



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D.C. 20555-0001  
March 3, 2000

MEMORANDUM TO: ACRS Members

*Noel Dudley*

FROM: Noel Dudley, Senior Staff Engineer

SUBJECT: CERTIFICATION OF THE SUMMARY/MINUTES OF THE ACRS  
SUBCOMMITTEE MEETINGS ON PLANT LICENSE RENEWAL  
FEBRUARY 23 AND 24, 2000, SENECA AND CLEMSON, SOUTH  
CAROLINA

The minutes of the subject meeting, issued on March 1, 2000, have been certified as the official record of the proceedings of that meeting. A copy of the certified minutes is attached.

Attachment: As stated

cc via e-mail:

J. Larkins  
H. Larson  
S. Duraiswamy  
ACRS Fellows and Technical Staff



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D.C. 20555-0001

MEMORANDUM TO: Noel Dudley, Senior Staff Engineer  
ACRS

FROM: Dr. Mario Bonaca, Chairman  
Plant License Renewal Subcommittee

SUBJECT: CERTIFICATION OF THE MINUTES OF THE ACRS PLANT LICENSE  
RENEWAL SUBCOMMITTEE MEETING CONCERNING THE  
LICENSE RENEWAL APPLICATION FOR OCONEE NUCLEAR  
STATION, FEBRUARY 23-24, 2000 - CLEMSON, SOUTH CAROLINA

I hereby certify that, to the best of my knowledge and belief, the minutes of the subject meeting issued on March 1, 2000, are an accurate record of the proceedings for the meeting.

Mario V. Bonaca

Dr. Mario Bonaca, Chairman  
Plant License Renewal Subcommittee

March 3, 2000  
Date

Issued: March 1, 2000  
Certified: March 3, 2000

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
MINUTES OF ACRS SUBCOMMITTEE MEETINGS ON  
PLANT LICENSE RENEWAL  
FEBRUARY 23 + 24, 2000  
SENECA AND CLEMSON, SOUTH CAROLINA

The ACRS Subcommittee on Plant License Renewal met on February 23 and 24, 2000, to hold discussions with representatives of the NRC staff and Duke Energy Corporation concerning the Oconee license renewal application. The meeting included presentations concerning the resolution of open and confirmatory items, and other changes to the June 1999 version of the Safety Evaluation Report related to the license renewal application of Oconee Nuclear Station, Units 1, 2, and 3. Mr. Noel Dudley was the cognizant ACRS staff engineer for these meetings. The meeting held at the Oconee Complex in Seneca, South Carolina, on February 23, 2000, was closed. The meeting was convened at 2:20 p.m. and was adjourned at 5:00 p.m. The meeting held at the Inn and Conference Center at Clemson, SC, on February 24, 2000, was open. The meeting was convened at 8:00 a.m. and adjourned at 11:15 a.m.

**ATTENDEES**

**ACRS**

M. Bonaca, Chairman	J. Sieber, Member
R. Seale, Vice Chairman	R. Uhrig, Member
T. Kress, Member	S. Duraiswamy, ACRS Staff
D. Powers, Member	Dudley, Senior Staff Engineer
W. Shack, Member	

**NRC STAFF**

C. Grimes, NRR	J. Fair, NRR
J. Sebrosky, NRR	S. Coffin, NRR
S. Hoffman, NRR	H. Ashar, NRR
P. Shemanski, NRR	J. Davis, NRR

**DUKE ENERGY CORPORATION**

M. Tuckman, Duke	R. Nader, Duke
G. Robison, Duke	J. Gilreath, Duke
R. Gill, Duke	D. Ramsey, Duke
P. Colaianni, Duke	B. Heineck, Duke

There were no written comments or requests for time to make oral statements received from members of the public. Four members of the public attended the meeting. A list of meeting attendees is available in the ACRS office files.

## **INTRODUCTION TO CLOSED MEETING**

Dr. Bonaca expressed his appreciation for the opportunity to visit Oconee Nuclear Station. He noted that this meeting was closed to review the proprietary documents that Duke used in developing its license renewal application.

Prior to the meeting, the Subcommittee members met with Mr. William McCollum, Duke, and discussed the timing of one-time inspections, cooperation between owners' groups in developing data bases containing license renewal information, Duke's corrective action program, and areas of greatest concern related to extended plant operations.

## **DUKE ENERGY CORPORATION PRESENTATION:**

Mr. Greg Robison, Duke, provided an overview of the Duke presentation. He explained that the Duke staff would walk through the decision making process associated with developing the license renewal application and the use of the Updated Final Safety Analysis Report (UFSAR) supplement to document licensee commitments. Before the planned presentations began, Mr. Robinson suggested that the Subcommittee hear a briefing on a related operational event.

### **Unisolable Reactor Coolant System Leak:**

Mr. Robert Heineck, Duke, stated that an unisolable leak had occurred in the Unit 1 reactor coolant system. The leak was from a one inch long through wall crack in a 1 ½ inch drain line off one of the reactor coolant loops. Mr. Heineck explained that Unit 1 was shutdown and the cause of the piping failure was under investigation. Mr. Heineck indicated that one probable cause of the piping failure was thermal fatigue, but noted that the cause had not been confirmed. The Subcommittee members and Duke discussed similar leaks at other operating plants, the corrective actions taken by Duke, and the aging-management programs for small bore piping in the Oconee license renewal application.

### **Evaluation of Structures:**

Ms. Debbie Ramsey, Duke, explained the process she used for scoping and screening facility structures as part of preparing the licensee renewal application. She described how she evaluated the roof of the Keowee electric station, the containment tendons, and the secondary shield building wall tendons. The Subcommittee members and Duke discussed the plant specific engineering documents, whether failure of the Keowee roof would damage safety related electrical cabinets, and extrapolating the results of containment tendon inspections.

### **Evaluation of Electrical Components:**

Mr. Paul Colaianni, Duke, explained the process he used for scoping and screening electrical components as part of preparing the license renewal application. He described the plant walkdowns he conducted, the associated photographs, the identified component degradations,

and the resulting corrective actions. Mr. Colaianni explained how the results of the extrapolation of the electrical cable aging data were used to evaluate the need for cable aging management programs during extended plant operations. The Subcommittee members and Duke discussed ampacity, temperature raise due to current, validation of the assumptions use in the aging extrapolations, correcting mechanical damage to cables, and evaluating of the aging of motors and breakers.

#### Evaluation of System and Components:

Ms. Rounette Nader, Duke, explained the process she used for scoping and screening mechanical systems and components as part of preparing the license renewal application. She described how she marked up piping and instrumentation diagrams based on the functions of each system; identified passive pressure boundaries; identified non-safety components that could effect safety; and high lighted all safety-related piping. Ms. Nader used the spent fuel pool cooling system to demonstrate the evaluation process. The Subcommittee members and Duke discussed safety-related makeup systems to the spent fuel pool, why the heat removal function was not considered safety-related, screening for passive long-lived components, and the research needed to support license renewal.

Mr. Bonaca adjourned the meeting at 5:00 p.m.

#### **INTRODUCTION TO OPEN MEETING**

Dr. Bonaca opened the meeting by identifying the Subcommittee members, stating the purpose of the meeting, and noting that the Subcommittee had visited the Oconee Nuclear Station and met with representatives of Duke Power Corporation.

Mr. John Sieber recused himself from the deliberations on the Oconee license renewal application.

#### **DUKE ENERGY CORPORATION PRESENTATION**

Mr. Robert Gill, Duke, summarized the status of the Oconee license renewal application and identified the topics on which Duke planned to make presentations. He noted that the purpose of the presentations was to provide the Subcommittee members with insights on the engineering process used to address and resolve the open items in the staff's June 1999 Safety Evaluation Report (SER).

#### SER Open Item 2.1.3.1-1 Scoping Methodology:

Ms. Nader explained that this item concerned whether evaluating the current licensing basis (CLB) events was sufficient to identify all of the structures, systems, and components (SSCs) that were within the scope of the license renewal rule. The staff identified ten additional events for consideration under the license renewal scoping criteria. Ms. Nader described how Duke

developed a case study of these ten events. She explained that the study identified that seven of the ten events needed to be considered for scoping. Ms. Nader summarized the chronology of the issue and listed the features and considerations of the license renewal scoping methodology.

Ms. Nader highlighted the fact that the Oconee design preceded the promulgation of the design basis events which are defined by NRC regulations. She explained that after considering the additional ten events suggested by the staff, Duke's assessment revealed that no additional SSCs needed to be added to the scope of license renewal. Ms. Nader concluded that the validation of the case study gave Duke and the staff reasonable assurance that the set of events used in the scoping methodology was sufficient for license renewal.

The Subcommittee members and Duke discussed Duke's extensive review of the high energy line break event and whether CLB events should include more than the UFSAR Chapter 15 events.

#### SER Open Item 3.9.3-1 Electrical Insulated Cables and Connectors:

Mr. Colaianni explained that this item resulted from a 1999 NRC inspection, which identified station problem reports concerning accelerated aging of electrical cables due to adverse environments. He described the aging management programs for thermal/radiation effects on insulated cables in the containment, and for medium-voltage cable moisture aging effects.

The Subcommittee members and Duke discussed design changes that would eliminate the requirement for the aging-management programs, continuation of plant walkdowns, and the different types of cable tests and inspections.

#### SER Open Items Concerning Reactor Vessel Internals:

Mr. Jeff Gilreath, Duke, explained that several open items concerned possible reactor vessel internals aging effects such as void swelling, cracking, embrittlement, and reduction in fracture toughness. He described the susceptible reactor vessel internals, the reactor vessel internals aging-management program, and the associated inspection program. Mr. Gilreath listed the components in the inspection programs, the timing of the inspections, associated industry activities, and related owners group topical reports.

The Subcommittee members and Duke discussed susceptibility of components to different aging effects, inspection of internal hinges, dose maps of reactor vessel internals, and the time line for the reactor vessel internals aging management program.

### **NRC STAFF PRESENTATION**

Mr. Christopher Grimes, Office of Nuclear Reactor Regulation, stated that holding Plant License Renewal Subcommittee meeting near applicants' sites is a good practice. Mr. Joseph Sebrosky,

NRR, presented an overview of the staff's review of the Oconee license renewal application. He listed the resolutions of the open and confirmatory items. The Subcommittee members and the NRC staff discussed the following items.

SER Open Item 3.0-1 UFSAR Supplement:

Mr. Sebrosky explained that the UFSAR supplement would be reviewed in the context of using 10 CFR 50.59, "Changes, tests, and experiment," to identify and track future changes.

SER Open Item 2.1.3.1-1 Scoping Methodology:

The Subcommittee and the staff discussed the use of guidance provided in NEI 95-10, and the adequacy of using UFSAR Chapter 15 accident events in scoping analyses for plants licensed before the promulgation of the design basis events, which are defined by NRC regulations. They also discuss amending 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," to better define the set of events that should be considered as part of the scoping process. Dr. Bonaca questioned whether the loss of heat removal function of the spent fuel pool should be an event used in the scoping process.

SER Open Item 2.2.3.7-2 Exclusion of Stage Equipment From License Renewal:

Mr. Sebrosky agreed that these types of components could be excluded from the scope of license renewal because the components were maintained in storage and inspected prior to use. The Subcommittee and the staff agreed that further review criteria should be included in the Standard Review Plan.

SER Open Item 3.1.3.1.7.4-1 Buried Piping:

The Subcommittee members and the staff discussed how buried pipes at Keowee could be bounded by the corrosion rate observed on pipes buried at Oconee, how the staff determined the corrosion rate of the pipes, and the technical basis for the staff review. Mr. James Davis, NRR, explained that the staff resolved this open item on the basis of an inspection program and not on an analysis of corrosion rates.

SER Open Item 3.2.12-1 SSF HVAC Coolers:

Ms. Stephanie Coffin, NRR, explained that the change in temperature across the standby shutdown facility (SSF) heating and ventilation air conditioning (HVAC) coolers was measured during maintenance activities.

SER Open Item 3.2.13-2 Use of Carbon Steel Inspections as an Indicator of Non-Carbon Steel:

Mr. Hans Ashar, NRR, stated that based on operating experience general corrosion of carbon steel components has appeared before localized corrosion of non-carbon steel components. He

explained that ultrasonic tests were ineffective in identifying internal localized corrosion but could identify general corrosion. He noted that if localized corrosion was identified the applicant would document and monitor the affected piping.

SER Open Item 3.3.3.1-1 Containment Tendon Anchorages:

Mr. Paul Semansky, NRR, explained that the staff resolved this item based on the development of an aging-management program. He noted that after collecting data based on a random sampling plan of the tendons, Duke may be able to perform a time-limiting aging analysis that would negate the need for an aging-management program.

**SUBCOMMITTEE COMMENTS, CONCERNS, AND RECOMMENDATIONS**

Dr. Shack stated that the reactor vessels internal aging-management program (RVIAMP) was comprehensive and that the scoping issue has been reasonably addressed.

Dr. Kress stated that he saw no show stoppers, but noted that guidance for conducting the scoping process at older plants should be developed.

Dr. Seale was impressed with the thoroughness and enthusiasm of the Duke representatives. He questioned the adequacy of analyses performed before the Three Mile Island accident and suggested research be conducted to valid their conclusions.

Dr. Uhrig stated that the effects of cable aging had been adequately addressed.

