



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 7, 1999

See Reports

LICENSEES: Baltimore Gas and Electric (BGE) Company and Duke Energy Corporation (Duke)
FACILITIES: Calvert Cliffs Nuclear Power Plant, (CCNPP) Unit Nos. 1 and 2 and Oconee Nuclear Station, (ONS) Unit Nos. 1, 2, and 3
SUBJECT: SUMMARY OF AUGUST 27, 1999, MEETING WITH BGE AND DUKE REGARDING LICENSE RENEWAL ACTIVITIES FOR CCNPP AND ONS

On August 27, 1999, the U. S. Nuclear Regulatory Commission (NRC) staff held a public meeting with representatives of BGE and Duke at Rockville, Maryland, to discuss the status of the NRC's review of BGE's and Duke's license renewal applications (LRAs) for the CCNPP Units 1 and 2 and the ONS Units 1, 2, and 3. Enclosure 1 to this meeting summary provides a list of the meeting attendees. Enclosure 2 provides a copy of slides that were used by NRC, BGE, and Duke to summarize the status of the review of BGE's and Duke's LRAs.

Highlights from the BGE portion of the meeting:

The meeting began with a summary of the NRC staff's progress reviewing the BGE LRA. The staff highlighted that a small number of the open and confirmatory items required further interaction between the staff and BGE to reach closure (by letter dated August 12, 1999) and requested public meetings for that purpose as soon as BGE was ready. The staff added that interaction to date to clarify the nature of BGE's changes to the LRA or responses to open and confirmatory items has been good and to expect the further interactions as the staff completes its review. In addition, the staff requested BGE submit the additional clarifications that resulted from some of the recent interactions as soon as practicable to allow the staff to complete its review in the affected areas. BGE asked if the staff had completed its review of their July 16, 1999, submittal, and if the staff saw any significant issues warranting further interaction. The staff stated that while it was not complete with its review of the July 16, 1999 submittal, it did not see any issues warranting additional interaction with BGE at this time. The staff also thanked BGE for coming in August 20, 1999, to discuss the open item related to updating the final safety analysis report (FSAR) supplement and added that the meeting was beneficial to the staff in formulating an appropriate resolution path. The staff stated that discussions were held with Region 1 management regarding closeout actions from the Region's perspective to support a Regional Administrator recommendation on a re-licensing decision for Calvert Cliffs and it was determined that the Region would conduct an additional inspection activity with one of the currently planned upcoming regional inspections around the end of 1999. The staff concluded its presentation with a status of the environmental and legal activities to support the staff's review of BGE's LRA.

BGE initially provided an overview of the recent changes that have occurred in their management structure relative to supporting their LRA and added that the former project director for BGE's LRA (currently president of Constellation Nuclear Services, a sister company to BGE) would still act as the primary contact and BGE's representative for the foreseeable future regarding interactions with the NRC on the LRA. BGE then highlighted their objectives for the meeting as given on page three of their presentation. BGE's representative complemented the staff regarding schedule adherence for the past 15 months and then requested that BGE be informed as soon as the date for the final inspection was established. BGE also asked that once the inspection date was determined would the inspection report need to be issued before the Regional Administrator could forward his recommendation. BGE added that a more detailed

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schedule showing the remaining steps in the review would assist with their planning. The staff responded that the planning for the inspection was largely dependent on the resolution of open items; however, once this milestone was accomplished the staff would be able to firm up plans for the additional steps leading to the staff forwarding its recommendation to the Commission regarding a re-licensing decision.

BGE went on to summarize the issues which it was waiting to hear feedback from the staff on, the issues BGE was still working on, and the issues BGE was preparing responses to the staff on. BGE's representative then recommended that any issues that remained open by the end of September 1999 be escalated. The staff clarified that current issues were in front of the responsible division directors and that any issues that could not be resolved at that level would be elevated to the Director for the Office of Nuclear Reactor Regulation (NRR) to facilitate resolution.

BGE then asked if the staff had additional clarification regarding the FSAR supplement open item. NRC management stated that based on the August 20, 1999 meeting with BGE and Duke the staff had gained insights into understanding both applicant's positions. Following the public meeting the staff considered the applicant's information in internal discussions held with the License Renewal Steering Committee to gain additional insights as the staff proposed its approach for resolving the open item. As a result, the staff concluded that while 10 CFR 50.21(d) did not require a FSAR supplement to be updated, not updating the FSAR supplement placed the burden on the staff for the development of the basis of information needed to support the 10 CFR 54.29 finding. To this end, as described in NRR Office Letter 805 "License Renewal Application Review Process," the staff has to articulate, and is obligated to document, findings critical to its review. The staff considered several options for achieving this objective. The first such option is that the FSAR supplement be revised prior to licensing by the applicant to include the appropriate information as a consequence of the staff's review. The second option is that the staff provide a list of information the staff relied upon with the final safety evaluation report (SER) in conjunction with a license condition that this information be controlled under 10 CFR 50.59 until it is placed in the FSAR in accordance with the existing 10 CFR 50.71(e) requirements for updating the FSAR. The staff would verify the changes later and the license condition would expire once the information had been incorporated. The third option is similar to the second option with the distinction that the applicant would develop the list using the SER, responses to open items, and questions; and the NRC would review and approve the list. Finally, the fourth option would impose a license condition requiring that all commitments, contained in the license renewal application, related correspondence, and the SER be controlled in accordance with the 10 CFR 50.59 process until the FSAR was updated in accordance with 10 CFR 50.71(e).

Highlights from the Duke portion of the meeting:

The staff noted that the comment period on the draft supplemental environmental impact statement (SEIS) ended on August 16, 1999, which is in accordance with the milestone schedule for the ONS LRA review. Regarding the safety portion of the review, the staff noted that the next major milestone is the completion of responses to the ONS SER open items. Duke is to complete its responses by October 15, 1999. The staff expects to issue the final SER and final SEIS by February 12, 2000.

The staff noted that communications continue to be good with several meetings being held to discuss issues. The meetings that were held included the following: cast austenitic stainless steel (CASS), fatigue, and a meeting to discuss the form and content of the FSAR related to

license renewal. In addition, a site visit was held in August to discuss the scoping issue. The CASS meeting resulted in a plant-specific resolution of issues for Oconee. The fatigue meeting resulted in the staff providing Duke with options for resolution of the open item associated with GSI - 190, "Fatigue Evaluation of Metal Components for 60-year Plant Life." Regarding the resolution of the form and content of the FSAR, the staff noted that the options provided to BGE during the earlier portion of this meeting (see BGE highlights above) are options that are also available to Duke.

Regarding the scoping issue, Chris Grimes of the License Renewal and Standardization Branch stated that "the purpose of the staff's review is to develop sufficient information to describe the scoping methodology in the SER which will provide a technical basis from which the NRC staff can conclude that there is reasonable assurance that the methodology will identify those systems structures and components (SSCs) that are relied upon to remain functional during and following design basis events (DBEs)." It is that terminology over which the NRC staff and Duke have had difficulty communicating clearly. Mr. Grimes continued to summarize the issue as follows:

The staff had expected that, while the Commission had concluded that the current licensing basis (CLB) did not need to be compiled for renewal, licensees would utilize their CLB (as it is defined in 54.3 and has been described generically over the last several years in relation to industry guidance on commitment management and 50.59) to ensure that the renewal scoping process would apply a broad set of design basis events (beyond those DBEs explicitly described in FSAR Accident Analysis Chapter) to address all of the safety functions embodied in and maintained by the CLB. In the letter to NEI regarding generic renewal issue 98-082, "Scoping Guidance", the staff described this expectation in relation to a definition of design basis events as *all events for which the plant must be designed* (using the 50.49 language).

More recently, the staff learned that the Advisory Committee on Reactor Safeguards is considering whether, particularly for older plants, the renewal process should explicitly develop a complete set of events that define the SSCs under Part 54. Consequently, Mr. Grimes stated that this is a timely issue where additional guidance and clarification would be appropriate.

In the meeting on May 11, 1999 Duke explained that they have a particular meaning and practice related to the term "design basis events" and its use in maintaining the CLB. Thus, the methodology for Oconee relies on Chapter 15 events and selected "scoping events" (which Duke calls design conditions), with the same apparent intent as the staff's expectation.

Therefore, the staff believes that this resolution of a finding on the methodology needs to determine whether the "event set" resulting from the application of Duke's methodology is sufficient for the purpose of scoping without having to resolve the language differences surrounding the CLB.

Duke then addressed an action item contained in the summary, dated August 27, 1999, for the August 16-18, site audit. Specifically, the action item was for Duke to reconsider whether the high energy line break (HELB) should be a design-basis event for the purpose of license renewal. Duke stated that although it considers HELB to be part of the Oconee current licensing basis it does not consider HELB to be within the Oconee design basis event set. Nevertheless, Duke stated that the HELB commitments resulted in six modifications to the plant. All of these

Oconee Nuclear Station (License Renewal)

cc:

Ms. Lisa F. Vaughn
Duke Energy Corporation
422 South Church Street
Mail Stop PB-05E
Charlotte, North Carolina 28201-1006

Anne W. Cottingham, Esquire
Winston and Strawn
1400 L Street, NW
Washington, DC 20005

Mr. Rick N. Edwards
Framatome Technologies
Suite 525
1700 Rockville Pike
Rockville, Maryland 20852-1631

Manager, LIS
NUS Corporation
2650 McCormick Drive, 3rd Floor
Clearwater, Florida 34619-1035

Senior Resident Inspector
U. S. Nuclear Regulatory Commission
7812B Rochester Highway
Seneca, South Carolina 29672

Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303

Virgil R. Autry, Director
Division of Radioactive Waste Management
Bureau of Land and Waste Management
Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201-1708

W. R. McColium, Jr., Vice President
Oconee Site
Duke Energy Corporation
P. O. Box 1409
Seneca, SC 29679

Mr. J. E. Burchfield
Compliance Manager
Duke Energy Corporation
Oconee Nuclear Site
P. O. Box 1439
Seneca, South Carolina 29679

Ms. Karen E. Long
Assistant Attorney General
North Carolina Department of Justice
P. O. Box 629
Raleigh, North Carolina 27602

L. A. Keller
Manager - Nuclear Regulatory Licensing
Duke Energy Corporation
526 South Church Street
Charlotte, North Carolina 28201-1006

