YAEC's interpretation is correct.

Comment: Recommends that the supplement also note that other organizations such as utilities and engineering service companies have developed codes and methods.

Response: The example of possible code developers has been modified to include utilities and national labs.

#### INDIANA MICHIGAN POWER COMPANY

Comment: Suggests that different versions of previously approved codes should be applicable as long as the calculational methodology is not changed.

Response: Section 2.1 has been modified to clarify code eligibility. What constitutes a significant code or methodology update that must be reviewed by the NRC is too complex a topic to fully address in generic terms at this time. However, as mentioned in the *Federal Register* notice (October 25, 1995 (60 FR 54712)), the NRC is also investigating modified procedures for reducing the resource effort for

acceptance of new or revised licensee or vendor analysis methods. Therefore, it is anticipated that this topic will be addressed at a future date.

#### ENTERGY OPERATIONS, INCORPORATED

Comment: The applicability of a particular method to either a specific fuel design or to a core which contains a mixture of fuel types is important. Use of one vendor's hot channel analysis code with another's transient codes may not necessarily yield conservative results and may not be consistent with the NRC-approved reload analysis package. In-house application procedures should have proper controls to preclude such a misapplication, and should be permitted to include the flexibility to perform comparison tests between the different methodologies to show that a conservative assessment can be made.

Response: Section 2.2 has been modified to incorporate this application procedure.

Comment: NRC should consider issuing an inspection procedure concurrently with the supplement so that licensees would know what questions and documentation requests might be needed to support audits.

Response: The NRC will incorporate oversight of this GL supplement into the NRC inspection program following the issuance of this supplement.

Comment: NRC should consider providing licensees the flexibility to conduct their own assessment of a third party reviewer similar to what is currently allowed in NRC Inspection Module 40501.

Response: Issuance of this supplement would eliminate the need to submit a qualification topical report for NRC review and thus eliminate the need for a third party reviewer.

#### ARIZONA PUBLIC SERVICE (APS)

Comment: The "first licensing application" is interpreted by APS as being the first proposed license amendment or other licensing basis change requiring prior NRC review and approval that was supported by safety analyses performed by the licensee instead of a vendor.

Response: The "first licensing application" may not necessarily be a licensing basis change requiring NRC approval before implementation, but may be a revision to a COLR parameter, for example.

Comment: APS would interpret "eligibility" in Section 2.1 to mean that code packages previously approved in topical reports or license amendments for other plants would be generically approved.

Response: The only codes and methods that are eligible for this process are those that have been generically approved, or those that have been otherwise accepted as part of a plant's licensing basis. Section 2.1 has been modified to clarify this.

Comment: APS suggests that plant specific uncertainties could be used without additional NRC review, even if these uncertainties are less than the generically approved uncertainties.

Response: As a general rule, plant specific uncertainties may be used without additional NRC review provided that they are derived with previously approved methods. However, NRC review is required for modifications to uncertainties that were generically approved to cover uncertainties due to codes and methods, correlations, etc.

Comment: APS states that they would control changes to methodology by design control procedures and that the changes would be subject to 10 CFR 50.59 evaluations, if appropriate.

Response: As stated in Section 2.1, the use of a new methodology or a change to an existing methodology is not applicable to this process. However, as mentioned in the *Federal Register* notice (October 25, 1995 (60 FR 54712)), the NRC is also investigating modified procedures for reducing the resource effort for acceptance of new or revised licensee or vendor analysis methods. Therefore, it is anticipated that this topic will be addressed at a future date.

Comment: APS considers an appropriate set of benchmark data to include other acknowledged industry standard data or criteria.

Response: The examples of appropriate benchmark data has been expanded to include APS's suggestions.

Comment: APS suggests that Section 2.5 be revised to allow a provision for evaluating vendor updates and implementing those updates, if applicable.

Response: The proposed rewording has been incorporated into Section 2.5.

#### CENTERIOR ENERGY

Comment: The guidance should be explicit enough to allow for utilities to reference topical reports submitted by non-NSSS vendors.

Response: Utilities have been added to the example of organizations that develop methods.

Comment: The proposed guidance should be sufficiently flexible to allow substitution of computer codes within an approved analytical methodology.

Response: The Application Procedures have been modified to allow this, but should contain proper controls to preclude misapplications or inappropriate use of an application.

Comment: NRC should maintain a listing of the codes or methods it has approved.

Response: The NRC is currently developing a data base of approved codes as a separate action.

Comment: NRC should define the point at which reapproval of updates is necessary.

Response: What constitutes a significant code or methodology update that must be reviewed by the NRC is too complex a topic to fully address in generic terms at this time. However, as mentioned in the *Federal Register* notice (October 25, 1995 (60 FR 54712)), the NRC is also investigating modified procedures for reducing the resource effort for acceptance of new or revised licensee or vendor analysis methods. Therefore, it is anticipated that this topic will be addressed at a future date.