Dr. Powers suggested that the Committee letter comment on the process methodology and the timing of one-time inspections. He cautioned that future applicants should not blindly follow prescriptive processes but should be imaginative while scoping SSCs.

Mr. Sieber noted that the Duke employees openly communicated with the Subcommittee members.

Dr. Bonaca stated that the increased number of events requested by the NRC and evaluated by Duke during the scoping process was important. He noted that the RVIAMP was a significant commitment, which included ties to industry initiatives. Dr. Bonaca stated that the physical condition of the plant was good. He noted that instead of relying on the CLB, the applicant should be alert to other components that are safety-related as indicated by operating experience or probabilistic risk assessments. Dr. Bonaca outlined the contents of a proposed Committee Report concerning the license renewal application related to Oconee Nuclear Station.

**STAFF AND INDUSTRY COMMITMENTS**

The staff agreed to provide the ACRS with the report concerning corrosion rates of buried pipes.  
[Provided February 28, 2000]

The staff agreed to consider adding guidance to the Standard Review Plan concerning events to be considered during the scoping process.

The staff agreed to consider adding guidance to the Standard Review Plan concerning managing passive features of safety-related equipment that is in storage and verifying the equipment is suitable for operation.

### **SUBCOMMITTEE DECISIONS**

The Subcommittee requested that the staff and Duke make presentations at the March 2-4, 2000 ACRS meeting. The Subcommittee requested Duke to make presentations on the following items:

- scoping process,
- cable aging-management program,
- Reactor Pressure Vessel Aging-Management Program,
- one-time inspections, and
- buried piping.

The Subcommittee requested the staff to make presentations on the following items:

- summary of the resolution of open and confirmatory items,
- reliance on the current licensing basis and the regulatory process,
- Perspectives on the one-time inspections, and
- acceptability of the aging management program for buried piping.

The Subcommittee recommended preparing a report on the SER related to the Oconee license renewal application at the March 2-5, 2000 ACRS meeting.

### **FOLLOW-UP ACTIONS**

No follow-up actions were identified.

### **PRESENTATION SLIDES AND HANDOUTS PROVIDED DURING THE MEETING**

The presentation slides and handouts used during the meeting are available in the ACRS office files or as attachments to the transcript.

### **BACKGROUND MATERIAL PROVIDED TO THE SUBCOMMITTEE:**

1. Letter dated June 16, 1999, from David Mathews, NRR, to William McCollum, Jr., Duke Energy Corporation, Subject: Oconee Nuclear Station License Renewal Safety Evaluation Report.

2. Letter dated April 26, 1999, from Christopher I. Grimes, Office of Nuclear Reactor Regulation, to David J. Firth, B&W Owners Group, Subject: Acceptance for Referencing of Generic License Renewal Program Topical Report Entitled, "Demonstration of the Management of Aging Effects for the Reactor Vessel," BAW-2251, June 1996.
3. Letter dated June 27, 1996, from D. K. Croneberger, B&W Owners Group, to Christopher I. Grimes, Office of Nuclear Reactor Regulation, Subject: Submittal of BAW-2251, "Demonstration of the Management of Aging Effects for the Reactor Vessel," June 1996.
4. Office of Nuclear Reactor Regulation Office Letter No. 805, "License Renewal Application Review Process," approved June 19, 1998.
5. Safety Evaluation Report (SER) related to the Babcock and Wilcox (BAW) topical report 2251, "Demonstration of the Management of Aging Effects for the Reactor Vessel," April 26, 1999.
6. Nuclear Regulatory Commission Safety Evaluation Report related to the license renewal of Oconee Nuclear Station, Units 1, 2, and 3," issued June 1999.
7. Nuclear Regulatory Commission SECY-99-148, "Credit for Existing Programs for License Renewal," dated June 3, 1999.

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**NOTE:** Additional details of this meeting can be obtained from a transcript of this meeting available in the NRC Public Document Room, 2120 L Street, N.W., Washington, D.C. 20006, (202) 634-3274, or can be purchased from Ann Riley & Associates, LTD., 1025 Connecticut Ave., NW, Suite 1041, Washington, D.C. 20036, (202) 842-0034.

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

January 19, 2000

MEMORANDUM TO: Howard J. Larson, Acting Associate Director for  
Technical Support, ACRS/ACNW

*Noel F. Dudley*

FROM: Noel F. Dudley, Senior Staff Engineer

SUBJECT: REVISED FEDERAL REGISTER NOTICE REGARDING  
THE MEETING OF THE ACRS SUBCOMMITTEE ON  
PLANT LICENSE RENEWAL, FEBRUARY 23, 2000,  
SENECA, SOUTH CAROLINA

Attached is a revised Federal Register notice regarding the subject meeting. Please have this notice transmitted for publication as soon as possible.

Attachment:  
FR Notice

cc with Attachment:

M. Bonaca, ACRS  
R. Seale, ACRS  
J. Larkins, ACRS  
S. Duraiswamy, ACRS  
R. Major, ACNW  
J. Szabo, OGC O-4F20  
A. Bates, SECY O-16C1  
W. Ott, OEDO O-16E15  
M. Landau, OPA O-2A13  
S. Collins, NRR O-5E7  
D. Matthews, NRR O-12E5  
C. Grimes, NRR O-12G15  
S. Hoffman, NRR O-12G15  
Public Document Room, LL6

NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
MEETING OF THE SUBCOMMITTEE ON PLANT LICENSE RENEWAL

Revised

The ACRS Subcommittee meeting on Plant License Renewal scheduled for February 24, 2000, 8:00 a.m. until 1:00 p.m. at the Madren Conference Center at Clemson University, Room III & IV, 100 Madren Center Drive, Clemson, South Carolina, has been extended to include a closed session scheduled for February 23, 2000, 2:00 p.m., in Room 1075 of the Oconee Complex, Seneca, South Carolina. This session will be closed pursuant to 5 U.S.C. 552b(c)(4) to review proprietary information pertinent to the Oconee license renewal application. Notice of this meeting was published in the Federal Register on Thursday, January 13, 2000 (64 FR 2204). All other items pertaining to this meeting remain the same as previously published.

For further information contact: Mr. Noel F. Dudley, cognizant ACRS staff engineer, (telephone: 301/415-6888) between 7:30 a.m. and 4:15 p.m. (EST).

Date

1/21/00



Howard J. Larson, Acting Associate Director for  
Technical Support, ACRS/ACNW

## NUCLEAR REGULATORY COMMISSION

### Advisory Committee on Reactor Safeguards, Subcommittee Meeting on Planning and Procedures; Notice of Meeting

The ACRS Subcommittee on Planning and Procedures will hold a meeting on February 2, 2000, Room T-2B1, 11545 Rockville Pike, Rockville, Maryland.

The entire meeting will be open to public attendance, with the exception of a portion that may be closed pursuant to 5 U.S.C. 552b(c) (2) and (6) to discuss organizational and personnel matters that relate solely to internal personnel rules and practices of ACRS, and information the release of which would constitute a clearly unwarranted invasion of personal privacy.

The agenda for the subject meeting shall be as follows:

**Wednesday, February 2, 2000—1:00 p.m. Until the Conclusion of Business**

The Subcommittee will discuss proposed ACRS activities and related matters. The purpose of this meeting is to gather information, analyze relevant issues and facts, and to formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Oral statements may be presented by members of the public with the concurrence of the Subcommittee Chairman; written statements will be accepted and made available to the Committee. Electronic recordings will be permitted only during those portions of the meeting that are open to the public, and questions may be asked only by members of the Subcommittee, its consultants, and staff. Persons desiring to make oral statements should notify the cognizant ACRS staff person named below five days prior to the meeting, if possible, so that appropriate arrangements can be made.

Further information regarding topics to be discussed, the scheduling of sessions open to the public, whether the meeting has been canceled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements, and the time allotted therefor can be obtained by contacting the cognizant ACRS staff person, Dr. John T. Larkins (telephone: 301/415-7360) between 7:30 a.m. and 4:15 p.m. (EST). Persons planning to attend this meeting are urged to contact the above named individual one or two working days prior to the meeting to be advised of any changes in schedule, etc., that may have occurred.

Dated: January 6, 2000.

Howard J. Larson,

Acting Associate Director for Technical Support, ACRS/ACNW.

[FR Doc. 00-806 Filed 1-12-00; 8:45 am]

BILLING CODE 7990-01-P

## NUCLEAR REGULATORY COMMISSION

### \* Advisory Committee on Reactor Safeguards Meeting of the Subcommittee on Plant License Renewal; Notice of Meeting

The ACRS Subcommittee on Plant License Renewal will hold a meeting on February 24, 2000, at the Madren Conference Center at Clemson University, Room III & IV, 100 Madren Center Drive, Clemson, South Carolina.

The entire meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

**Thursday, February 24, 2000—8:00 a.m. until 1:00 p.m.**

The Subcommittee will review the NRC staff's resolution of the open and confirmatory items identified in the June 1999 Safety Evaluation Report related to the license renewal of Oconee Nuclear Station Units 1, 2 and 3, and related license renewal activities. The purpose of this meeting is to gather information, analyze relevant issues and facts, and to formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Oral statements may be presented by members of the public with the concurrence of the Subcommittee Chairman; written statements will be accepted and made available to the Committee. Electronic recordings will be permitted only during those portions of the meeting that are open to the public, and questions may be asked only by members of the Subcommittee, its consultants, and staff. Persons desiring to make oral statements should notify the cognizant ACRS staff engineer named below five days prior to the meeting, if possible, so that appropriate arrangements can be made.

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, may exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the Duke Energy Corporation, the NRC staff, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, and the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor, can be obtained by contacting the cognizant ACRS staff engineer, Mr. Noel F. Dudley (telephone 301/415-6888) between 7:30 a.m. and 4:15 p.m. (EST). Persons planning to attend this meeting are urged to contact the above named individual one or two working days prior to the meeting to be advised of any potential changes to the agenda, etc., that may have occurred.

Dated: January 6, 2000.

Howard J. Larson,

Acting Associate Director for Technical Support, ACRS/ACNW.

[FR Doc. 00-807 Filed 1-12-00; 8:45 am]

BILLING CODE 7990-01-P

## SECURITIES AND EXCHANGE COMMISSION

[Form N-54A, SEC File No. 270-182, OMB Control No. 3235-0237, Form N-54C, SEC File No. 270-184, OMB Control No. 3235-0236, Form N-6F, SEC File No. 270-185, OMB Control No. 3235-0238]

### Proposed Collection; Comment Request

Upon Written Request, Copy Available From: Securities and Exchange Commission, Office of Filings and Information Services, 450 Fifth Street, NW, Washington, DC 20549.

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 [44 U.S.C. 3501 *et seq.*] (the "Act"), the Securities and Exchange Commission (the "Commission") is soliciting comments on the collections of information summarized below. The Commission plans to submit these existing collections of information to the Office of Management and Budget for extension and approval.

*Form N-54A Under the Investment Company Act of 1940; Notification of Election To Be Subject to Sections 55 Through 65 of the Investment Company Act of 1940 Filed Pursuant to Section 54(a) of the Act*

Form N-54A [17 CFR 274.53] is a notification of election to the Commission to be regulated as a business development company. A company making such an election only has to file a Form N-54A once.

It is estimated that approximately 3 respondents per year file with the Commission a Form N-54A. Form N-54A requires approximately 0.5 burden



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

January 6, 2000

MEMORANDUM TO: Howard J. Larson, Acting Associate Director for  
Technical Support, ACRS/ACNW

*Noel F. Dudley*

FROM: Noel F. Dudley, Senior Staff Engineer

SUBJECT: FEDERAL REGISTER NOTICE REGARDING THE  
MEETING OF THE ACRS SUBCOMMITTEE ON  
PLANT LICENSE RENEWAL, FEBRUARY 24, 2000,  
CLEMSON, SOUTH CAROLINA

Attached is a Federal Register notice regarding the subject meeting. Please have this notice transmitted for publication as soon as possible.

Attachment:  
FR Notice

cc with Attachment:  
M. Bonaca, ACRS  
R. Seale, ACRS  
J. Larkins, ACRS  
S. Duraiswamy, ACRS  
R. Major, ACNW  
J. Szabo, OGC O-4F20  
A. Bates, SECY O-16C1  
W. Ott, OEDO O-16E15  
M. Landau, OPA O-2A13  
S. Collins, NRR O-5E7  
D. Matthews, NRR O-12E5  
C. Grimes, NRR O-12G15  
S. Hoffman, NRR O-12G15  
Public Document Room, LL6

*Refer to Home  
News Release  
couple of weeks before  
Feb 7 send  
e-mail of Fed. Register  
notice* STANDARD  
BEST. FOR CHANGE

NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEG  
MEETING OF THE SUBCOMMITTEE ON PLANT LICENSE RENEWAL

Notice of Meeting

The ACRS Subcommittee on Plant License Renewal will hold a meeting on February 24, 2000, at the Madren Conference Center at Clemson University, Room III & IV, 100 Madren Center Drive, Clemson, South Carolina.

The entire meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

Thursday, February 24, 2000 - 8:00 a.m. until 1:00 p.m.