Mr. Richard M. Fry, Director
Division of Radiation Protection
North Carolina Department of
Environment, Health, and
Natural Resources
3825 Barrett Drive
Raleigh, North Carolina 27609-7721

Gregory D. Robison
Duke Energy Corporation
Mail Stop EC-12R
P. O. Box 1006
Charlotte, North Carolina 28201-1006

Robert L. Gill, Jr.
Duke Energy Corporation
Mail Stop EC-12R
P. O. Box 1006
Charlotte, North Carolina 28201-1006
RLGILL@DUKE-ENERGY.COM

Douglas J. Walters
Nuclear Energy Institute
1776 I Street, NW
Suite 400
Washington, DC 20006-3708
DJW@NEI.ORG

Chattooga River Watershed Coalition
P. O. Box 2006
Clayton, GA 30525

Mr. Charles H. Cruse
Baltimore Gas & Electric Company
cc:

President
Calvert County Board of
Commissioners
175 Main Street
Prince Frederick, MD 20678

James P. Bennett, Esquire
Counsel
Baltimore Gas and Electric Company
P.O. Box 1475
Baltimore, MD 21203

Jay E. Silberg, Esquire
Shaw, Pittman, Potts, and Trowbridge
2300 N Street, NW
Washington, DC 20037

Mr. Bruce S. Montgomery, Director
NRM
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 287
St. Leonard, MD 20685

Mr. Richard I. McLean
Nuclear Programs
Power Plant Research Program
Maryland Dept. of Natural Resources
Tawes State Office Building, B3
Annapolis, MD 21401

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

National Whistleblower Center
3233 P Street, N.W.
Washington, DC 20007

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

Mr. Joseph H. Walter, Chief Engineer
Public Service Commission of
Maryland
Engineering Division
6 St. Paul Centre
Baltimore, MD 21202-6806

Kristen A. Burger, Esquire
Maryland People's Counsel
6 St. Paul Centre
Suite 2102
Baltimore, MD 21202-1631

Patricia T. Birnie, Esquire
Co-Director
Maryland Safe Energy Coalition
P.O. Box 33111
Baltimore, MD 21218

Mr. Loren F. Donatell
NRC Technical Training Center
5700 Brainerd Road
Chattanooga, TN 37411-4017

David Lewis
Shaw, Pittman, Potts, and Trowbridge
2300 N Street, NW
Washington, DC 20037

Carl J. Yoder
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
NEF 1st Floor
Lusby, Maryland 20657

Mr. Charles H. Cruse, Vice President
Nuclear Energy Division
Baltimore Gas and Electric Company
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

September 7, 1999

modifications were screened into license renewal because their functions were captured for reasons other than HELB being considered a DBE. Duke's slides contained in Enclosure 2 provide more details regarding the HELB.

The staff noted that the site audit on August 16-18, 1999, found that for some other events there were safety functions that were determined to be in the CLB and within the scope of renewal for other reasons, including changes to the CLB. Therefore, it would appear that some of these events could now be considered among the "scoping events." Mr. Grimes stated that the NRC staff has an action item to consider this concept (i.e., broadening the set of events considered to be scoping events), along with a more direct approach to safety functions (i.e., place less emphasis on the definition of a DBE and more emphasis on the safety functions that are contained in the CLB), to develop a plan to resolve the issue. After the plan is developed it will be sent to Duke in a letter and discussed with Duke in a meeting in the near future.

In addition to the scoping issue and the FSAR open item, the staff identified other issues that may require management attention. Specifically, the staff stated that the resolution of open items associated with BAW-2248 (reactor vessel internals), fatigue, and complex assemblies may require meetings and management involvement to resolve. A draft of the highlights from the Duke portion of the meeting was provided to Duke to allow them the opportunity to comment on this portion of the summary prior to issuance.

Original Signed By

David L. Solorio, Project Manager
License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Original Signed By

Joseph M. Sebrosky, Project Manager
License Renewal and Standardization Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318 (BGE)
50-269, 50-270, and 50-287 (Duke)

Enclosures: 1. List of Attendees
2. Meeting Slides

cc w/ encls: See next page

* See previous concurrence

DISTRIBUTION: See next page

DOCUMENT NAME: G:\RLSB\SOLORIO\August 27th 1999 BGE-Duke-NRC Monthly Management Meeting summary.WPD

OFFICE	LA	RLSB	RLSB	RLSB:D	DRIP:D
NAME	EHylton	DLSolorio	JMSebrosky	CIGrimes	DBMatthews
DATE	09/02/99*	09/5/99	09/1/99	09/3/99*	09/7/99

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OFFICE	LA	RLSB	RLSB	RLSB:D
NAME	EHylton	DLSolorio <i>DS</i>	JMSebrosky <i>JS</i>	CIGrimes <i>CG</i>
DATE	09/02/99*	09/04/99	09/12/99	09/23/99 <i>w/ comments</i>

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OFFICE	LA	RLSB	RLSB	RLSB:D
NAME	BHilton	DLSolorio	JMSebrosky	CIGrimes
DATE	09/2/99	09/ /99	09/ /99	09/ /99

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NRC MEETING WITH BALTIMORE GAS AND ELECTRIC AND DUKE ENERGY
CORPORATION TO DISCUSS LICENSE RENEWAL ISSUES
ATTENDANCE LIST
AUGUST 27, 1999

<u>NAME</u>	<u>ORGANIZATION</u>
MICHAEL MODES	NRC RI
ROUNETTE NADER	DUKE
GREG ROBISON	DUKE ENERGY
MARK WETTERHAHN	WINSTON & STRAWN
WILLIAM MCCOLLUM	DUKE ENERGY
NANCY CHAPMAN	SERCH/Bechtel
CHUCK RAYBURN	CNS, INC
DONALD FERRARO	WINSTON & STRAWN
EILEEN MCKENNA	NRC/DRIP/RGEB
P.T. KUO	NRC/DRIP/RLSB
STEVE HOFFMAN	NRC/DRIP/RLSB
COLLEEN AMORUSO	NUS INFO. SERVICES
BARRY ZALCMAN	NRC/DRIP/RGEB
CHRIS GRIMES	NRC/DRIP/RLSB
BOB WEISMAN	NRC/OGC
DAVID MATTHEWS	NRC/DRIP
DICK WESSMAN	NRC/DE
JACK STROSNIDER	NRC/DE
JOE SEBROSKY	NRC/DRIP/RLSB
SAM LEE	NRC/DRIP/RLSB
GENE IMBRO	NRC/NRR
BARTH DOROSHUK	CNS, INC.
DICK HEIBEL	BGE
CARL YODER	BGE
DON SHAW	CNS
JAMES BENNETT	BGE
DAVID LEWIS	SHAW PITTMAN

Meeting Slides

Enclosure 2

Status Report on Baltimore Gas and Electric Company License Renewal Application Review

August 27, 1999

David Matthews, Director, Division of Regulatory
Improvement Programs

Chris Grimes, Branch Chief, License Renewal &
Standardization Branch

Summary of LRA Review Activities

■ Safety Review

- Staff reviewed BGE open/confirmatory item responses
 - August 12, 1999 letter to BGE with status regarding which open or confirmatory items require further interaction
 - Staff reviewing LRA changes
 - Staff reviewing comments from BGE regarding SER accuracy
 - Staff is in process of revising SER
 - FSER to be issued by November 16, 1999
-

Summary of LRA Review Activities - continued

- Resolution of open/confirmatory items
 - August 20, 1999 staff held meeting with BGE on FSAR supplement open item
 - Staff requested public meetings with BGE to discuss some responses (requested interaction on 8 of 48 items) including license renewal issues (scoping, CASS, complex assemblies, heat exchangers) and void swelling
 - Staff has interacted with BGE to gain clarification regarding open item responses or changes to LRA
 - More interaction should be expected to clarify BGE submittals
 - Staff waiting for BGE submittal with additional clarification as the result of interactions

Summary of LRA Review Activities - continued

■ Inspection Activities

- Discussed closeout actions to support Region 1 management input for recommendations on license renewal
 - Additional inspection to be performed
 - Coordinate with currently planned inspection activities occurring around end of 1999
-

Summary of LRA Review Activities - continued

■ Environmental Review

- Staff addressing comments received on draft Supplement to the Environmental Impact Statement (SEIS) for License Renewal - Calvert Cliffs
 - Staff in process of finalizing SEIS
 - Commission approved amendment to Part 51 associated with high-level waste transportation impacts on August 24, 1999
 - SEIS to be completed by November 16, 1999
-

Summary of LRA Review Activities - continued

■ Petitioner Status

– All briefs filed, case ready for argument October 6, 1999



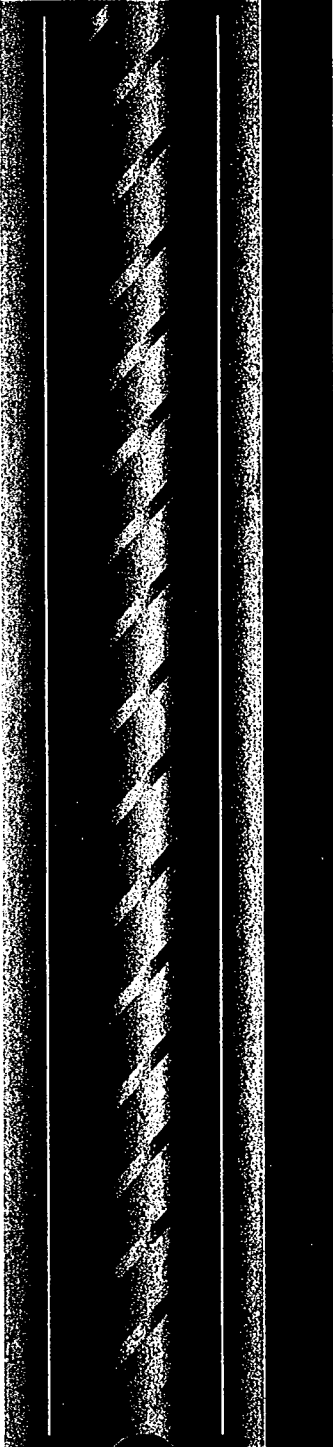
Calvert Cliffs License Renewal Application Status Report to the US Nuclear Regulatory Commission

Dick Heibel, Manager - Nuclear Projects
Carl Yoder, Project Director - LR
Barth W. Doroshuk, President - CNS, Inc.

August 27, 1999

BGE

 **Constellation**
Nuclear Services

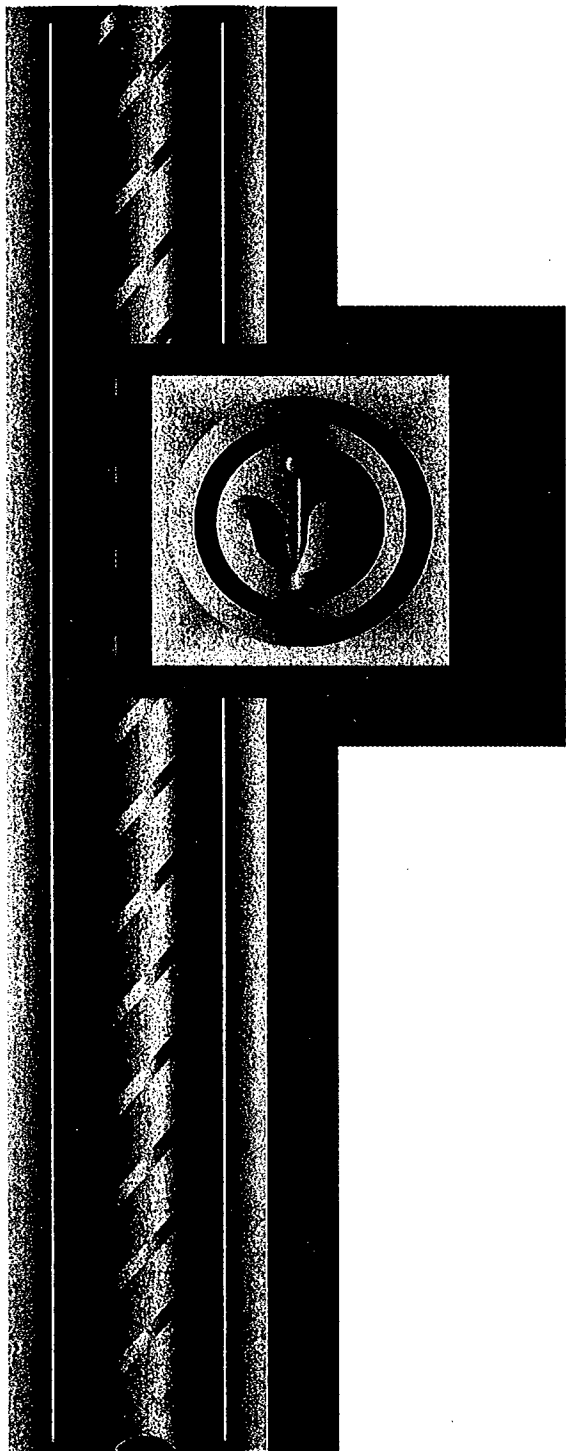


Objectives of Meeting

- Brief NRC line management on progress of license renewal application review
- Determine if any issues need elevating to NRC Steering Committee by BGE or NRC
- Establish performance indicators for next review meeting

Proposed Performance Indicators for August 1999

- NRC decision on acceptability of BGE's Open Item/Confirmatory Item responses ✓
- Revised UFSAR Supplement sections submitted for three programs (now n/a)
- NRC decision on a public meeting (now n/a)



**August 1999
Calvert Cliffs
LRA Report Card**

August 27, 1999

SER follow-up Items

BGE waiting

- How does the NRC position on scoping affect:
 - The heat exchange function (NRC's action)
 - Complex assemblies (NRC's action)

BGE working

- Does CVCS small bore piping ARDI bound RCS small bore piping for SCC?
- CEA shroud bolt confirmatory item
- SCC of RCS external surfaces

SER follow-up Items (cont')

BGE writing

- How does the NRC-to-NEI letter on scoping affect:
 - SBO EDG Open Item
 - Open Item for ductwork that cools EQ components
- Commitment for QA program applicability to NSR SSCs.
- RV flange leak-off line
- What is an appropriate disposition for the Containment tendon TLAA?
- ***New item*** - void swelling of RVI

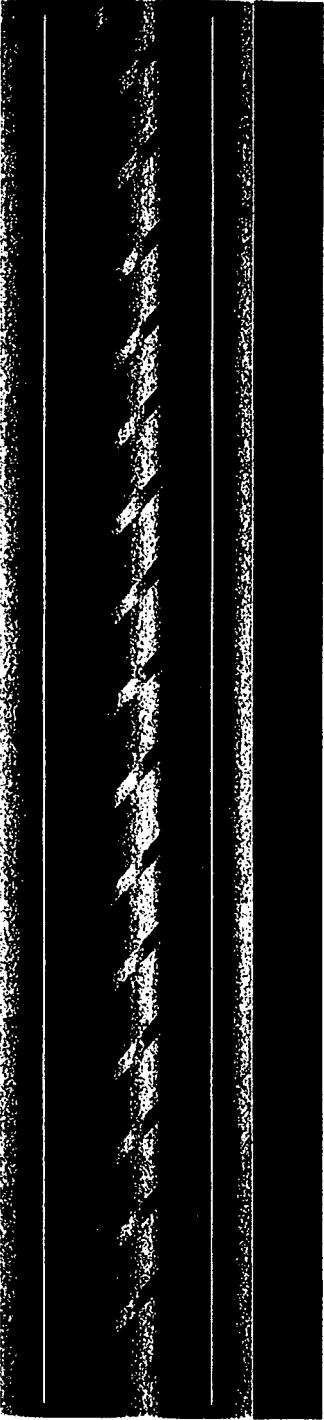
Proposed Performance Indicators for September 1999

- Final Schedule Published

- Draft license review
- Region I inspection
- ACRS meeting
- Region I Director recommendation
- Commission decision

- All Open and Confirmatory Items resolved, or escalated

- Items from NRC's 8/12/99 letter
- UFSAR Supplement Policy Decision resolved



**NRC Schedule
for
BGE Calvert Cliffs
License Renewal Application**

*CCNPP License Renewal Status Report to the USNRC
99-041*

NRC Overall Schedule 1998

- 4/10/98 - Application Submitted - **completed**
- 5/10/98 - Acceptance and Docketing Completed - **completed**
- 7/8/98 - Notice of Opportunity for Hearing Filed by NRC - **completed**
- 7/7-7/10 - NRC Environmental Site/Public Visit - **completed**
- 7/9/98 - Public Meetings for Environmental Impact Statement Scoping - **completed**
- 8/7/98 - Filing of Intervener Petitions Ends - **completed**
- 9/7/98 - NRC Completes Technical Requests for Additional Information (RAI) - **completed**
- 9/28/98 - Management Progress Review - **completed**

NRC Overall Schedule 1998 (continued)

- 10/1/98 - Deadline for Whistleblower Center Filing - **completed**
- 10/7/98 - NRC Completes Environmental RAIs - **completed**
- 10/16/98- Whistleblower Center Petition Dismissed - **completed**
- 10/22/98- BGE EQ Presentation to NRC Staff - **completed**
- 10/29/98- Management Program Review; NRC Steering Committee Meeting - **completed**
- 11/21/98- BGE Completes Technical Responses - **completed**
- 12/6/98 - BGE Completes Environmental Responses - **completed**
- 12/16/98- Management Progress Review - **completed**

NRC Overall Schedule 1999-2000

- 1/14/99 - Management Progress Review - completed**
- 2/26/99 - Management Progress Review - completed**
- 3/6/99 - NRC Issues Draft Supplemental Environmental Impact Statement (SEIS) for Comment - completed**
- 3/21/99 - NRC Completes Initial Safety Evaluation Report (SER) and Open Items - completed**
- 4/6/99 - Public Meeting for Draft SEIS Comments - completed**
- 5/5/99 - ACRS Meeting - completed**
- 5/20/99 - NRC Comment Period on Draft SEIS Closes - completed**
- 7/19/99 - BGE Completes Response to SER - completed**
- 11/16/99 - NRC Issues Final SER and SEIS**
- TBD - Commission Decision on Application**

**Oconee License Renewal
Application Status Report to
Duke Energy
August 27, 1999**

David Matthews, Director, Division of Regulatory
Improvement Programs
Chris Grimes, Branch Chief, License Renewal &
Standardization Branch

Oconee Renewal Status

8/27/99

Schedule Adherence

- Comment period on draft SEIS ended 8/16/99
- Duke to complete responses to SER open items by 10/15/99
- Final SEIS and SER to be issued by 2/12/2000

Accomplishments

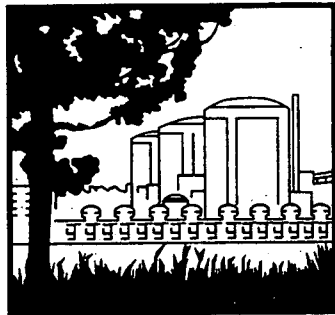
- Communications continue to be good
 - Scoping meeting held at the site from 8/16 thru 8/18
 - FSAR meeting held on 8/20
 - Cast Austenitic Stainless Steel (CASS) meeting held on 8/24 — resolution path identified
 - Fatigue meeting held on 8/25
- Duke has provided responses for 27 out of 43 SER issues
- Region-based inspection status
 - Second regional based inspection report due to be issued by 9/14/99

Concerns

- Tracking status of 43 open items and 6 confirmatory items
 - Duke providing responses
 - Duke requested to provide priority for feedback from staff
- 10 CFR Part 54 Scoping Issue
 - Duke requested to provide feedback to staff on “Design Basis Events” used for scoping
- Resolution of BAW-2248 (Reactor Vessel Internals) issues
- Fatigue related issues
- FSAR open item
- Complex Assemblies



Oconee License Renewal Project



Duke/NRC Management Meeting

August 27, 1999

August 27, 1999

Oconee License Renewal Project

1



Agenda

- Safety Review
- Environmental Review
- Expectations
- Meeting Plans
- Mechanical Scoping Process

August 27, 1999

Oconee License Renewal Project

2



Site Inspection

- Two of three possible Region II License Renewal Site Inspections have been completed
- The April scoping inspection results are documented in NRC Inspection Report 99-11, May 24, 1999
- The July aging management program inspection will be documented in NRC Inspection Report 99-12, due September 14, 1999
- Duke recognizes that a number of the inspection items will require disposition and has identified four categories for management of the inspection items

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Oconee License Renewal Project

3



Inspection Item Management

Four Inspection Item Categories:

1. Mismatches between LR and the plant where LR needs to change.
 - Managed by the annual update process. Due 9/30/99.
2. Mismatches between LR and the plant where the plant needs to change.
 - Managed by final SER, final license when commitments are defined.
3. Safety Evaluation Report Open Items and Comments.
 - Managed by Duke responses to SER Open Items due 10/15/99
4. Specific plant condition observations.
 - Duke believes that existing programs / proposed programs credited for LR would have identified and managed these observations. Any plant hardware issues that may still exist are being managed via current station practices.