The Subcommittee will review the NRC staff's resolution of the open and confirmatory items identified in the June 1999 Safety Evaluation Report related to the license renewal of Oconee Nuclear Station Units 1, 2 and 3, and related license renewal activities. The purpose of this meeting is to gather information, analyze relevant issues and facts, and to formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

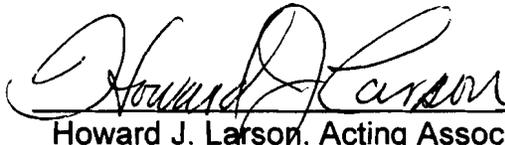
Oral statements may be presented by members of the public with the concurrence of the Subcommittee Chairman; written statements will be accepted and made available to the Committee. Electronic recordings will be permitted only during those portions of the meeting that are open to the public, and questions may be asked only by members of the Subcommittee, its consultants, and staff. Persons desiring to make oral statements should notify the cognizant ACRS staff engineer named below five days prior to the meeting, if possible, so that appropriate arrangements can be made.

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Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, and the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor, can be obtained by contacting the cognizant ACRS staff engineer, Mr. Noel F. Dudley (telephone 301/415-6888) between 7:30 a.m. and 4:15 p.m. (EST). Persons planning to attend this meeting are urged to contact the above named individual one or two working days prior to the meeting to be advised of any potential changes to the agenda, etc., that may have occurred.

Date

1/6/00

Howard J. Larson, Acting Associate Director for  
Technical Support, ACRS/ACNW

NFD

for the Hope Creek Generating Station, located in Salem County, New Jersey.

The proposed amendment would have modified the facility technical specifications associated with the enabling of the Oscillation Power Range Monitor (OPRM) reactor protection system (RPS) trip function. The OPRM is designed to detect the onset of reactor core power oscillations resulting from thermal-hydraulic instability and suppresses them by initiating a reactor scram via the RPS trip logic. The Commission had previously issued a Notice of Consideration of Issuance of Amendment published in the *Federal Register* on June 16, 1999 (64 FR 32289). However, by letter dated January 7, 2000, the licensee withdrew the proposed change.

For further details with respect to this action, see the application for amendment dated May 17, 1999, as supplemented November 16, 1999, and the licensee's letter dated January 7, 2000, which withdrew the application for license amendment. The above documents are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and accessible electronically through the ADAMS Public Electronic Reading Room link at the NRC Web site (<http://www.nrc.gov>).

Dated at Rockville, Maryland, this 19th day of January 2000.

For The Nuclear Regulatory Commission.  
Richard B. Ennis,

Project Manager, Section 2, Project Directorate I, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 00-1940 Filed 1-26-00; 8:45 am]

BILLING CODE 7590-01-U

## NUCLEAR REGULATORY COMMISSION

### Advisory Committee on Reactor Safeguards

#### \* Meeting of the Subcommittee on Plant License Renewal Revised

The ACRS Subcommittee meeting on Plant License Renewal scheduled for February 24, 2000, 8:00 a.m. until 1:00 p.m. at the Madren Conference Center at Clemson University, Room III & IV, 100 Madren Center Drive, Clemson, South Carolina, has been extended to include a closed session scheduled for February 23, 2000, 2:00 p.m., in Room 1075 of the Oconee Complex, Seneca, South Carolina. This session will be closed pursuant to 5 U.S.C. 552b(c)(4) to review proprietary information

pertinent to the Oconee license renewal application. Notice of this meeting was published in the *Federal Register* on Thursday, January 13, 2000 (64 FR 2204). All other items pertaining to this meeting remain the same as previously published.

**FOR FURTHER INFORMATION CONTACT:** Mr. Noel F. Dudley, cognizant ACRS staff engineer, (telephone: 301/415-6888) between 7:30 a.m. and 4:15 p.m. (EST).

Dated: January 21, 2000.

Howard J. Larson,

Acting Associate Director for Technical Support, ACRS/ACNW.

[FR Doc. 00-1941 Filed 1-26-00; 8:45 am]

BILLING CODE 7590-01-P

## OFFICE OF MANAGEMENT AND BUDGET

### Draft Report to Congress on the Costs and Benefits of Federal Regulations

**AGENCY:** Office of Management and Budget, Executive Office of the President.

**ACTION:** Notice of extension of public comment period.

**SUMMARY:** On January 7, 2000, OMB published a notice of availability of the Draft Report to Congress on the Costs and Benefits of Federal Regulations. The comment period was scheduled to end on January 21, 2000. This notice extends the public comment period on the draft report to February 22, 2000.

**DATES:** *Comment Due Date:* February 22, 2000.

**ADDRESSES:** Comments on this draft report should be addressed to John Morrall, Office of Information and Regulatory Affairs, Office of Management and Budget, NEOB, Room 10235, 725 17th Street, NW, Washington, DC 20503.

You may submit comments by regular mail, by facsimile to (202) 395-6974, or by electronic mail to [jmorrall@omb.eop.gov](mailto:jmorrall@omb.eop.gov).

**FOR FURTHER INFORMATION CONTACT:** You can review the Report on the Internet at: "<http://www.whitehouse.gov/omb/infocreg/index.html>". You may also request a copy from John Morrall, Office of Information and Regulatory Affairs, Office of Management and Budget, NEOB, Room 10235, 725 17th Street, NW, Washington, DC 20503. Telephone: (202) 395-7316. E-mail: [jmorrall@omb.eop.gov](mailto:jmorrall@omb.eop.gov).

**SUPPLEMENTARY INFORMATION:** On January 7, 2000, OMB published in the *Federal Register* (65 FR 1296) a notice of availability of the Draft Report to

Congress on the Costs and Benefits of Federal Regulations. The comment period on the draft report was scheduled to end January 21, 2000. Members of the public and Congress have asked for additional time to allow the public a better opportunity to participate in the comment process. Accordingly, OMB has decided to extend the public comment period on the draft report to February 22, 2000.

John T. Spotila,

Administrator, Office of Information and Regulatory Affairs.

[FR Doc. 00-1860 Filed 1-26-00 8:45 am]

BILLING CODE 3110-01-M

## SECURITIES AND EXCHANGE COMMISSION

[Investment Company Act Release No. 24258; International Series Release No. 1212; 812-11306]

### The Toronto-Dominion Bank, et al.; Notice of Application

January 20, 2000.

**AGENCY:** Securities and Exchange Commission ("Commission").

**ACTION:** Notice of an application under section 6(c) of the Investment Company Act of 1940 (the "Act") for an exemption from all provisions of the Act.

**SUMMARY OF APPLICATION:** Applicants request an order that would permit certain finance subsidiaries of The Toronto-Dominion Bank ("TD") to sell certain debt securities and use the proceeds to finance the business activities of their parent company, TD, and certain of its subsidiaries. The requested order would supersede an existing order.

**APPLICANTS:** TD, Toronto-Dominion Holdings (U.S.C.), Inc. ("TD Holdings"), and TD Capital Funding L.P. ("TD Capital").

**FILING DATES:** The application was filed on September 16, 1998 and amended on November 18, 1999. Applicants have agreed to file an amendment during the notice period, the substance of which is reflected in this notice.

**HEARING OR NOTIFICATION OF HEARING:** An order granting the application will be issued unless the Commission orders a hearing. Interested persons may request a hearing by writing to the Commission's Secretary and serving applicants with a copy of the request, personally or by mail. Hearing requests should be received by the Commission by 5:30 p.m. on February 14, 2000, and

**ADVISORY COMMITTEE ON REACTOR SAFEGUARDS**  
**SUBCOMMITTEE MEETING ON PLANT LICENSE RENEWAL**

FEBRUARY 24, 2000  
Date(s)

FEBRUARY 24, 2000  
Today's Date

**ATTENDEES - PLEASE SIGN BELOW**

**PLEASE PRINT**

NAME	AFFILIATION
PAUL COLAIANNI	DUKE
Greg Robison	Duke
Rounette Nader	Duke
Michael Semmier	Duke
ROO Emory	DUKE
JEFF GILREATH	DUKE
Ronald Clary	SCE&G
Wesley Higgins	SCE&G
AL PAGLIA	SCE&G
MARLIN STRAND	NJSIS / SCIENTIST
MIKE TUCKERMAN	DUKE
William R McCallum	Duke
Robert Gill	Duke
Jay Verbois	Duke
Dayle Stewart	Duke



ACRS License Renewal Subcommittee  
Site Visit to Oconee Nuclear Station  
February 23, 2000

7:30 Leave Hotel

8:15 ACRS Subcommittee arrive at the Oconee Complex, Room 1075

8:20 ~~8:30~~ Introductions - Opening Remarks Dr. Mario Bonaca, Subcommittee Chairman  
Bill McCollum, Site Vice President

Note: Pickup NRC Hardhats, Safety Glasses, Ear Plugs before departing

8:30 ~~8:45~~ Depart by Bus for Oconee/Keowee Tour

8:40 ~~9:00~~ Tour Keowee Hydroelectric Station

9:15 ~~10:00~~ Depart Keowee for Oconee Plant Tour

9:30 ~~10:15~~ In-Process for Oconee Plant Tour (Pickup Visitor Badges)

11:15 ~~10:30~~ Tour Lower Tendon Gallery (Unit 3)

10:35 11:00 Tour Standby Shutdown Facility

10:15 11:45 Tour Turbine Building Basement

9:45 12:30 Tour Control Room (Unit 1&2)  
*END TOUR / MEET WITH W. McCollum, JR.*

11:50  
12:20 ~~1:00~~ Depart Oconee Plant - Return by Bus to the Oconee Complex

1:15 Lunch at the Oconee Complex, Room 1075

2:20 ~~2:00~~ Technical Presentations in the Oconee Complex, Room 1075 (Closed):  
*RCS DRAIN LINE CRACK/LEAK*  
Scoping Process

Aging Management Review Overview

Insulated Cable Aging Management Review

5:00 ~~4:00~~ Closing Remarks Dr. Mario Bonaca, ~~Bill McCollum~~

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
 PLANT LICENSE RENEWAL  
 FEBRUARY 24, 2000  
 CLEMSON, SOUTH CAROLINA

- AGENDA -

<u>TOPIC</u>	<u>PRESENTER</u>	<u>TIME</u>
I. Opening Remarks	M. Bonaca ACRS	8:00-8:05 a.m.
II. Resolution of Open Items	DUKE Staff	8:05-9:30 a.m.
A. Scoping		
B. Insulated Cables		
C. Reactor Pressure Vessel Internals		
- BREAK -		9:30-9:45 a.m.
III. Safety Evaluation Report	J. Sebrosky NRR Staff	9:45-10:45 a.m.
A. Closure of Open Items		
B. Added Sections		
IV. Discussion	M. Bonaca ACRS	10:45- <del>12:00 noon</del> <sup>11:15 a.m.</sup>
V. Adjournment	M. Bonaca ACRS	<del>12:00 noon</del> <sup>11:15 a.m.</sup>

**NOTE:** Presentation time should not exceed 50 percent of the total time allocated for specific item. The remaining 50 percent of the time is reserved for discussion.

Number of copies of the presentation materials to be provided to the ACRS - 25.

ACRS License Renewal Subcommittee  
Site Visit to Oconee Nuclear Station  
February 23, 2000

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- 8:15 ACRS Subcommittee arrive at the Oconee Complex, Room 1075
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Bill McCollum, Site Vice President
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- 10:30 Tour Lower Tendon Gallery (Unit 3)
- 11:00 Tour Standby Shutdown Facility
- 11:45 Tour Turbine Building Basement
- 12:30 Tour Control Room (Unit 1&2)
- 1:00 Depart Oconee Plant – Return by Bus to the Oconee Complex
- 1:15 Lunch at the Oconee Complex, Room 1075
- 2:00 Technical Presentations in the Oconee Complex, Room 1075 (Closed):
- Scoping Process
- Aging Management Review Overview
- Insulated Cable Aging Management Review
- 4:00 Closing Remarks Dr. Mario Bonaca, Bill McCollum

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
PLANT LICENSE RENEWAL  
FEBRUARY 24, 2000  
CLEMSON, SOUTH CAROLINA

- AGENDA -

<u>TOPIC</u>	<u>PRESENTER</u>	<u>TIME</u>
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B. Insulated Cables		
C. Reactor Pressure Vessel Internals		
- BREAK -		9:30-9:45 a.m.
III. Safety Evaluation Report	J. Sebrosky NRR Staff	9:45-10:45 a.m.
A. Closure of Open Items		
B. Added Sections		
IV. Discussion	M. Bonaca ACRS	10:45-12:00 noon
V. Adjournment	M. Bonaca ACRS	12:00 noon

**NOTE:** Presentation time should not exceed 50 percent of the total time allocated for specific item. The remaining 50 percent of the time is reserved for discussion.

Number of copies of the presentation materials to be provided to the ACRS - 25.

INTRODUCTORY STATEMENT BY THE CHAIRMAN OF THE  
PLANT LICENSE RENEWAL SUBCOMMITTEE  
OCONEE COMPLEX, ROOM 1075  
SENECA, SOUTH CAROLINA  
FEBRUARY 23, 2000; MORNING

Good morning, I am Mario Bonaca Chairman of the Plant License Renewal Subcommittee. The other ACRS Members in attendance are the ACRS Chairman Dana Powers, Vice-Chairman of the Plant License Renewal Subcommittee Robert Seale, Thomas Kress, William Shack, Jack Sieber, and Robert Uhrig.