August 27, 1999

Oconee License Renewal Project

4



Safety Evaluation Report

- NRC Safety Evaluation Report received on June 16, 1999
- 43 Open Items and 6 Confirmatory Items were identified
- Proposed responses to 32 of 49 Open Items are under discussion with NRC staff
- Duke recognizes that several items have a higher priority for discussion and will work to communicate this priority

August 27, 1999

Oconee License Renewal Project

5



Safety Review Highlights

- Void Swelling Issue
 - ◆ All but one draft Safety Evaluation Open Item (void swelling) on BWOG Reactor Vessel Internals Report (BAW-2248) have sufficient information to address
 - ◆ BWOG Void Swelling letter provided 8/16/99
 - ◆ NRC action to process final SE on BAW-2248 to support Oconee application
- Mechanical Scoping Process Issues
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- UFSAR Supplement Issues
 - ◆ Meeting held with NRC Staff on 8/20/99
- Cast Austenitic Stainless Steel Issues
 - ◆ Duke Meeting with NRC Staff on 8/24/99
- Fatigue Issues
 - ◆ Duke Meeting with NRC Staff on 8/25/99

August 27, 1999

Oconee License Renewal Project

6



ACRS Meeting

- Duke is scheduled to update the Advisory Committee on Reactor Safeguards (ACRS) full committee on September 1, 1999
- Duke had previously updated the ACRS license renewal subcommittee on June 30, 1999

August 27, 1999

Oconee License Renewal Project

7



Environmental Review

- Received the draft Supplemental Environmental Impact Statement on May 21, 1999
- NRC held two public meetings on July 8, 1999 in Clemson, SC
- Duke provided 78 written comments on the draft SEIS on August 16, 1999
- No further Duke information is required by the NRC complete the final Supplemental Environmental Impact Statement

August 27, 1999

Oconee License Renewal Project

8

Expectations

- **Expectations to be accomplished by next NRC/Duke Management Meeting**
 - ◆ Closure of Mechanical Scoping Issue (Duke and NRC Staff)
 - ◆ Provide success path to final safety evaluation on BAW-2248, Reactor Vessel Internals Report (NRC Staff)
 - ◆ Prioritize and process Safety Evaluation Report Open Items (Duke and NRC Staff)
 - ◆ Provide updated milestone schedule for "End Game" planning (NRC staff)

Commission Package

- As described to Duke the following are part of the Commission Package of information.
 - ◆ Facility Operating License
 - ◆ Technical Specification Changes (if any)
 - ◆ Final Safety Evaluation Report
 - ◆ Final Supplemental Environmental Impact Statement
 - ◆ ACRS Recommendation Letter
 - ◆ Region II Recommendation Letter
 - ◆ UFSAR Supplement
 - ◆ Amendment to the Indemnity Agreement
- Should Duke support be required beyond the formal responses currently scheduled, a more detailed milestone schedule would be beneficial



Meeting Plans

- Schedule for next NRC/Duke management meetings:
 - ◆ September 29, 1999
 - ◆ October date not set

August 27, 1999

Oconee License Renewal Project

11



Mechanical Scoping Issue

- An NRC staff audit of mechanical scoping process was conducted at Oconee from August 16-18, 1999 for the purposes of resolving Safety Evaluation Report Open Item 2.1.3.1-1 related to the mechanical scoping process.
- The audit focused on six topical areas:
 - ◆ Pipe Rupture (High Energy Line Break)
 - ◆ Loss of Decay Heat Removal
 - ◆ Loss of Spent Fuel Pool Cooling
 - ◆ Loss of Heating Ventilation and Air Conditioning to the Control Room
 - ◆ Updated Steam Generator Tube Rupture Analysis
 - ◆ Fuel Handling Accident
- Duke Action as a result of this audit was to review Pipe Rupture further to reassess its status in relation to the other license renewal scoping events that determine part of the mechanical scope of license renewal review.

August 27, 1999

Oconee License Renewal Project

12

■ A review of the 1973 Duke High Energy Line Break Technical Report and NRC SER identified 6 Committed Modifications:

1. Install Blowout Panels in the East Penetration Room Wall
 - Screened into renewal as part of Auxiliary Building structure and included in Application as metal wall in Table 2.7-1
2. Reinforce Battery Room Walls
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 - Note: These lines are now considered the normal EFW injection path into the steam generators and are safety-related.
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Pipe Rupture Review

- Pipe Rupture (High Energy Line Break) is part of the Oconee current licensing basis
- The actions reviewed here associated with Pipe Rupture are not understood by Duke to constitute a new design basis event for Oconee
- Review of historical records indicate Duke's belief that actions associated with Pipe Rupture were generally felt to be unnecessary due to the "margins" designed into the plant piping and supports

August 27, 1999

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15

Pipe Rupture Review

- This perspective is further substantiated since no application of QA condition, inclusion in a testing or inservice inspection program or other such requirements were ascribed to the modifications based on Pipe Rupture requirements
- Pipe Rupture is not within the Oconee Design Basis Events set.

August 27, 1999

Oconee License Renewal Project

16

Larger View

- Taking a larger view, the Oconee Design Basis Event set has not been static since original licensing. The DBE set has been modified when events rose to the level to require inclusion
- Terminology differences may be causing us to focus away from the adequacy of the Oconee license renewal scoping results
- To that end, let's review again the Oconee license renewal scoping process and how we've gained confidence in both our process and our results.

August 27, 1999

Oconee License Renewal Project

17

Oconee License Renewal Scoping Process

- Three distinct scoping activities comprise the Oconee license renewal scoping process: structures, mechanical systems and electrical components
 - ◆ Structures - Structural scoping relies on the Oconee CLB to define scope
 - ◆ Mechanical Systems - Mechanical scoping is a functional review process based on the CLB
 - ◆ Electrical Components - Electrical scoping relies on an encompassing approach to include all electrical components in scope unless specifically scoped or screened out

August 27, 1999

Oconee License Renewal Project

18



Mechanical Scoping Process

- Mechanical §54.4(a)(1) and (a)(2) scoping was performed using a four-step process.
 1. Functional flow path identification
 2. Fluid pressure boundary determination
 3. Physical interference identification
 4. Other designated item identification (safety-related, seismic)
- The completion of these four steps gives Duke confidence that the mechanical §54.4(a)(1) and (a)(2) scoping is complete

August 27, 1999

Oconee License Renewal Project

19



Functional Flow Path Identification

- Involves identifying all mechanical flow paths required to remain functional for successful design basis event mitigation
- A critical task for Oconee license renewal was to determine our licensing basis from which to identify these flow paths and the mechanical scope
- A separate project, the Oconee Safety Related Designation Clarification Project, worked from 1995-1998 to research and compile the appropriate portions of the Oconee licensing basis in order to establish the set of events used for license renewal scoping
- The findings of the project are documented in a plant design basis document

August 27, 1999

Oconee License Renewal Project

20



Functional Flow Path Identification

- The definition of the Oconee License Renewal Scoping Events set used to identify the functional flow paths within the mechanical systems:
 - ◆ Current Oconee Design Basis Events (UFSAR Chapter 15 events)
 - ◆ Natural Phenomena Criteria
 - ◆ Post-TMI Emergency Feedwater Design Basis scenerios
 - ◆ Turbine Building Flood mitigated by the Standby Shutdown Facility

August 27, 1999

Oconee License Renewal Project

21



Reasons We Are Confident in the Scoping Results

- From the in-depth CLB review that established the License Renewal Scoping Events set and the knowledge that we are consistent with our CLB, we have confidence that our scoping process is being applied in accordance with the rule
- Overall, the depth of review in all discipline areas gives confidence in the comprehensiveness of structural, mechanical and electrical results
- The scoping results for license renewal are consistent with previous scoping of regulated programs
- Looking at the plant as a whole, the structures and systems not selected for license renewal are not associated with what we traditionally view as the important aspects of the plant

August 27, 1999

Oconee License Renewal Project

22

Status Report on Baltimore Gas and Electric Company License Renewal Application Review

August 27, 1999

David Matthews, Director, Division of Regulatory
Improvement Programs

Chris Grimes, Branch Chief, License Renewal &
Standardization Branch

Summary of LRA Review Activities

■ Safety Review

- Staff reviewed BGE open/confirmatory item responses
 - August 12, 1999 letter to BGE with status regarding which open or confirmatory items require further interaction
 - Staff reviewing LRA changes
 - Staff reviewing comments from BGE regarding SER accuracy
 - Staff is in process of revising SER
 - FSER to be issued by November 16, 1999
-

Summary of LRA Review Activities - continued

- Resolution of open/confirmatory items
 - August 20, 1999 staff held meeting with BGE on FSAR supplement open item
 - Staff requested public meetings with BGE to discuss some responses (requested interaction on 8 of 48 items) including license renewal issues (scoping, CASS, complex assemblies, heat exchangers) and void swelling
 - Staff has interacted with BGE to gain clarification regarding open item responses or changes to LRA
 - More interaction should be expected to clarify BGE submittals
 - Staff waiting for BGE submittal with additional clarification as the result of interactions

Summary of LRA Review Activities - continued

■ Inspection Activities

- Discussed closeout actions to support Region 1 management input for recommendations on license renewal
 - Additional inspection to be performed
 - Coordinate with currently planned inspection activities occurring around end of 1999
-

Summary of LRA Review Activities - continued

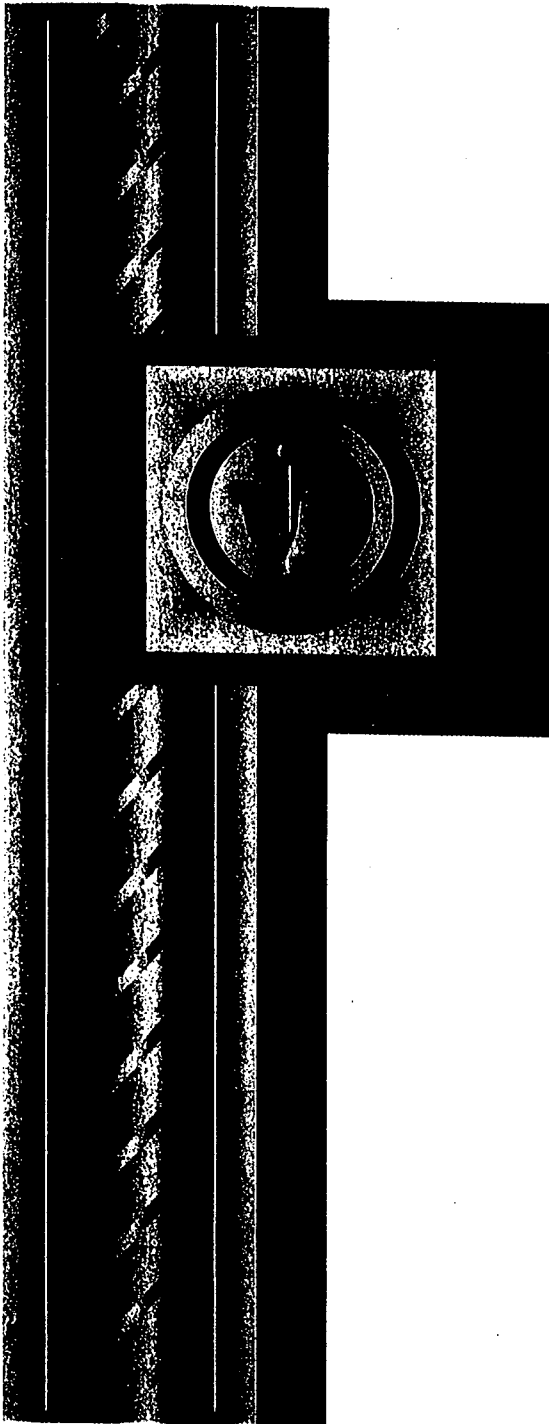
■ Environmental Review

- Staff addressing comments received on draft Supplement to the Environmental Impact Statement (SEIS) for License Renewal - Calvert Cliffs
 - Staff in process of finalizing SEIS
 - Commission approved amendment to Part 51 associated with high-level waste transportation impacts on August 24, 1999
 - SEIS to be completed by November 16, 1999
-

Summary of LRA Review Activities - continued

■ Petitioner Status

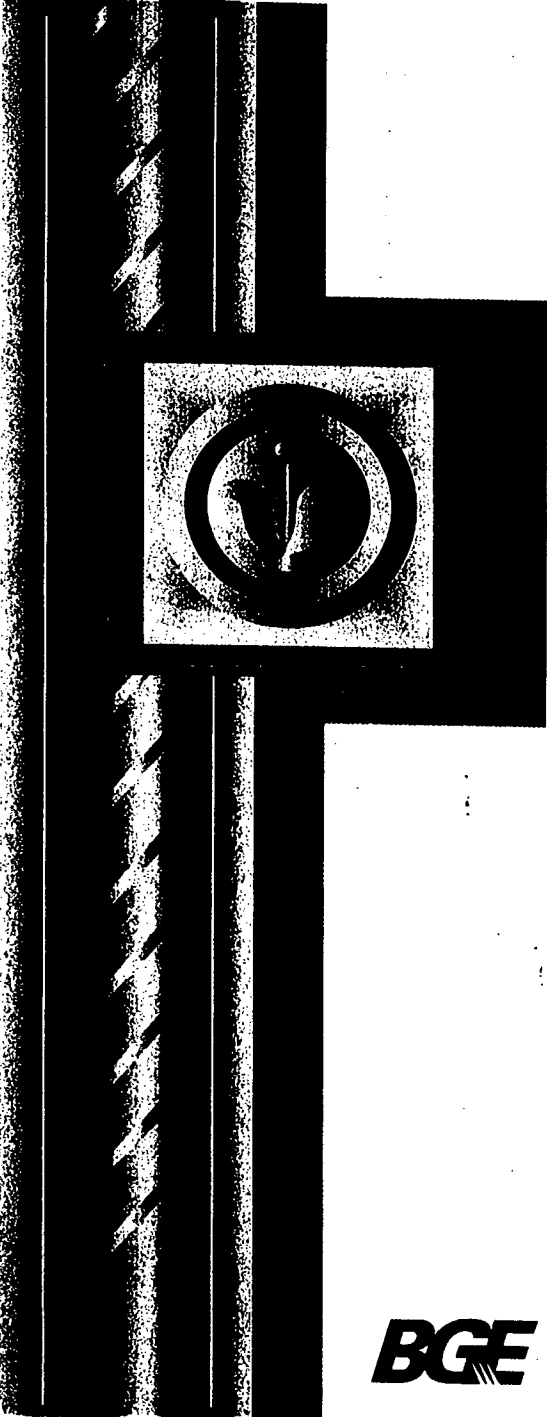
– All briefs filed, case ready for argument October 6, 1999



**August 1999
Calvert Cliffs
LRA Report Card**

August 27, 1999





Calvert Cliffs License Renewal Application Status Report to the US Nuclear Regulatory Commission

Dick Heibel, Manager - Nuclear Projects
Carl Yoder, Project Director - LR
Barth W. Doroshuk, President - CNS, Inc.

August 27, 1999

BGE

 **Constellation**
Nuclear Services

Objectives of Meeting

- Brief NRC line management on progress of license renewal application review
- Determine if any issues need elevating to NRC Steering Committee by BGE or NRC
- Establish performance indicators for next review meeting

Proposed Performance Indicators for August 1999

- NRC decision on acceptability of BGE's Open Item/Confirmatory Item responses ✓
- Revised UFSAR Supplement sections submitted for three programs (now n/a)
- NRC decision on a public meeting (now n/a)

August 1999 Report Card

- **Schedule Adherence**

- On track

- **Quality of Work**

- Good

- **Communications**

- Good

- **Accomplishments**

- NRC reaction to SER OI and CI responses submitted 8/12/99
- UFSAR Supplement OI discussed on 8/20/99

- **Concerns**

- see next slide

Managing the End Game - Remaining Activities

Region I

- Scope of December inspection
- Recommendation Letter from Region I Director

Schedule Firming

- Final ACRS meeting
- Commission briefing/decision

UFSAR Supplement

- Decision

Documents

- The renewed licenses - drafts for comment
- SEIS - BGE understands there are no issues.
- Closing the SER follow-up Items

SER follow-up Items

BGE waiting

- How does the NRC position on scoping affect:
 - The heat exchange function (NRC's action)
 - Complex assemblies (NRC's action)

BGE working

- Does CVCS small bore piping ARDI bound RCS small bore piping for SCC?
- CEA shroud bolt confirmatory item
- SCC of RCS external surfaces

SER follow-up Items (cont')

BGE writing

- How does the NRC-to-NEI letter on scoping affect:
 - SBO EDG Open Item
 - Open Item for ductwork that cools EQ components
- Commitment for QA program applicability to NSR SSCs.
- RV flange leak-off line
- What is an appropriate disposition for the Containment tendon TLAA?
- ***New item*** - void swelling of RVI

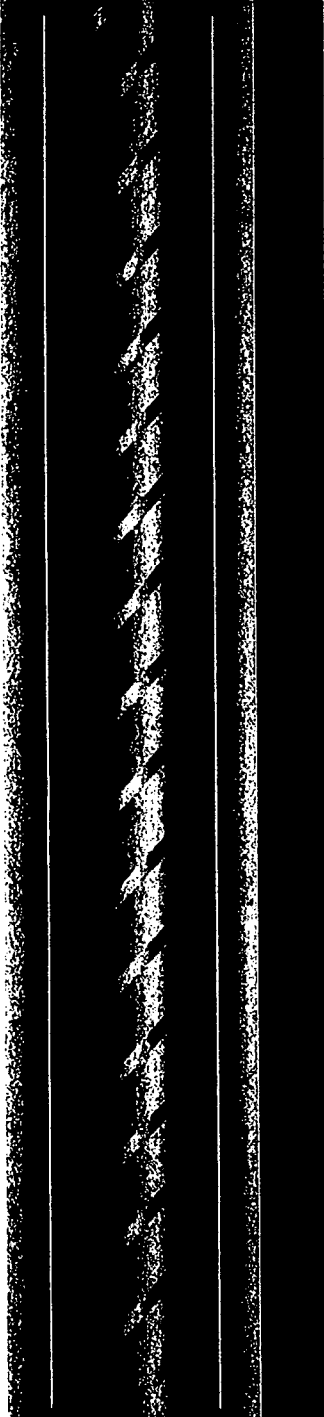
Proposed Performance Indicators for September 1999

- Final Schedule Published

- Draft license review
- Region I inspection
- ACRS meeting
- Region I Director recommendation
- Commission decision

- All Open and Confirmatory Items resolved, or escalated

- Items from NRC's 8/12/99 letter
- UFSAR Supplement Policy Decision resolved



**NRC Schedule
for
BGE Calvert Cliffs
License Renewal Application**

*CCNPP License Renewal Status Report to the USNRC
99-041*

10



NRC Overall Schedule 1998

- 4/10/98 - Application Submitted - **completed**
- 5/10/98 - Acceptance and Docketing Completed - **completed**
- 7/8/98 - Notice of Opportunity for Hearing Filed by NRC - **completed**
- 7/7-7/10 - NRC Environmental Site/Public Visit - **completed**
- 7/9/98 - Public Meetings for Environmental Impact Statement Scoping - **completed**
- 8/7/98 - Filing of Intervener Petitions Ends - **completed**
- 9/7/98 - NRC Completes Technical Requests for Additional Information (RAI) - **completed**
- 9/28/98 - Management Progress Review - **completed**

NRC Overall Schedule 1998 (continued)

- 10/1/98 - Deadline for Whistleblower Center Filing - **completed**
- 10/7/98 - NRC Completes Environmental RAIs - **completed**
- 10/16/98 - Whistleblower Center Petition Dismissed - **completed**
- 10/22/98 - BGE EQ Presentation to NRC Staff - **completed**
- 10/29/98 - Management Program Review; NRC Steering Committee Meeting - **completed**
- 11/21/98 - BGE Completes Technical Responses - **completed**
- 12/6/98 - BGE Completes Environmental Responses - **completed**
- 12/16/98 - Management Progress Review - **completed**