We appreciate the opportunity to tour your facility and meet with you. The purpose of the plant tour and the meeting this afternoon is to review the NRC staff's resolution of the open and confirmatory items identified in the Safety Evaluation Report related to the license renewal of Oconee Nuclear Station, Units 1, 2 and 3, and related license renewal activities. We are holding a Subcommittee Meeting tomorrow to continue our review and to allow local citizens an opportunity to express their views on the license renewal application for Oconee Nuclear Station. For these same reasons, we plan to visit other facilities that apply for license renewal. Our Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions as appropriate for deliberation by the full Committee.

Sometime during our discussion today I would like to better understand why the spent fuel pool cooling pumps are not included within the scope of license renewal

INTRODUCTORY STATEMENT BY THE CHAIRMAN OF THE  
PLANT LICENSE RENEWAL SUBCOMMITTEE  
OCONEE COMPLEX, ROOM 1075  
SENECA, SOUTH CAROLINA  
FEBRUARY 23, 2000; AFTERNOON

The meeting will now come to order. This is a meeting of the ACRS Plant License Renewal Subcommittee. I am Mario Bonaca, Chairman of the Subcommittee.

The other ACRS Members in attendance are the Vice-Chairman of the Subcommittee Robert Seale, Thomas Kress, Dana Powers, William Shack, Jack Sieber, and Robert Uhrig.

The purpose of the meeting is to meet with the representatives of Duke Energy Corporation to discuss their resolution of the open and confirmatory items identified in the Safety Evaluation Report related to the license renewal of Oconee Nuclear Station, Units 1, 2 and 3, and related license renewal activities. Our Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions as appropriate for deliberation by the full Committee.

Noel Dudley is the Cognizant ACRS Staff Engineer for this meeting.

The rules for participation in today's meeting have been announced as part of the notice of this meeting previously published in the Federal Register on January 27, 2000.

This meeting is closed and a transcript of the meeting will not be kept. A summary of the issue discussed and the commitments made will be included in the minutes of the Subcommittee meeting. We will proceed with the meeting and I call upon the Duke staff to begin.

INTRODUCTORY STATEMENT BY THE CHAIRMAN OF THE  
PLANT LICENSE RENEWAL SUBCOMMITTEE  
MADREN CONFERENCE CENTER, ROOM III & IV  
CLEMSON, SOUTH CAROLINA  
FEBRUARY 24, 2000

The meeting will now come to order. This is a meeting of the ACRS Plant License Renewal Subcommittee.

I am Mario Bonaca, Chairman of the Subcommittee.

The other ACRS Members in attendance are the Vice-Chairman of the Subcommittee Robert Seale, ~~George Apostolakis~~, Thomas Kress, Dana Powers, William Shack, Jack Sieber, and Robert Uhrig.

The purpose of the meeting is to meet with the representatives of the NRC staff and the Duke Energy Corporation to discuss the staff's resolution of the open and confirmatory items identified in the Safety Evaluation Report related to the license renewal of Oconee Nuclear Station, Units 1, 2 and 3, and related license renewal activities. Our Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions as appropriate for deliberation by the full Committee.

Noel Dudley is the Cognizant ACRS Staff Engineer for this meeting.

The rules for participation in today's meeting have been announced as part of the notice of this meeting previously published in the Federal Register on January 13, 2000.

A transcript of the meeting is being kept and will be made available as stated in the Federal Register Notice. It is requested that the speakers first identify themselves and speak with sufficient clarity and volume so that they are readily heard.

We have received no written comments or requests for time to make oral statements from members of the public.

Yesterday, the Subcommittee toured Oconee Nuclear Station and meet with representative of the Duke Energy Corporation to review the details of how Duke conducted the license renewal scoping and aging management review processes.

We will proceed with the meeting and I call upon the Duke staff to begin.



## **Safety Evaluation Report Related to the License Renewal Application for Oconee Nuclear Station**

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ACRS Plant License Renewal Subcommittee  
February 24, 2000

Joseph Sebrosky DRIP/RLSB

1

## **Oconee License Renewal Application**

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### Agenda

- ▶ Overview
- ▶ Resolution of open and confirmatory items
- ▶ Added discussions in the Oconee SER
- ▶ Summary of LRA review activities

2

## **Overview**

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Status of Oconee Nuclear Station LRA review

- June 16, 1999 SER issued for Oconee LRA
- Meeting held with ACRS Subcommittee on June 30, 1999, and July 1, 1999
- ACRS Full Committee meeting on September 1, 1999
- Provided ACRS with update to SER on February 3, 2000

3

## **Overview**

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Status of Oconee Nuclear Station LRA Review

- February 3, 2000 version of the SER contains several updates to June version
  - ▶ Closed open and confirmatory items contained in June 1999 version of the SER
  - ▶ New evaluations added due to LRA update or because of a Duke response to an SER open item
  - ▶ Changes made to address technical comments received by Duke

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# **Resolution of OIs and CIs**

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## **Summary of Staff's Basis for Closure**

- **Division of Regulatory Improvement Programs (DRIP)**
- **Division of Inspection Program Management (DIPM)**
- **Division of Systems Safety and Analysis (DSSA)**
- **Division of Engineering**
  - ▶ **Materials and Chemical Engineering Branch (EMCB)**
  - ▶ **Mechanical and Civil Engineering Branch (EMEB)**
  - ▶ **Electrical and Instrumentation and Controls Branch (EEIB)**

5

# **Top Issues — Resolved**

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## **DRIP**

- **Information regarding significant aging management programs critical to staff findings that are to be included in the UFSAR (OI: 3.0-1)**

6

## **Top Issues — Resolved**

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### **DIPM**

- Staff concerned that because of Duke's definition of design basis events, some structure or component capabilities might have been overlooked if a broader view of DBEs like that described in 10 CFR 50.49(b)(1) was used. (OI: 2.1.3.1-1)
- Duke performed an evaluation of 10 additional events.
  - ▶ Evaluation did not identify any additional structure or component function that needed to be subject to an AMR
- On the basis of the evaluation, inspections, meetings, and applicant actions, the staff concluded that there was reasonable assurance that all applicable SSCs had been identified for license renewal.

7

## **Other Issues — Resolved**

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### **DIPM**

- Commitment to revise the UFSAR supplement corrective action statement for each applicable credited aging management program that contains non-safety related structures and components. (OI: 3.2.3.3-1)

8

## **Top Issues — Resolved**

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DSSA - Added SSCs or portions of SSCs to the scope of renewal

- Added chilled water system to the scope of license renewal (OI:2.2.3.4.3.2.1-1)
- Added ventilation sealant material to the scope of license renewal and provided an AMR (OI: 2.2.3.4.3.2.1-2)
- Passive long-lived equipment excluded from an AMR. Applicant expanded the scope of the systems subject to an AMR (OI 2.2.3.4.8.2.1-1)
- ECCS piping insulation (new issue)

## **Other Issues — Resolved**

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### **DSSA**

- Basis for the recirculated cooling water system not being included within the scope of license renewal (OI: 2.2.3-1)
- Treatment of structural sealants, water stops, and expansion joints (OI: 2.2.3.6.1.2.1-1)
- Basis for excluding the Keowee and Turbine building roofs from an AMR (OI: 2.2.3.6.4.2.1-1)
- Basis for excluding fire detector cables from an AMR (OI: 2.2.3.7-1)
- Basis for excluding staged pumps, electrical cable, and switchgear from an AMR (OI: 2.2.3.7-2)
- Applicant docketed information provided during 2 conference calls regarding pipe segments that provide structural support (CI: 2.2.3.6.9-1)

## **Top Issues — Resolved**

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### **DE/EMCB - Reactor Vessel Internals Related Issues**

- Applicant addressed void swelling through reactor vessel internals inspection(OI:3.4.3.2-2)
- SER Open Items 3.4.3.3-3, 3.4.3.3-4, and 3.4.3.3-5,
  - ▶ related to management of cracking for non-bolted reactor vessel internal components, inspection of baffle former bolts, and loss of fracture toughness in CASS from synergistic thermal and neutron embrittlement
  - ▶ Duke provided a Reactor Vessel Internals Inspection that includes inspections into the period of extended operation to address the above issues
- Applicant addressed plan to develop data to demonstrate that the internals will meet the deformation limit (OI: 4.2.5.3-1)

## **Top Issues — Resolved**

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### **DE/EMCB - Reactor Coolant System**

- Applicant provided an explanation regarding treatment of the reactor vessel internal vent valve bodies and retaining rings (OI 3.4.3.3-6)
- Duke evaluated CASS components in 4 different groups that satisfied the staff's concerns regarding the use of EPRI TR-106092 (OI: 3.4.3.3-7)
  - ▶ The four groups were: RCS boundary isolation valves, reactor coolant pump casings, the pressurizer spray head, and parts of the reactor vessel internals
- Applicant provided an explanation regarding the reactor vessel monitoring line (OI:3.4.3.3-9 added after June SER)

## Other Issues — Resolved

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### DE/EMCB

- Spray head aging effect (OI: 3.4.3.2-1)
- Pressurizer heater bundle (OI 3.4.3.3-1)
- Unit 1 pressurizer heater sheath-to-sleeve plate and heater sleeve-to-bundle diaphragm plate (OI 3.4.3.3-2)
- Aging effect inconsistencies in the license renewal application (OI 3.1.1-1)
- Buried piping (OI 3.1.3.1.7.4-1)
- SSF HVAC coolers (OI: 3.2.12-1)
- SSF heat exchangers, decay heat removal coolers, and reactor building cooling units, performance testing (OI: 3.2.12-2)
- Keowee oil sampling program (OI: 3.6.3.3.2-1)

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## Other Issues — Resolved

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### DE/EMCB

- Service Water Piping Corrosion Program
  - ▶ Loss of material (OI: 3.2.13-1)
  - ▶ Carbon steel inspection “indicator” of the condition of non-carbon steel components (OI: 3.2.13-2)
  - ▶ Relationship of program to Keowee (OI: 3.2.13-3)
  - ▶ UT inspections capability to detect localized degradation (OI: 3.2.13-4)
- Applicant provided information regarding the Section XI flaw evaluations for identified locations (OI: 4.2.3-1)
- Applicant provided information regarding flaw growth acceptance in accordance with ASME B&PV code, Section XI ISI requirements (OI: 4.2.5.3-2)
- Applicant docketed information regarding the reactor building spray inspection, auxiliary service water system operating experience, and basis for Keowee oil sampling program (CIs: 3.5.3.2-1, 3.6.1.3.2-1, and 3.6.3.3.2-1, respectively)

14

## **Top Issues — Resolved**

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### **DE/EMEB — GSI 190 – Fatigue Evaluation of Metal Components for 60-Year Plant Life (OI: 4.2.3-2)**

- 3 Options
  - ▶ Develop an AMP that incorporates a plant-specific resolution
  - ▶ Submit a technical rationale which demonstrates that the CLB will be until an option is implemented to manage the effects of aging
  - ▶ Adopt GSI-190 resolution
- Duke chose to develop an AMP incorporating a plan-specific resolution
  - ▶ Apply ANL environmental correction factors to locations identified in NUREG/CR-6260 (pressurizer surge line, HPI nozzle, decay heat removal piping)
  - ▶ Alternatively, implement GSI-190 resolution.

## **Other Issues — Resolved**

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### **DE/EMEB**

- Containment tendon anchorages (OI: 3.3.3.1-1)
- Letdown cooler thermal fatigue (OI: 3.4.3.3-8)
- Aging effects of HVAC sub-components (3.6.1.3.1-1)
- Reactor coolant pump oil tank inspection plan (OI: 3.6.2.3.2-1)
- Spent fuel pool temperature (OI: 3.8.3.1-1)
- For structural components experience database should consider the results of Oconee baseline inspection and instances of reported unusual events (OI: 3.8.3.1-2)
- Aging effects for cable trays (OI: 3.8.3.1.9-1)
- Secondary shield wall prestressing tendons (OI: 3.8.3.2.5-1)

## **Other Issues — Resolved**

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### **DE/EMEB**

- Discussion or cumulative effects of all possible cycles in the containment fatigue analysis (OI: 4.2.1.3-1)
- Trend lines for containment tendons (OI: 4.2.2.3-1)
- Duke docketed information regarding containment pressure tests and fatigue management program analyses commitments (CIs: 4.2.1.3-1 and 4.2.3-1)

## **Top Issues — Resolved**

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### **DE/EEIB**

- Insulated cables and connections (OI: 3.9.3-1 added after June 1999 SER because of inspection findings)
  - ▶ Originally, Duke did not identify the need for an aging management program for insulated cables and connections
  - ▶ Inspection found evidence of aging of insulated cables
  - ▶ In letters dated December 17, 1999, and January 12, 2000, Duke provided an Insulated cables AMP
- Insulated cables AMP Scope
  - ▶ Insulated cables within scope of license renewal that are installed in adverse, localized environments in the reactor buildings, auxiliary buildings, turbine building, SSF, Keowee, in conduit and direct-buried which could be subject to aging effects from heat, radiation, or moisture
- Accessible insulated cables will be inspected once every 10 years
- Inaccessible or direct-buried, medium voltage cables exposed to significant moisture will be tested

## **Added Discussions in the SER**

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### **Response to SER Open Items**