NRC Overall Schedule 1999-2000

- 1/14/99 - Management Progress Review - **completed**
- 2/26/99 - Management Progress Review - **completed**
- 3/6/99 - NRC Issues Draft Supplemental Environmental Impact Statement (SEIS) for Comment - **completed**
- 3/21/99 - NRC Completes Initial Safety Evaluation Report (SER) and Open Items - **completed**
- 4/6/99 - Public Meeting for Draft SEIS Comments - **completed**
- 5/5/99 - ACRS Meeting - **completed**
- 5/20/99 - NRC Comment Period on Draft SEIS Closes - **completed**
- 7/19/99 - BGE Completes Response to SER - **completed**
- 11/16/99 - NRC Issues Final SER and SEIS
- TBD - Commission Decision on Application

**Oconee License Renewal
Application Status Report to
Duke Energy
August 27, 1999**

David Matthews, Director, Division of Regulatory
Improvement Programs
Chris Grimes, Branch Chief, License Renewal &
Standardization Branch

Oconee Renewal Status

8/27/99

Schedule Adherence

- Comment period on draft SEIS ended 8/16/99
- Duke to complete responses to SER open items by 10/15/99
- Final SEIS and SER to be issued by 2/12/2000

Accomplishments

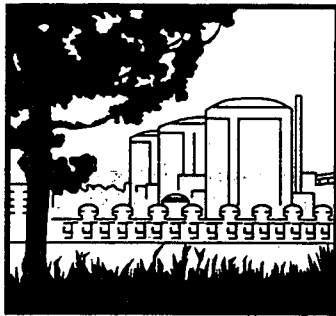
- Communications continue to be good
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Oconee License Renewal Project



Duke/NRC Management Meeting

August 27, 1999

August 27, 1999

Oconee License Renewal Project

1



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August 27, 1999

Oconee License Renewal Project

2



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Oconee License Renewal Project

3



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Oconee License Renewal Project

4



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Oconee License Renewal Project

5



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August 27, 1999

Oconee License Renewal Project

6



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August 27, 1999

Oconee License Renewal Project

7



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August 27, 1999

Oconee License Renewal Project

8

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August 27, 1999

Oconee License Renewal Project

11



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August 27, 1999

Oconee License Renewal Project

12

Pipe Rupture Actions & Relations to LR

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August 27, 1999

Oconee License Renewal Project

13

Pipe Rupture Actions & Relations to LR (continued)

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August 27, 1999

Oconee License Renewal Project

14

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Oconee License Renewal Project

15

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Oconee License Renewal Project

16

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Oconee License Renewal Project

17

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Oconee License Renewal Project

18



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Oconee License Renewal Project

19



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Oconee License Renewal Project

20



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August 27, 1999

Oconee License Renewal Project

21



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- From the in-depth CLB review that established the License Renewal Scoping Events set and the knowledge that we are consistent with our CLB, we have confidence that our scoping process is being applied in accordance with the rule
- Overall, the depth of review in all discipline areas gives confidence in the comprehensiveness of structural, mechanical and electrical results
- The scoping results for license renewal are consistent with previous scoping of regulated programs
- Looking at the plant as a whole, the structures and systems not selected for license renewal are not associated with what we traditionally view as the important aspects of the plant

August 27, 1999

Oconee License Renewal Project

22

August 1999 Report Card

- **Schedule Adherence**

- On track

- **Quality of Work**

- Good

- **Communications**

- Good

- **Accomplishments**

- NRC reaction to SER OI and CI responses submitted 8/12/99
- UFSAR Supplement OI discussed on 8/20/99

- **Concerns**

- see next slide

Managing the End Game - Remaining Activities

Region I

- Scope of December inspection
- Recommendation Letter from Region I Director

Schedule Firming

- Final ACRS meeting
- Commission briefing/decision

UFSAR Supplement

- Decision

Documents

- The renewed licenses - drafts for comment
- SEIS - BGE understands there are no issues.
- Closing the SER follow-up Items

SER follow-up Items

BGE waiting

- How does the NRC position on scoping affect:
 - The heat exchange function (NRC's action)
 - Complex assemblies (NRC's action)

BGE working

- Does CVCS small bore piping ARDI bound RCS small bore piping for SCC?
- CEA shroud bolt confirmatory item
- SCC of RCS external surfaces

SER follow-up Items (cont')

BGE writing

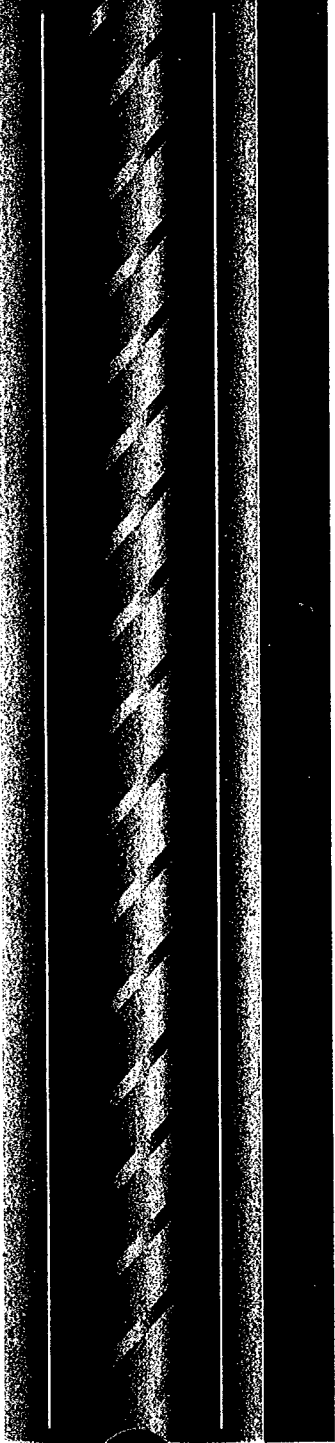
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- RV flange leak-off line
- What is an appropriate disposition for the Containment tendon TLAA?
- ***New item*** - void swelling of RVI



Proposed Performance Indicators for September 1999

- Final Schedule Published
 - Draft license review
 - Region I inspection
 - ACRS meeting
 - Region I Director recommendation
 - Commission decision

- All Open and Confirmatory Items resolved, or escalated
 - Items from NRC's 8/12/99 letter
 - UFSAR Supplement Policy Decision resolved



**NRC Schedule
for
BGE Calvert Cliffs
License Renewal Application**

*CCNPP License Renewal Status Report to the USNRC
99-041*

NRC Overall Schedule 1998

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**Oconee License Renewal
Application Status Report to
Duke Energy
August 27, 1999**

David Matthews, Director, Division of Regulatory
Improvement Programs
Chris Grimes, Branch Chief, License Renewal &
Standardization Branch

Oconee Renewal Status

8/27/99

Schedule Adherence

- Comment period on draft SEIS ended 8/16/99
- Duke to complete responses to SER open items by 10/15/99
- Final SEIS and SER to be issued by 2/12/2000

Accomplishments

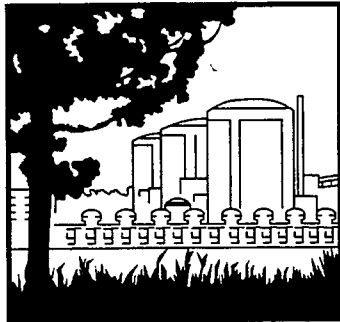
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- FSAR open item
- Complex Assemblies



Oconee License Renewal Project



Duke/NRC Management Meeting

August 27, 1999

August 27, 1999

Oconee License Renewal Project

1



Agenda

- Safety Review
- Environmental Review
- Expectations
- Meeting Plans
- Mechanical Scoping Process

August 27, 1999

Oconee License Renewal Project

2

- Two of three possible Region II License Renewal Site Inspections have been completed
- The April scoping inspection results are documented in NRC Inspection Report 99-11, May 24, 1999
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- Duke recognizes that several items have a higher priority for discussion and will work to communicate this priority

August 27, 1999

Oconee License Renewal Project

5



Safety Review Highlights

- Void Swelling Issue
 - ◆ All but one draft Safety Evaluation Open Item (void swelling) on BWOG Reactor Vessel Internals Report (BAW-2248) have sufficient information to address
 - ◆ BWOG Void Swelling letter provided 8/16/99
 - ◆ NRC action to process final SE on BAW-2248 to support Oconee application
- Mechanical Scoping Process Issues
 - ◆ Meeting held at Oconee from 8/16 through 8/18/99
- UFSAR Supplement Issues
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- Fatigue Issues
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August 27, 1999

Oconee License Renewal Project

6



ACRS Meeting

- Duke is scheduled to update the Advisory Committee on Reactor Safeguards (ACRS) full committee on September 1, 1999
- Duke had previously updated the ACRS license renewal subcommittee on June 30, 1999

August 27, 1999

Oconee License Renewal Project

7



Environmental Review

- Received the draft Supplemental Environmental Impact Statement on May 21, 1999
- NRC held two public meetings on July 8, 1999 in Clemson, SC
- Duke provided 78 written comments on the draft SEIS on August 16, 1999
- No further Duke information is required by the NRC to complete the final Supplemental Environmental Impact Statement

August 27, 1999

Oconee License Renewal Project

8

- Expectations to be accomplished by next NRC/Duke Management Meeting
 - ◆ Closure of Mechanical Scoping Issue (Duke and NRC Staff)
 - ◆ Provide success path to final safety evaluation on BAW-2248, Reactor Vessel Internals Report (NRC Staff)
 - ◆ Prioritize and process Safety Evaluation Report Open Items (Duke and NRC Staff)
 - ◆ Provide updated milestone schedule for "End Game" planning (NRC staff)

- As described to Duke the following are part of the Commission Package of information.
 - ◆ Facility Operating License
 - ◆ Technical Specification Changes (if any)
 - ◆ Final Safety Evaluation Report
 - ◆ Final Supplemental Environmental Impact Statement
 - ◆ ACRS Recommendation Letter
 - ◆ Region II Recommendation Letter
 - ◆ UFSAR Supplement
 - ◆ Amendment to the Indemnity Agreement
- Should Duke support be required beyond the formal responses currently scheduled, a more detailed milestone schedule would be beneficial

Meeting Plans

- Schedule for next NRC/Duke management meetings:
 - ◆ September 29, 1999
 - ◆ October date not set

Mechanical Scoping Issue

- An NRC staff audit of mechanical scoping process was conducted at Oconee from August 16-18, 1999 for the purposes of resolving Safety Evaluation Report Open Item 2.1.3.1-1 related to the mechanical scoping process.
- The audit focused on six topical areas:
 - ◆ Pipe Rupture (High Energy Line Break)
 - ◆ Loss of Decay Heat Removal
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 - ◆ Updated Steam Generator Tube Rupture Analysis
 - ◆ Fuel Handling Accident
- Duke Action as a result of this audit was to review Pipe Rupture further to reassess its status in relation to the other license renewal scoping events that determine part of the mechanical scope of license renewal review.