- As discussed above, responses to the following OIs resulted in new SER Sections
  - ▶ Chilled water system (OI: 2.2.3.4.3.2.1-1)
  - ▶ Control room pressurization and filtration system (OI: 2.2.3.4.3.2.1-2)
  - ▶ Standby shutdown facility (OI: 2.2.3.4.8.2.1-1)
  - ▶ Reactor vessel monitoring pipe (OI 3.4.3.3-9 new item)
  - ▶ Insulated cables (OI: 3.9.3-1 new item)
  - ▶ ECCS piping insulation (updated discussion in SER Section 2.2.3.3.3.2.1)

## **Added Discussions in the SER**

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### **September 30, 1999 LRA update**

- September 30, 1999, LRA update added the following SSCs or portions of SSCs to the scope of license renewal
  - ▶ Essential siphon vacuum system, the siphon seal water system, the essential siphon vacuum trenches, and the essential siphon vacuum building
  - ▶ Portions of the component cooling water system because of a revision to the steam generator tube rupture analysis
  - ▶ Portions of the low pressure service water system for the reactor building auxiliary coolers because of an operational change

# Added Discussions in the SER

## Duke Comments from October 15, 1999, letter

Comment #	Description	Change to SER
1	Clarify Basis for Program Evaluation Conclusions	No Change
2	Revise Pressurized Thermal Shock Discussion for Oconee Unit 2	Updated Section 4.2.4.3.3 of the SER
3	Discuss leak-before-break evaluation in SER section 4.2	Added new discussion in Section 4.2 of the SER
4	Clarify admin Controls for Preventive Maintenance	Corrected Section 3.2.10.3 of the SER
5, 5.1 and 5.2	Clarify Discussion of Aux Service Water including the raw water and air portion of system	Minor changes to SER Section 3.6.1 and 3.2.10
6	Clarify discussion of CASS	Made changes to Section 3.4.3.3 of the SER
7	Revise the evaluation of the Chemistry Control Program	Revised Section 3.2.2 of the SER
8	Revise the Description of the "Technical Information for Identifying SSCs within scope of License Renewal"	Revised Section 2.1.2.1 to address some of the issues
9	Verify the appropriateness of Specifically referencing documents that are not part of the application	Clarification added to Section 4.2.8.3 of the SER
10	Revise discussion of class E piping supports	Revised Section 2.2.3.6.9 of the SER

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# Summary of LRA Review Activities

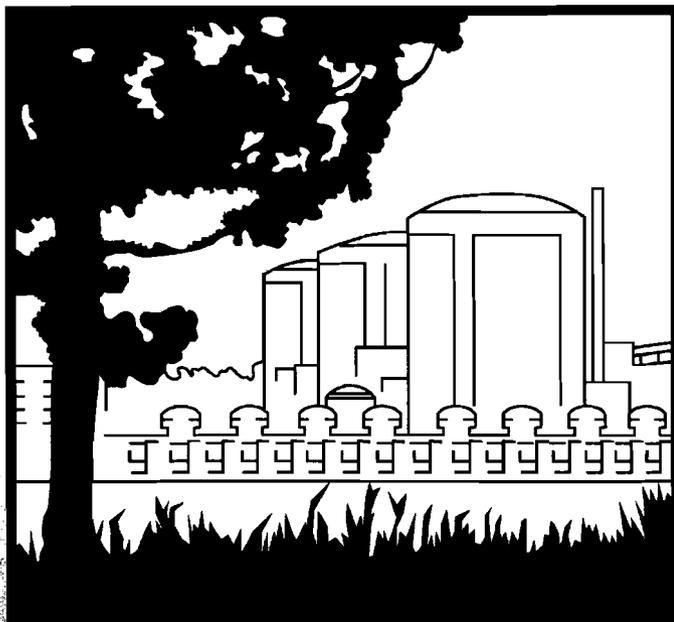
## Schedule

Item	Date	Actual
Staff Issue FES	2/12/00	12/9/99
Staff Issue SSER	2/12/00	2/3/00
ACRS Subcommittee Meeting	2/24/00	
Final Renewal Inspection	2/28/00	
ACRS Full Committee Meeting	3/2/00	
ACRS Letter	3/10/00	
Issue SER as NUREG	3/24/00	
Regional Administrator's Letter	3/31/00	
Commission Paper with Staff Recommendation	4/14/00	
Commission Meeting (if requested)	6/15/00	
Commission Decision	6/26/00	
Renewed License Issued (if approved)	7/3/00	

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# *Oconee License Renewal Project*



*Meeting with the  
Advisory Committee on  
Reactor Safeguards*

*Plant License Renewal  
Subcommittee*

*February 24, 2000*

- Project status
- Resolution of Open Items
  - ◆ Scoping Methodology
  - ◆ Electrical Insulated Cables & Connections
  - ◆ Reactor Vessel Internals



# *Status of Commission Package*

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## **Oconee License Renewal Package is due to the NRC Commissioners by 4/14/00**

- **Facility Operating License** - meeting 3/9/00 to review draft
- **Technical Specification Changes** - none identified
- **Final Safety Evaluation Report** - received 2/3/00
- **UFSAR Supplement** - draft sent 2/14/00 for NRC overview
- **Region II Recommendation Letter** - by 3/31/00
- **Final Supplemental Environmental Impact Statement** - received 12/9/99
- **ACRS Recommendation Letter** - by 3/10/00
- **Amendment to the Indemnity Agreement** - none identified



## *Resolution of Open Items*

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- Purpose of the discussion of resolution of these open items is to provide the ACRS members with insights on the engineering process used to address and resolve these items.



## *Presenters*

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- Scoping Methodology - Rounette Nader
- Electrical Insulated Cables & Connections - Paul Colaianni
- Reactor Vessel Internals - Jeff Gilreath



# SER OPEN ITEM 2.1.3.1-1

## Scoping Methodology

February 24, 2000

Oconee License Renewal Project

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## *Scoping Methodology Safety Evaluation Report Open Item Resolution*

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- SER Open Item 2.1.3.1-1 - Scoping Methodology:
  - ◆ Is the set of events that is considered by the Oconee License Renewal Scoping Methodology sufficient for scoping?
- Duke Response
  - ◆ Resolution involved a case study of the CLB of 10 additional events
  - ◆ Scoping methodology and scoping results remain unchanged based on case study results



## *Chronology of Issue*

- 10/27/98 NRC staff technical visit to Duke to review scoping details (NRC trip report issued 2/8/99)
- 12/1/99 Request for Additional Information (RAI) 2.2-6 issued addressing scoping topic (NRC letter dated 12/1/99)
- 2/17/99 Duke submits initial response to RAI 2.2-6 (M.S. Tuckman letter dated 2/17/99)
- 3/11/99 Duke technical meeting with NRC staff (NRC meeting summary issued 4/2/99)
- 3/18/99 Duke submits revised response to RAI 2.2-6 (M.S. Tuckman letter dated 3/18/99)
- 5/11/99 Duke/NRC management meeting focused on scoping issue (NRC meeting summary issued 5/19/99)



## ***Chronology of Issue***

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- 6/16/99 NRC Safety Evaluation Report related to Oconee license renewal issued with open item 2.1.3.1-1
- 6/22/99 Duke submits initial response to SER open item 2.1.3.1-1 (M.S. Tuckman letter dated 6/22/99)
- 8/16-18/99 NRC staff meets with Oconee staff to review materials associated with the scoping process (NRC meeting summary issued 8/27/99)
- 8/27/99 Duke management presents further scoping issue information at monthly NRC/Duke license renewal management meeting (NRC meeting summary issued 9/7/99)
- 10/8/99 NRC issues Plan for the Resolution of the Scoping Issue (NRC letter dated 10/8/99)



## *Chronology of Issue*

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- 10/28/99 Duke/ NRC meeting held to discuss Plan for Responding to NRC 10/8/99 letter
- 11/30/99 Duke submits letter responding to NRC 10/8/99 letter (M.S. Tuckman letter dated 6/22/99)
- 2/2000 Scoping issue resolved and Open Item 2.1.3.1-1 closed in Final SER



## *Seven Features of the License Renewal Scoping Methodology*

### **1. Functional flow path identification**

All mechanical systems and their functions that are listed in Oconee event mitigation calculations are included within the scope of license renewal. (The scope of these events is the subject of SER Open Item 2.1.3.1-1.)

### **2. Fluid pressure boundary determination**

All passive pressure boundaries required for mechanical systems identified in Feature 1 above are included within the scope of license renewal.

### **3. Physical interference identification**

Portions of selected mechanical systems whose failure to maintain their pressure boundary or to remain structurally intact would result in impacting the function of any essential system and component (seismic II/I) are included within the scope of license renewal.



## *Seven Features of the License Renewal Scoping Methodology*

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### **4. Other designated item identification (safety-related, seismic)**

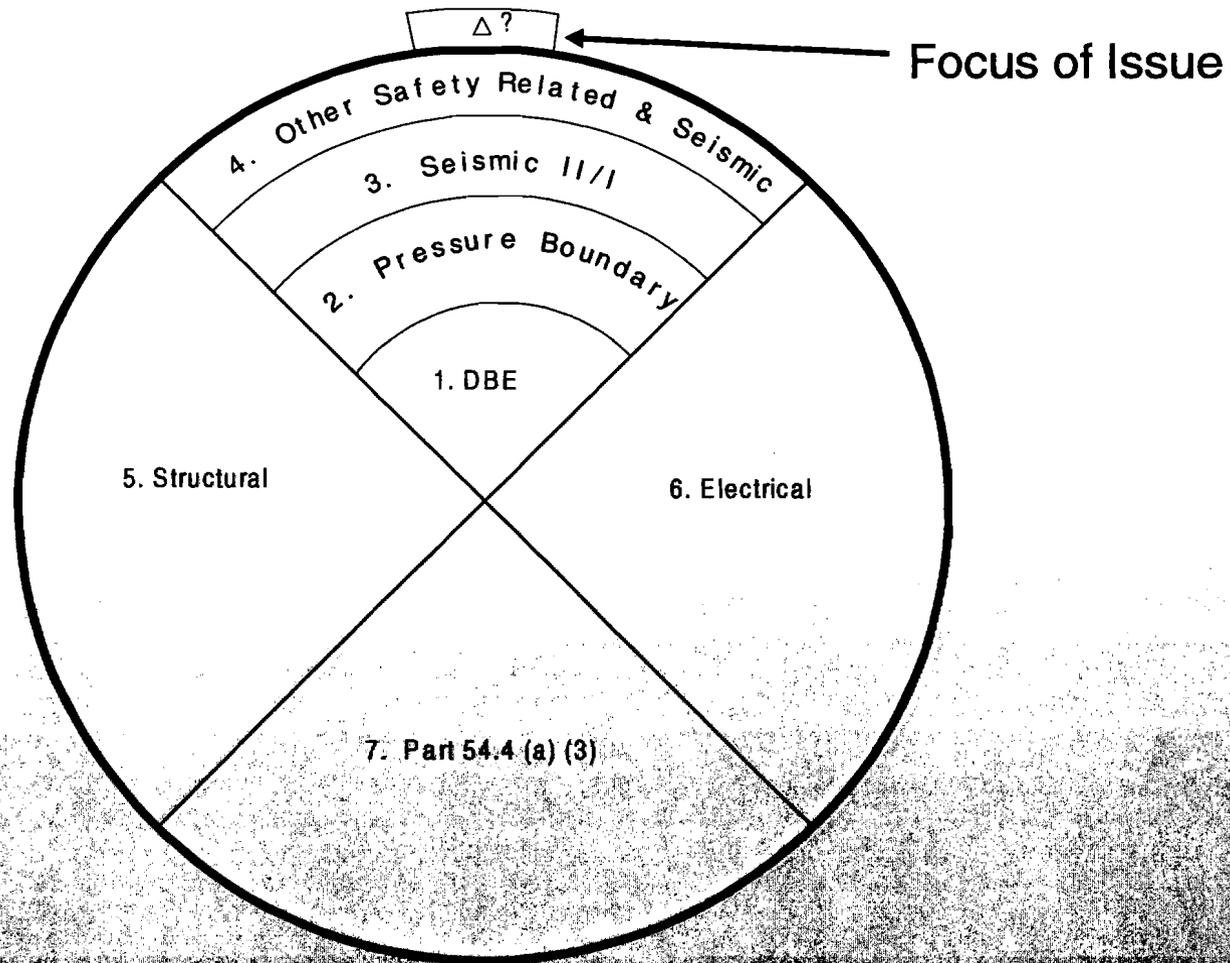
Mechanical systems or portions of systems that contain safety-related and seismically designed piping that have not otherwise been included are included within the scope of license renewal.

### **5. All Oconee structures that are designated as either Class 1 or 2 as defined in UFSAR**

### **6. All Oconee electrical components are initially assumed to be within scope**

### **7. All structures and mechanical systems required for events identified in §54.4(a)(3)**

# License Renewal Scoping Methodology





## *Oconee Design & Licensing Basis Background*

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- “This section details the expected response of the plant to the spectrum of transients and accidents which constitute the design basis events.”

*- Opening sentence of Oconee UFSAR Chapter 15*



## *Oconee Design & Licensing Basis Background*

- When applying NRC regulations to Oconee, it is important to recognize that Oconee's design preceded the promulgation of the design basis events definition in NRC regulation
- An Oconee project confirmed and documented the UFSAR statement that the Oconee UFSAR Chapter 15 events constitute Oconee's own unique set of design basis events.
- In addition, this project documented an additional set of scoping events beyond the design basis events that should be considered for possible inclusion when defining the scope of a regulatory issue.
- License renewal is such an issue.



# Oconee Design & Licensing Basis Background

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- The definition of the Oconee Scoping Events set:
  - ◆ Oconee Design Basis Events (UFSAR Chapter 15 events)
  - ◆ Natural Phenomena Criteria
  - ◆ Post-TMI Emergency Feedwater Design Basis scenarios
  - ◆ Turbine Building Flood mitigated by the Standby Shutdown Facility
- The §54.4 (a)(1) & (a)(2) mechanical scoping for license renewal uses the Oconee Scoping Events set



## *Plan for Resolution of Scoping Issue*

- ***NRC Perspective:*** “The staff believes that more events should be reviewed to determine if they would identify any SSC functions that might be considered necessary to ensure the functions identified in 10 CFR 54.4(a)(1).” ...*from the 10/8/99 NRC letter*
- ***Resolution:*** Develop a case study of the ten events identified in the enclosure to the 10/8/99 letter by reviewing the following:
  - Commission Regulations
  - License Conditions
  - Commission Orders
  - UFSAR
  - Exemptions



## *Case Study Purpose*

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- The purpose of the study was to provide reasonable assurance that the Oconee License Renewal Scoping Methodology, as executed, identifies those SSCs that are relied upon to remain functional during and following design-basis events (these SSCs are necessary to ensure the functions identified in 10 CFR 54.4(a)(1))



## ***Case Study Results***

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- Duke's assessment revealed that the current licensing basis associated with the 10 events did not identify any additional SSCs that needed to be added to the scope of license renewal
- Final SER agrees that no additional SSCs associated with the ten events needed to be added to the scope of license renewal



## *Duke's Conclusion from Case Study*

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- Conclusion from the Duke Assessment:
  - ◆ The Oconee License Renewal Scoping Methodology described in the Application identified all systems structures and components relied upon to remain functional to ensure the functions identified in 10 CFR §54.4
  - ◆ The case study provided a validation of such that the NRC can rely upon in making a finding



## ***NRC's Conclusion in Final SER***

- The Final SER resolved the issue related to mechanical scoping and closed the open item
- The validation of the case study results gave Duke and the NRC reasonable assurance that the set of events used in the scoping methodology was indeed sufficient for license renewal scoping.



## ***Reasons We Are Confident in the Scoping Results***

- The knowledge that we are consistent with our CLB
- We have applied our scoping process in accordance with the rule
- We are consistent with previous scoping of other regulated programs
- The structures and systems selected for license renewal are those we traditionally view as the important aspects of the plant



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# SER OPEN ITEM 3.9.3-1

## Electrical Insulated Cables & Connections

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## ***Electrical Insulated Cables & Connections SER Open Item Resolution***

### ■ SER Open Item 3.9.3-1 - Cable Aging Management

- ◆ SER OI 3.9.3-1 was initiated following the on-site inspection review of Oconee operating experience and the resolution of this open item fell into two categories:
  - » Thermal/Radiation Aging Effects
  - » Medium-Voltage Cable Moisture Aging Effects

### ■ Duke Response

- ◆ An Insulated Cables Aging Management Program will be developed and implemented to manage these aging effects during the period of extended operation.



## *Electrical Insulated Cables & Connections SER Open Item*

### ■ Thermal/Radiation Aging Effects

- ◆ Insulated cables in a small number of localized areas in containment were identified in station problem reports as exhibiting accelerated aging due to adverse environments.
- ◆ Corrective actions included testing, which confirmed that all cables were functional, and future surveillance. Modifications to eliminate the adverse environment were to be evaluated.
- ◆ When identified during the early stages of the license renewal review (1996), the problems were judged to be design and installation problems and not relevant to the license renewal review. The Oconee LRA reflected this judgement.



## ***Electrical Insulated Cables & Connections SER Open Item***

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- **Thermal/Radiation Aging Effects *(cont.)***
  - ◆ During the 1999 on-site inspection reviews, these station problem reports were identified and the NRC staff viewed these problems as indications that aging management was needed.
  - ◆ As these areas have not yet been modified to eliminate the equipment configurations causing the accelerated aging, Duke agreed with the staff that aging management was needed.



## ***Electrical Insulated Cables & Connections SER Open Item***

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### ■ Thermal/Radiation Aging Effects *(cont.)*

#### ◆ ***Insulated Cables Aging Management Program***

- » The *Insulated Cables Aging Management Program* includes in-scope cables installed in adverse, localized environments.
- » The *Insulated Cables Aging Management Program* does not include insulated cables already in the Environmental Qualification (EQ) Program.
- » Accessible insulated cables in these areas will be visually inspected at least every ten years for cable jacket surface anomalies such as embrittlement, discoloration, cracking or surface contamination.
- » Unacceptable indications identified during visual inspections will be investigated further by engineering.



## ***Electrical Insulated Cables & Connections SER Open Item***

- **Medium-Voltage Cable Moisture Aging Effects**
  - ◆ During the on-site inspection reviews, areas of particular concern were water collection in cable trenches and potential degradation of direct-buried cables.
    - » Oconee cables installed in trenches are designed for the rain and drain moisture to which they are exposed.
    - » The inspection report concludes that direct buried cable test results do not indicate cable degradation is occurring.
  - ◆ A 1980 LER was identified that documented the failure of a 4160V cable.
    - » The documented failure root cause is moisture intrusion due to improper installation, which either damaged the jacket or allowed water to enter the end of the cable.



## ***Electrical Insulated Cables & Connections SER Open Item***

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- **Medium-Voltage Cable Moisture Aging Effects**  
*(cont.)*
  - ◆ Based on the on-site inspections the NRC staff concluded that aging effects for medium-voltage cables exposed to moisture were applicable at Oconee and that aging management was needed.



## ***Electrical Insulated Cables & Connections SER Open Item***

- **Medium-Voltage Cable Moisture Aging Effects *(cont.)***
  - ◆ ***Insulated Cables Aging Management Program***
    - » The *Insulated Cables Aging Management Program* includes inaccessible in-scope medium-voltage cables installed in adverse, localized environments in conduit and direct-buried.
    - » Water collection in manholes will be monitored to prevent the cables from being exposed to significant moisture.
    - » Inaccessible medium-voltage cables exposed to significant moisture and voltage will be tested at least every 10 years.
    - » Prior to each test, the specific type of test to be performed along with test acceptance criteria will be determined.
    - » Cables not meeting the test acceptance criteria will be investigated further by engineering.



## ***Electrical Insulated Cables & Connections SER Open Item***

### **■ *Insulated Cables Aging Management Program***

#### **Thermal/Radiation and Moisture Aging Effects:**

- ◆ A determination will be made as to whether an identified unacceptable condition or situation is applicable to other accessible or inaccessible cables.
- ◆ Initial inspections and tests will be completed by February 6, 2013.
- ◆ EPRI TR-109619, *Guideline for the Management of Adverse Localized Equipment Environments* will be used as guidance.



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# SER Open Items

# Reactor Vessel Internals

February 24, 2000

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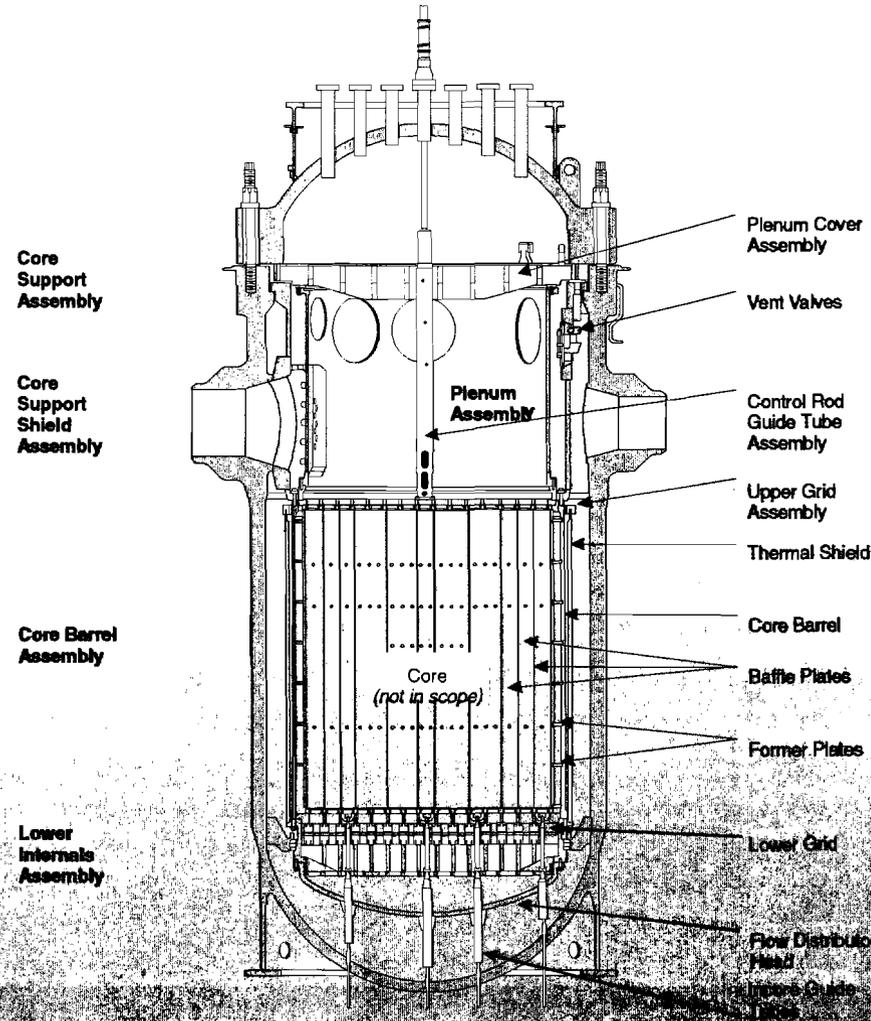
## ■ SER Open Items

- ◆ 3.4.3.2-2 Changes in Dimensions Due to Void Swelling
- ◆ 3.4.3.3-3 Cracking in RV Internals in Non-CASS Internal Components
- ◆ 3.4.3.3-4 Cracking of Baffle Former Bolts
- ◆ 3.4.3.3-5 Embrittlement of CASS RVI Components
- ◆ 3.4.3.3-6 Thermal Embrittlement of Vent Valve
- ◆ 4.2.5.3-1 Reduction in Fracture Toughness (TLAA)

## ■ Duke Response

- ◆ Developed Reactor Vessel Internals Inspection Plan
- ◆ Industry participation and reporting requirements

# Reactor Vessel Internals Description





## ***Approach (Process vs Inspections)***

- Duke proposed licensing a Reactor Vessel Internals Aging Management Program ( process)
  - ◆ Included characterization of aging effects, analysis, development of any needed inspections (method, acceptance criteria, frequency, etc. .)
- As a result of staff reviews, an Inspection Program was developed which included:
  - ◆ Specific Timing of Inspections
  - ◆ Incorporated process within inspection program
  - ◆ Industry Participation
  - ◆ Reports
- Modifications of the Program will occur over time as:
  - ◆ Industry data and analysis are evaluated
  - ◆ Plant specific justification would be submitted for review if any inspection was determined not necessary



# Oconee Reactor Vessel Internals Inspection

- The Oconee *Reactor Vessel Internals Inspection* includes the following *three* interrelated inspections:

- ◆ Baffle Bolts

**Aging Effects** – The aging effects of concern are (1) cracking due to irradiation assisted stress corrosion cracking, (2) reduction of fracture toughness due irradiation embrittlement, and (3) dimensional changes due to void swelling.

- ◆ CASS

**Aging Effects** – The aging effects of concern for the reactor vessel internals items fabricated from CASS and martensitic steel are reduction of fracture toughness by thermal embrittlement and irradiation embrittlement.

- ◆ Other Components

**Aging Effects** – The aging effects of concern are (1) cracking due to irradiation assisted stress corrosion cracking, (2) reduction of fracture toughness due irradiation embrittlement, (3) dimensional changes due to void swelling, and (4) loss of bolted closure integrity due to stress relaxation.