Pipe Rupture Actions & Relations to LR

- A review of the 1973 Duke High Energy Line Break Technical Report and NRC SER identified 6 Committed Modifications:
 1. Install Blowout Panels in the East Penetration Room Wall
 - Screened into renewal as part of Auxiliary Building structure and included in Application as metal wall in Table 2.7-1
 2. Reinforce Battery Room Walls
 - Screened into renewal as part of Auxiliary Building structure and included in Application as wall in Table 2.7-1
 3. Shield a Low Pressure Injection line; reroute a High Pressure Injection cable
 - Shield screened into renewal as part of Auxiliary Building structure and included in Application in Table 2.7-1. Cabling within scope.

August 27, 1999

Oconee License Renewal Project

13



Pipe Rupture Actions & Relations to LR (continued)

4. Install Emergency Feedwater (EFW) bypass lines
 - Note: These lines are now considered the normal EFW injection path into the steam generators and are safety-related.
 - Screened into license renewal since lines are safety-related and included in Application in Section 2.5.9.3
5. Install Main Feedwater restraints
 - Screened into renewal as part of Turbine Building structures and included in Application as pipe supports in Table 2.7-1
6. Install interconnection between units for EFW bypass line
 - Screened into license renewal since lines are safety-related and included in Application in Section 2.5.9.3

August 27, 1999

Oconee License Renewal Project

14



Pipe Rupture Review

- Pipe Rupture (High Energy Line Break) is part of the Oconee current licensing basis
- The actions reviewed here associated with Pipe Rupture are not understood by Duke to constitute a new design basis event for Oconee
- Review of historical records indicate Duke's belief that actions associated with Pipe Rupture were generally felt to be unnecessary due to the "margins" designed into the plant piping and supports

August 27, 1999

Oconee License Renewal Project

15



Pipe Rupture Review

- This perspective is further substantiated since no application of QA condition, inclusion in a testing or inservice inspection program or other such requirements were ascribed to the modifications based on Pipe Rupture requirements
- Pipe Rupture is not within the Oconee Design Basis Events set.

August 27, 1999

Oconee License Renewal Project

16

- Taking a larger view, the Oconee Design Basis Event set has not been static since original licensing. The DBE set has been modified when events rose to the level to require inclusion
- Terminology differences may be causing us to focus away from the adequacy of the Oconee license renewal scoping results
- To that end, let's review again the Oconee license renewal scoping process and how we've gained confidence in both our process and our results.

- Three distinct scoping activities comprise the Oconee license renewal scoping process: structures, mechanical systems and electrical components
 - ◆ Structures - Structural scoping relies on the Oconee CLB to define scope
 - ◆ Mechanical Systems - Mechanical scoping is a functional review process based on the CLB.
 - ◆ Electrical Components - Electrical scoping relies on an encompassing approach to include all electrical components in scope unless specifically scoped or screened out



Mechanical Scoping Process

- Mechanical §54.4(a)(1) and (a)(2) scoping was performed using a four-step process.
 1. Functional flow path identification
 2. Fluid pressure boundary determination
 3. Physical interference identification
 4. Other designated item identification (safety-related, seismic)
- The completion of these four steps gives Duke confidence that the mechanical §54.4(a)(1) and (a)(2) scoping is complete

August 27, 1999

Oconee License Renewal Project

19



Functional Flow Path Identification

- Involves identifying all mechanical flow paths required to remain functional for successful design basis event mitigation
- A critical task for Oconee license renewal was to determine our licensing basis from which to identify these flow paths and the mechanical scope
- A separate project, the Oconee Safety Related Designation Clarification Project, worked from 1995-1998 to research and compile the appropriate portions of the Oconee licensing basis in order to establish the set of events used for license renewal scoping
- The findings of the project are documented in a plant design basis document

August 27, 1999

Oconee License Renewal Project

20



Functional Flow Path Identification

- The definition of the Oconee License Renewal Scoping Events set used to identify the functional flow paths within the mechanical systems:
 - ◆ Current Oconee Design Basis Events (UFSAR Chapter 15 events)
 - ◆ Natural Phenomena Criteria
 - ◆ Post-TMI Emergency Feedwater Design Basis scenerios
 - ◆ Turbine Building Flood mitigated by the Standby Shutdown Facility

August 27, 1999

Oconee License Renewal Project

21



Reasons We Are Confident in the Scoping Results

- From the in-depth CLB review that established the License Renewal Scoping Events set and the knowledge that we are consistent with our CLB, we have confidence that our scoping process is being applied in accordance with the rule
- Overall, the depth of review in all discipline areas gives confidence in the comprehensiveness of structural, mechanical and electrical results
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- Looking at the plant as a whole, the structures and systems not selected for license renewal are not associated with what we traditionally view as the important aspects of the plant

August 27, 1999

Oconee License Renewal Project

22

Status Report on Baltimore Gas and Electric Company License Renewal Application Review

August 27, 1999

David Matthews, Director, Division of Regulatory
Improvement Programs

Chris Grimes, Branch Chief, License Renewal &
Standardization Branch

Summary of LRA Review Activities

■ Safety Review

- Staff reviewed BGE open/confirmatory item responses
 - August 12, 1999 letter to BGE with status regarding which open or confirmatory items require further interaction
 - Staff reviewing LRA changes
 - Staff reviewing comments from BGE regarding SER accuracy
 - Staff is in process of revising SER
 - FSER to be issued by November 16, 1999
-

Summary of LRA Review Activities - continued

■ Resolution of open/confirmatory items

- August 20, 1999 staff held meeting with BGE on FSAR supplement open item
- Staff requested public meetings with BGE to discuss some responses (requested interaction on 8 of 48 items) including license renewal issues (scoping, CASS, complex assemblies, heat exchangers) and void swelling
- Staff has interacted with BGE to gain clarification regarding open item responses or changes to LRA
- More interaction should be expected to clarify BGE submittals
- Staff waiting for BGE submittal with additional clarification as the result of interactions

Summary of LRA Review Activities - continued

■ Inspection Activities

- Discussed closeout actions to support Region 1 management input for recommendations on license renewal
 - Additional inspection to be performed
 - Coordinate with currently planned inspection activities occurring around end of 1999
-

Summary of LRA Review Activities - continued

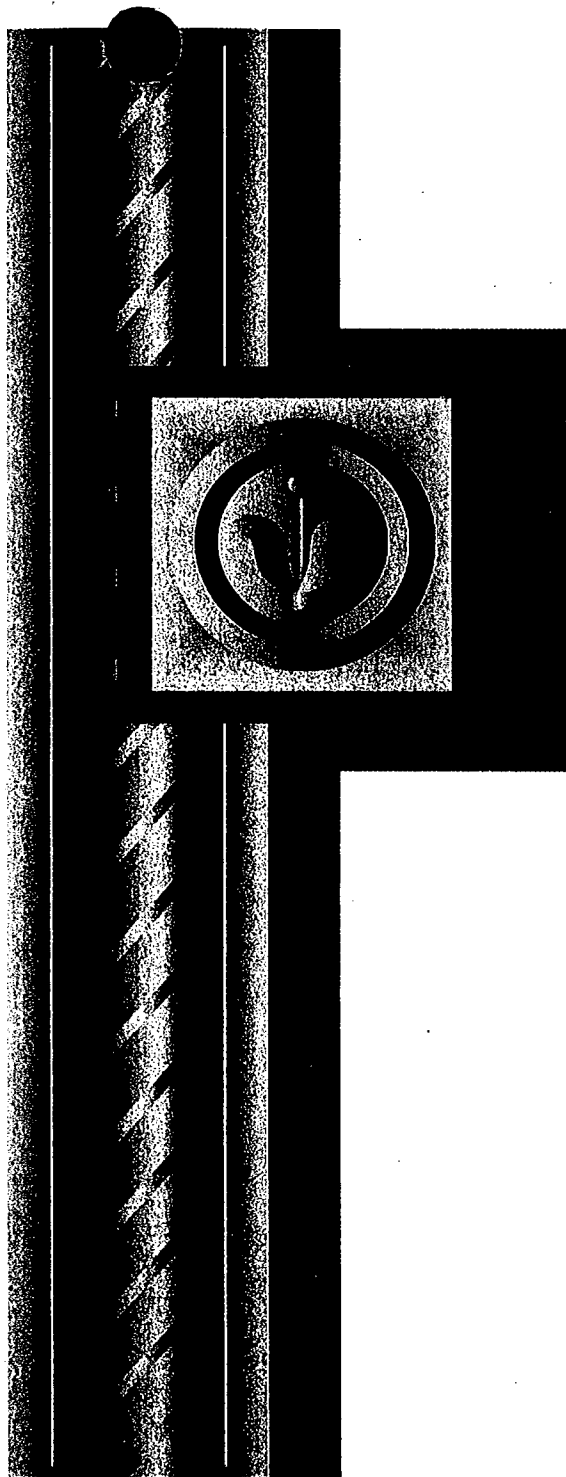
■ Environmental Review

- Staff addressing comments received on draft Supplement to the Environmental Impact Statement (SEIS) for License Renewal - Calvert Cliffs
 - Staff in process of finalizing SEIS
 - Commission approved amendment to Part 51 associated with high-level waste transportation impacts on August 24, 1999
 - SEIS to be completed by November 16, 1999
-

Summary of LRA Review Activities - continued

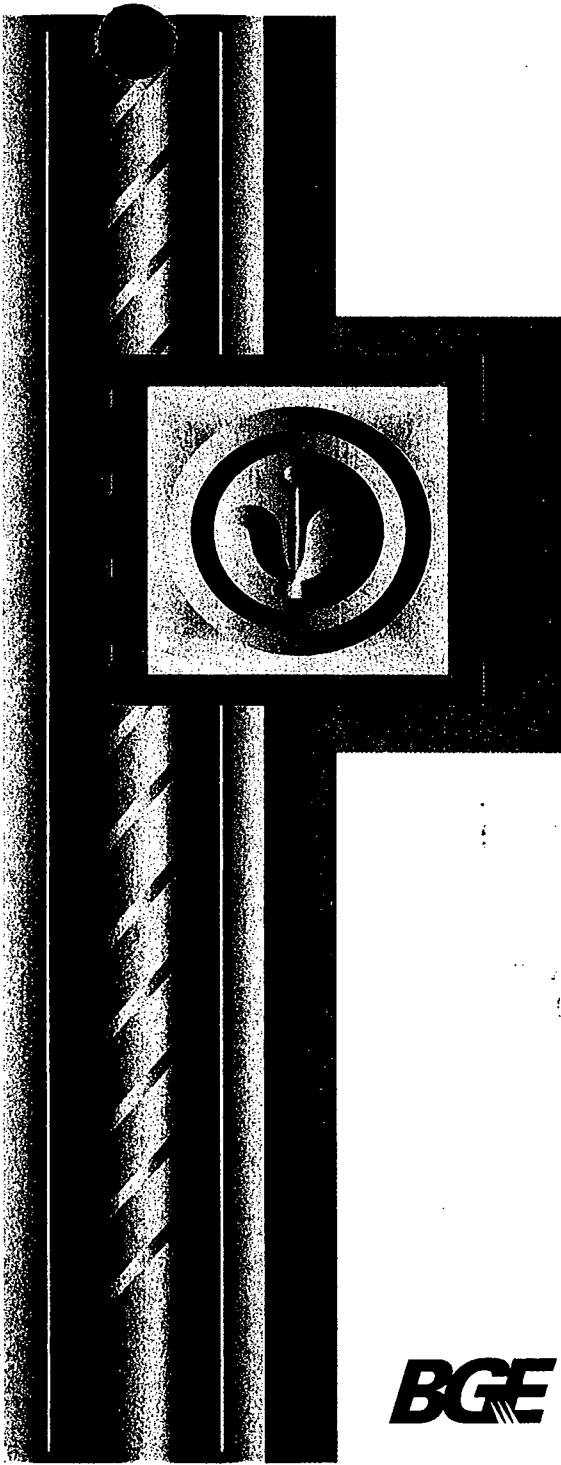
■ Petitioner Status

– All briefs filed, case ready for argument October 6, 1999



**August 1999
Calvert Cliffs
LRA Report Card**

August 27, 1999



Calvert Cliffs License Renewal Application Status Report to the US Nuclear Regulatory Commission

Dick Heibel, Manager - Nuclear Projects
Carl Yoder, Project Director - LR
Barth W. Doroshuk, President - CNS, Inc.

August 27, 1999



Objectives of Meeting

- Brief NRC line management on progress of license renewal application review
- Determine if any issues need elevating to NRC Steering Committee by BGE or NRC
- Establish performance indicators for next review meeting

Proposed Performance Indicators for August 1999

- NRC decision on acceptability of BGE's Open Item/Confirmatory Item responses ✓
- Revised UFSAR Supplement sections submitted for three programs (now n/a)
- NRC decision on a public meeting (now n/a)

August 1999 Report Card

- **Schedule Adherence**

- On track

- **Quality of Work**

- Good

- **Communications**

- Good

- **Accomplishments**

- NRC reaction to SER OI and CI responses submitted 8/12/99
- UFSAR Supplement OI discussed on 8/20/99

- **Concerns**

- see next slide

Managing the End Game - Remaining Activities

Region I

- Scope of December inspection
- Recommendation Letter from Region I Director

Schedule Firming

- Final ACRS meeting
- Commission briefing/decision

UFSAR Supplement

- Decision

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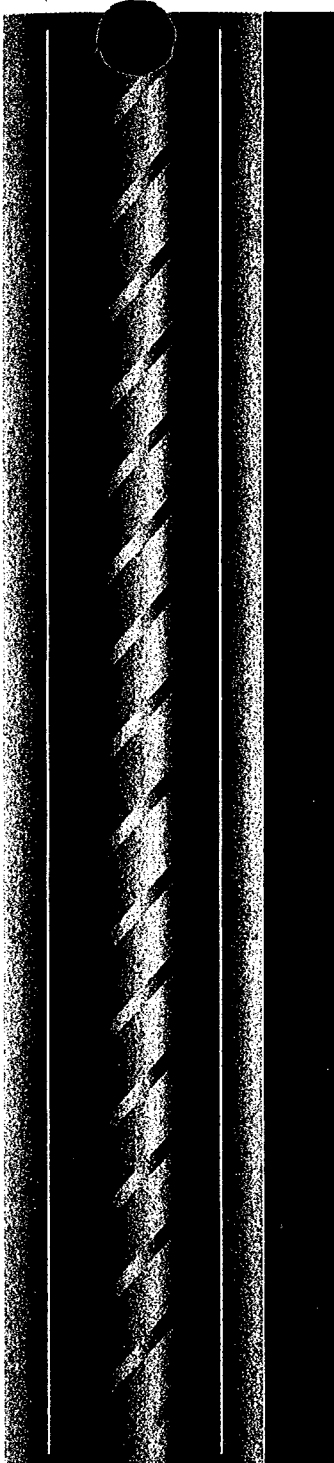
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August 27, 1999**

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Oconee Renewal Status

8/27/99

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Oconee License Renewal Project



Duke/NRC Management Meeting

August 27, 1999

August 27, 1999

Oconee License Renewal Project

1



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August 27, 1999

Oconee License Renewal Project

2

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Oconee License Renewal Project

5



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August 27, 1999

Oconee License Renewal Project

6



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August 27, 1999

Oconee License Renewal Project

7



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August 27, 1999

Oconee License Renewal Project

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- Duke Action as a result of this audit was to review Pipe Rupture further to reassess its status in relation to the other license renewal scoping events that determine part of the mechanical scope of license renewal review.



Pipe Rupture Actions & Relations to LR

- A review of the 1973 Duke High Energy Line Break Technical Report and NRC SER identified 6 Committed Modifications:
 1. Install Blowout Panels in the East Penetration Room Wall
 - Screened into renewal as part of Auxiliary Building structure and included in Application as metal wall in Table 2.7-1
 2. Reinforce Battery Room Walls
 - Screened into renewal as part of Auxiliary Building structure and included in Application as wall in Table 2.7-1
 3. Shield a Low Pressure Injection line; reroute a High Pressure Injection cable
 - Shield screened into renewal as part of Auxiliary Building structure and included in Application in Table 2.7-1. Cabling within scope.

August 27, 1999

Oconee License Renewal Project

13



Pipe Rupture Actions & Relations to LR (continued)

4. Install Emergency Feedwater (EFW) bypass lines
 - Note: These lines are now considered the normal EFW injection path into the steam generators and are safety-related.
 - Screened into license renewal since lines are safety-related and included in Application in Section 2.5.9.3
5. Install Main Feedwater restraints
 - Screened into renewal as part of Turbine Building structures and included in Application as pipe supports in Table 2.7-1
6. Install interconnection between units for EFW bypass line
 - Screened into license renewal since lines are safety-related and included in Application in Section 2.5.9.3

August 27, 1999

Oconee License Renewal Project

14



Pipe Rupture Review

- Pipe Rupture (High Energy Line Break) is part of the Oconee current licensing basis
- The actions reviewed here associated with Pipe Rupture are not understood by Duke to constitute a new design basis event for Oconee
- Review of historical records indicate Duke's belief that actions associated with Pipe Rupture were generally felt to be unnecessary due to the "margins" designed into the plant piping and supports

August 27, 1999

Oconee License Renewal Project

15



Pipe Rupture Review

- This perspective is further substantiated since no application of QA condition, inclusion in a testing or inservice inspection program or other such requirements were ascribed to the modifications based on Pipe Rupture requirements
- Pipe Rupture is not within the Oconee Design Basis Events set.

August 27, 1999

Oconee License Renewal Project

16

- Taking a larger view, the Oconee Design Basis Event set has not been static since original licensing. The DBE set has been modified when events rose to the level to require inclusion
- Terminology differences may be causing us to focus away from the adequacy of the Oconee license renewal scoping results
- To that end, let's review again the Oconee license renewal scoping process and how we've gained confidence in both our process and our results.

- Three distinct scoping activities comprise the Oconee license renewal scoping process: structures, mechanical systems and electrical components
 - ◆ Structures - Structural scoping relies on the Oconee CLB to define scope
 - ◆ Mechanical Systems - Mechanical scoping is a functional review process based on the CLB
 - ◆ Electrical Components - Electrical scoping relies on an encompassing approach to include all electrical components in scope unless specifically scoped or screened out

- Mechanical §54.4(a)(1) and (a)(2) scoping was performed using a four-step process.
 1. Functional flow path identification
 2. Fluid pressure boundary determination
 3. Physical interference identification
 4. Other designated item identification (safety-related, seismic)
- The completion of these four steps gives Duke confidence that the mechanical §54.4(a)(1) and (a)(2) scoping is complete

- Involves identifying all mechanical flow paths required to remain functional for successful design basis event mitigation
- A critical task for Oconee license renewal was to determine our licensing basis from which to identify these flow paths and the mechanical scope
- A separate project, the Oconee Safety Related Designation Clarification Project, worked from 1995-1998 to research and compile the appropriate portions of the Oconee licensing basis in order to establish the set of events used for license renewal scoping
- The findings of the project are documented in a plant design basis document



Functional Flow Path Identification

- The definition of the Oconee License Renewal Scoping Events set used to identify the functional flow paths within the mechanical systems:
 - ◆ Current Oconee Design Basis Events (UFSAR Chapter 15 events)
 - ◆ Natural Phenomena Criteria
 - ◆ Post-TMI Emergency Feedwater Design Basis scenerios
 - ◆ Turbine Building Flood mitigated by the Standby Shutdown Facility

August 27, 1999

Oconee License Renewal Project

21



Reasons We Are Confident in the Scoping Results

- From the in-depth CLB review that established the License Renewal Scoping Events set and the knowledge that we are consistent with our CLB, we have confidence that our scoping process is being applied in accordance with the rule
- Overall, the depth of review in all discipline areas gives confidence in the comprehensiveness of structural, mechanical and electrical results
- The scoping results for license renewal are consistent with previous scoping of regulated programs
- Looking at the plant as a whole, the structures and systems not selected for license renewal are not associated with what we traditionally view as the important aspects of the plant

August 27, 1999

Oconee License Renewal Project

22

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