# *Timing of Inspections*

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- First inspection to occur early in the license renewal period
- Second inspection in middle of the license renewal period
- Third inspection in the latter third of the license renewal period (prior to the last year of the license renewal period)



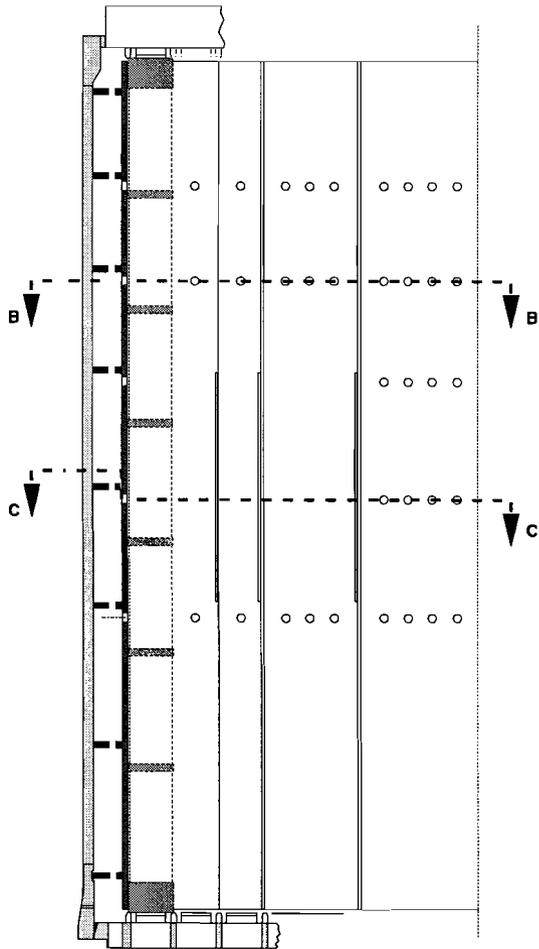
## *Participation in Industry Activities*

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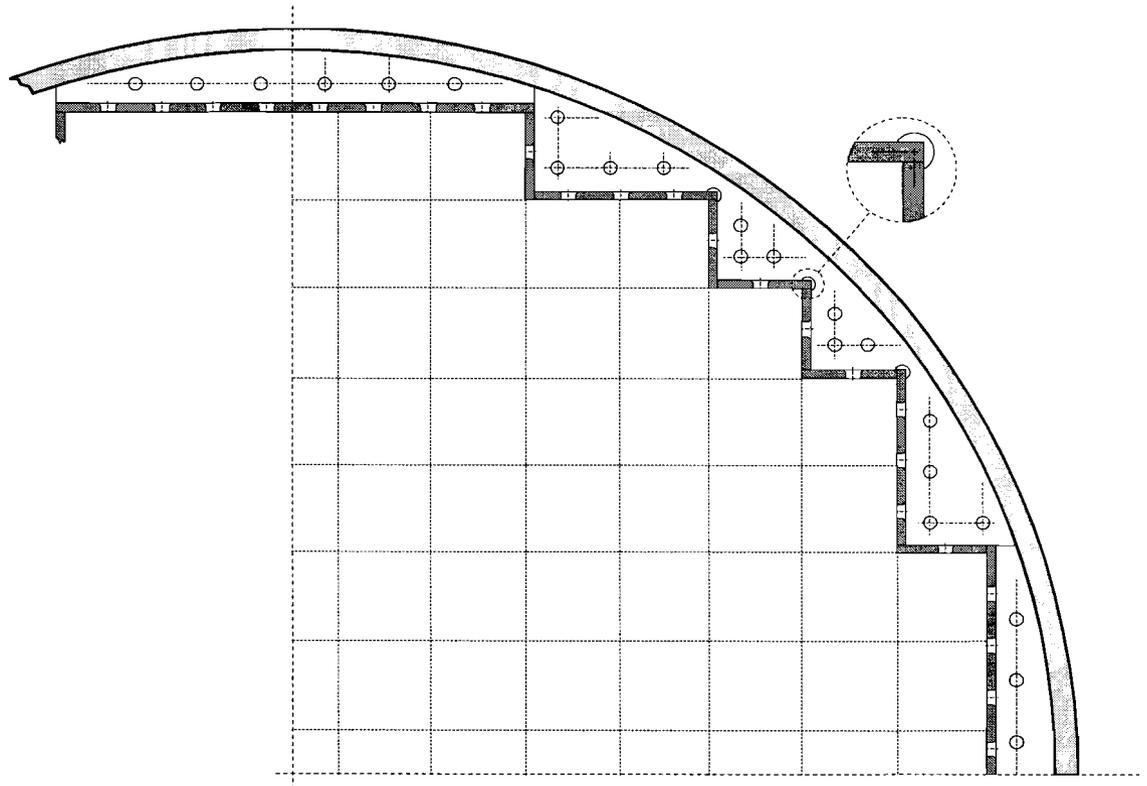
- To continue the investigation of applicable aging effects for reactor vessel internals items
  - ◆ Duke Power will participate in industry programs
    - » B&W Owners Group - RVIAMP
    - » Other industry programs, as appropriate (EPRI ITG, JoBB)
  - ◆ Apply results of industry studies to develop required inspection

- BAW-2248, *Demonstration of the Management of Aging Effects for the Reactor Vessel Internals*, SER received in December 1999
  
- Duke Power will provide periodic updates after the completion of significant milestones
  - ◆ Commencing within one year of the issuance of the renewed licenses
  - ◆ Two years prior to the RVI initial inspection, Duke Power will submit a final report outlining its inspection program and its continuing RVIAMP

# Former and Baffle Plates

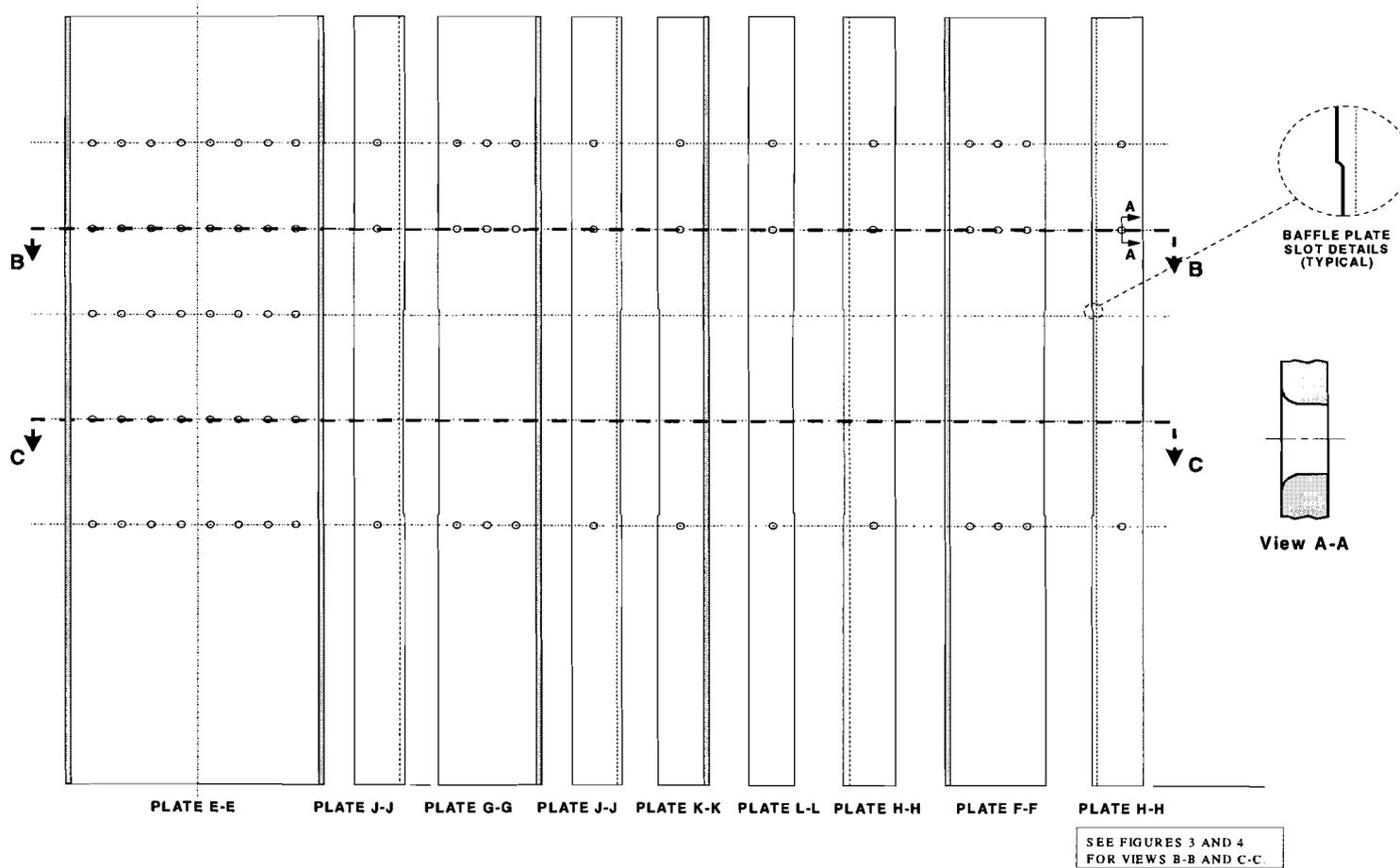


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Oconee License Renewal Project

# Baffle Plates

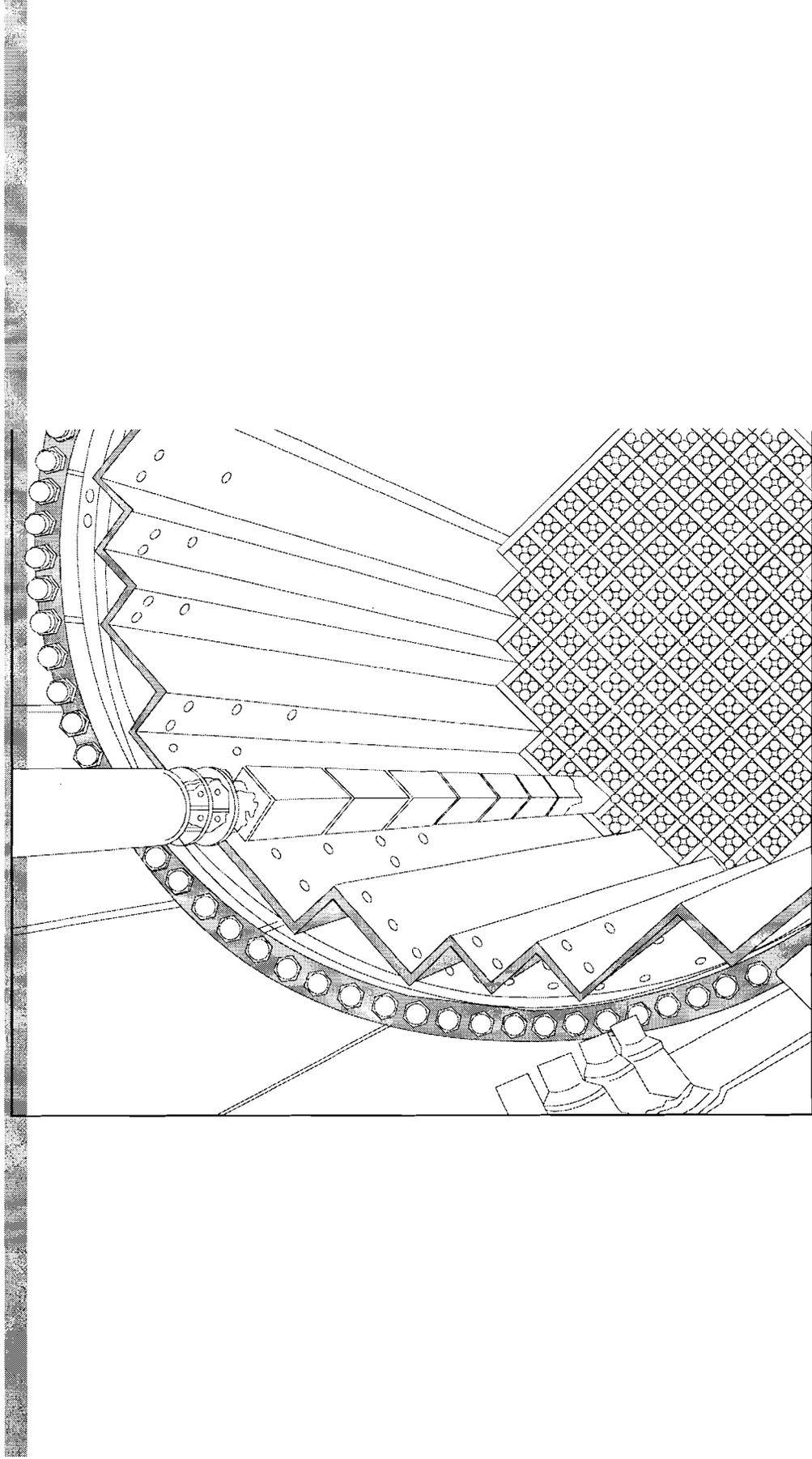


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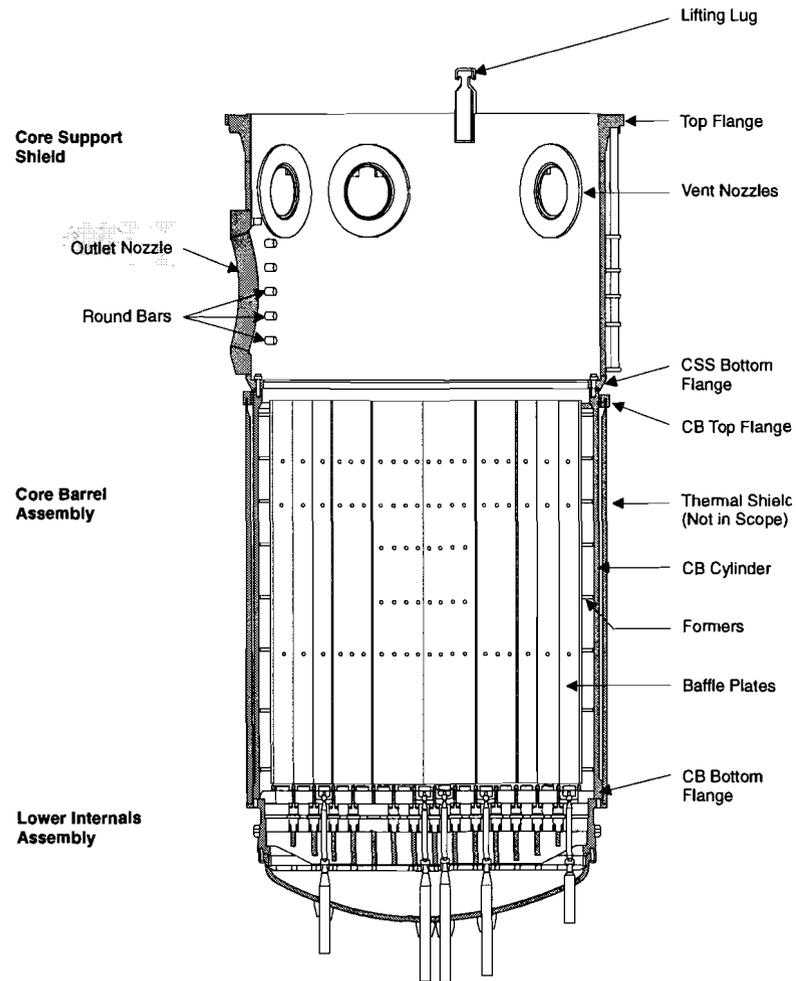
# Baffle & Former Plates



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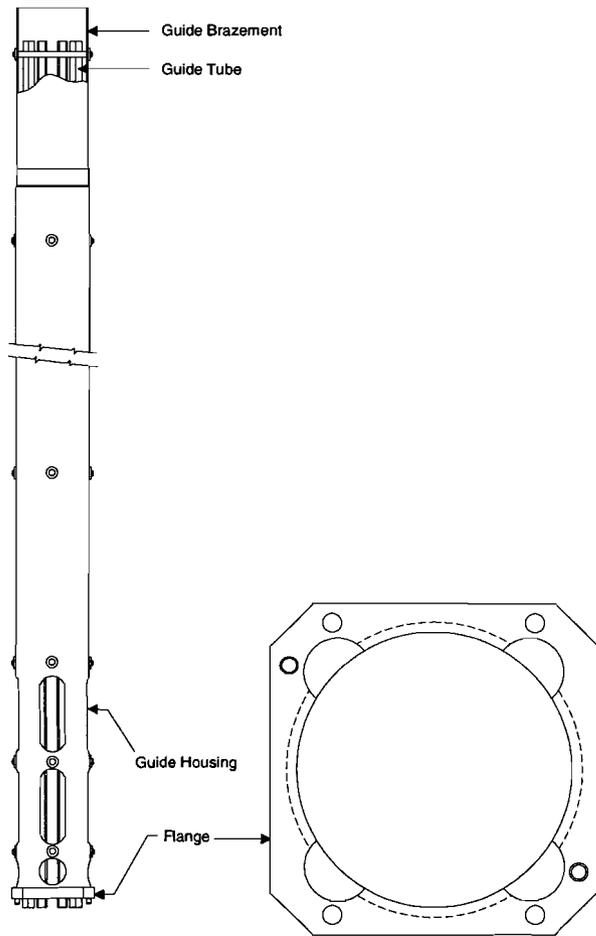
# Core Support Assembly



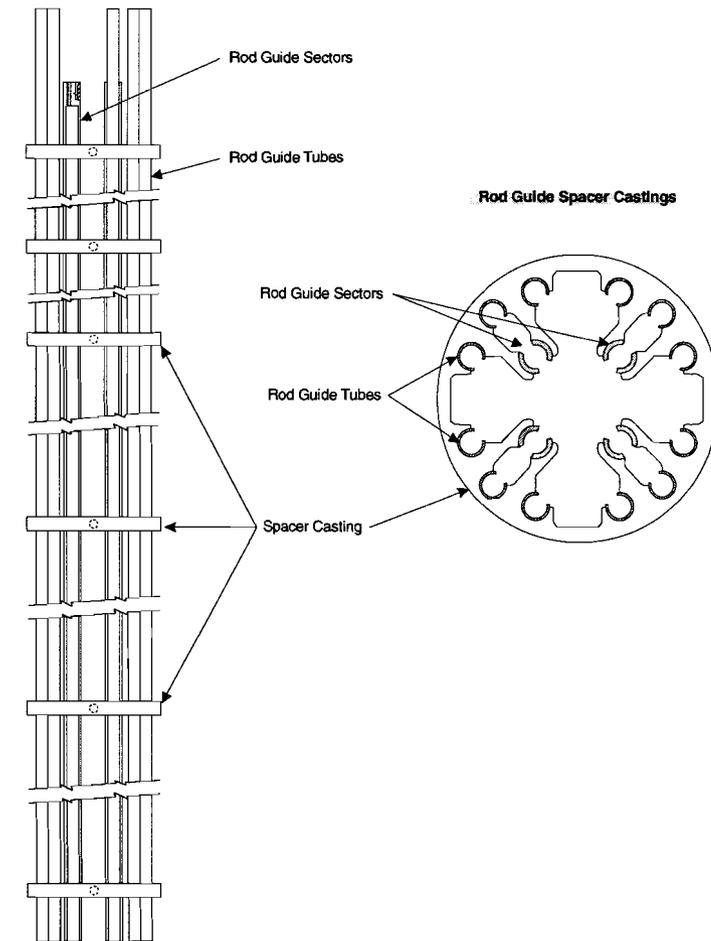
February 24, 2000

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# Rod Guide Brazement and Spacer



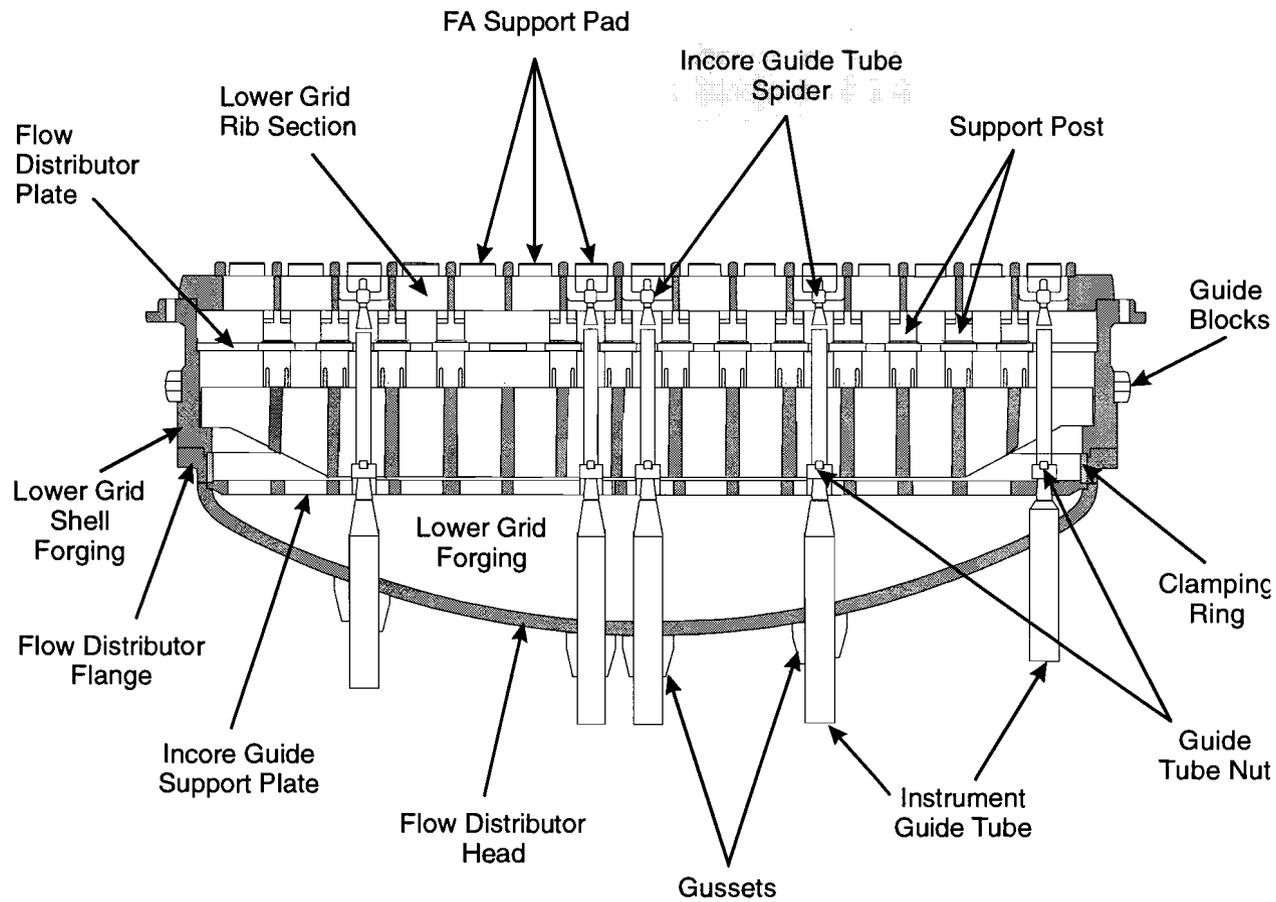
## Rod Guide Brazement



February 24, 2000

Oconee License Renewal Project

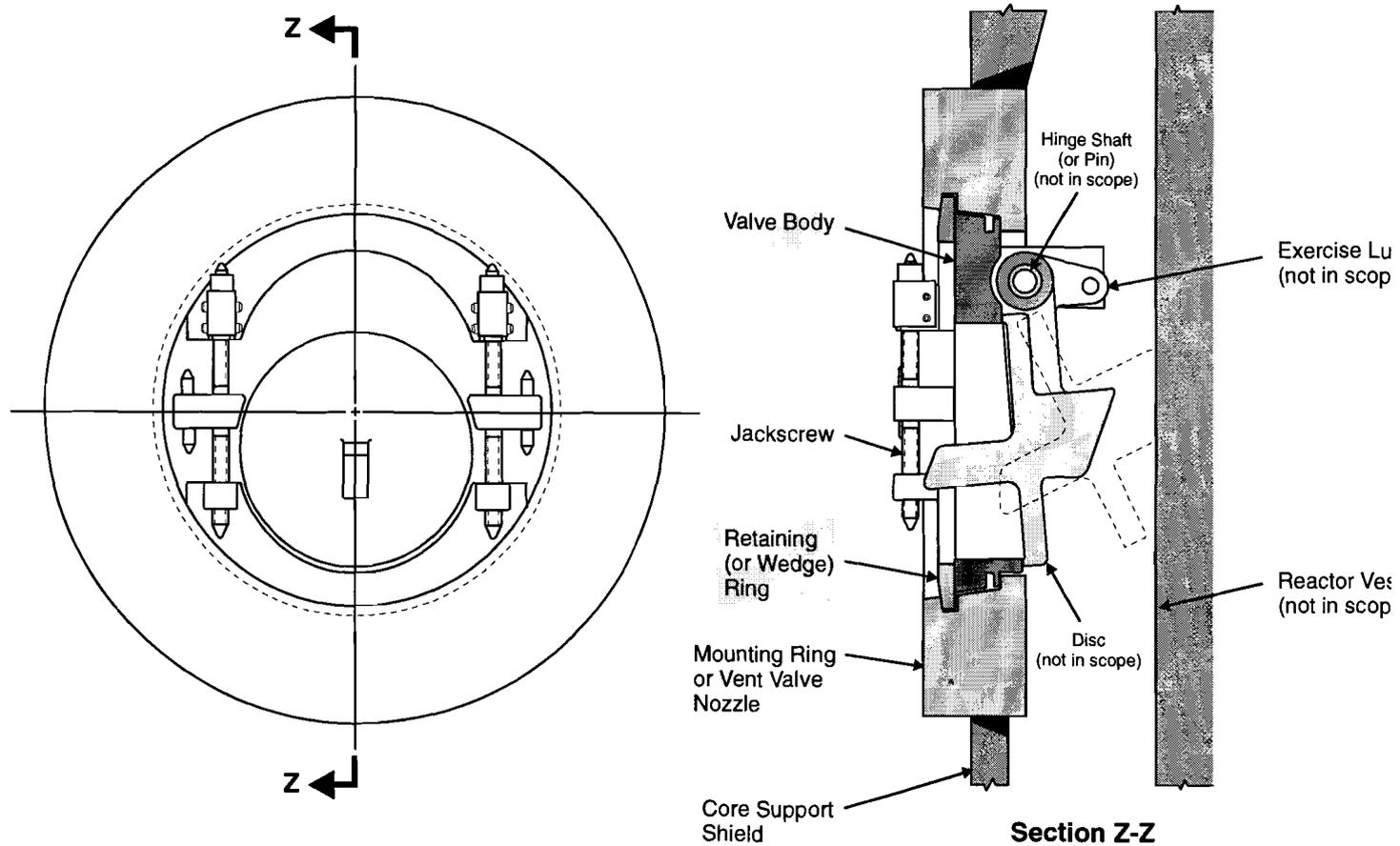
# Lower Internals Assembly



February 24, 2000

Oconee License Renewal Project

# Vent Valve Assembly



February 24, 2000

Oconee License Renewal Project