



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 4, 2000

MEMORANDUM TO: Stuart A. Richards, Director
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Jack Cushing, Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

A handwritten signature in black ink, appearing to read "J. Cushing".

SUBJECT: SUMMARY OF SEMI-ANNUAL MEETING HELD ON NOVEMBER 18,
1999, WITH COMBUSTION ENGINEERING OWNERS GROUP
EXECUTIVE COMMITTEE

On November 18, 1999, the staff held a public meeting with the Combustion Engineering Owners Group (CEOG) Executive Committee at the Nuclear Regulatory Commission (NRC) headquarters in Rockville, Maryland. Members of the public were also present at this meeting. The purpose of this meeting was to exchange information and to provide a forum for discussion of topics related to both NRC and CEOG activities. This was the second meeting of this nature in 1999. Attachment 1 provides a list of action items generated during the meeting. Attachment 2 lists meeting participants. Attachment 3 provides a set of slides presented by the CEOG and Attachment 4 provides the slide presented by the NRC staff during the meeting.

COMMENTS FROM THE DIRECTOR OF NRR

Sam Collins (Director, Office of Nuclear Reactor Regulation) provided the opening remarks and an overview of NRC activities. He acknowledged the importance of the CEOG/NRC management meetings as a forum to exchange ideas and provide feedback on the performance of both the NRC and the CEOG. One of the NRC activities discussed by Mr. Collins was the establishment of a work planning center (WPC). The WPC will plan, schedule, and track the (NRR) work load. The WPC has been benchmarked against industry and government best practices. A pilot program will be ready next year. Mr. Collins requested industry feedback on the work planning center and stated that Mr. Robert Perch was the lead individual on the planning center. Mr. Collins offered a tour of the WPC at the next meeting (see Attachment 1, action item 1).

Mr. Collins also addressed the issue of NRC resource planning. Licensee's long term plans such as seeking license renewal instead of decommissioning significantly impact NRC resource loading. The resources required for license renewal are considerably greater than those required for decommissioning. Mr. Collins expressed a desire for the industry to coordinate an approach to license renewal priority. In particular, he was concerned that a licensee's strategic business decision may hinge on license renewal and may at the last minute want to jump to the head of the line for license renewal. He recommended that the CEOG work with other industry groups to develop a consensus on this issue. Mr. Collins requested the CEOG inform the NRC as early as possible about issues that impact NRC resources such as license renewal and decommissioning. This information will enable the staff to allocate resources in the most

DFO3

PDR To PRP CEOG

efficient manner. The CEOG agreed to keep the NRC informed of their long range intentions so that NRC resources can be adjusted accordingly (action item 2).

At the request of the CEOG, Mr. Collins provided suggestions on areas where the CEOG would be effective in working as a group. These included:

- Oversight process - The CEOG should compare among themselves how the pilot process is working across the CEOG members.
- License renewal - CEOG members could benefit by developing generic technical reports to facilitate the review and approval process and to provide feedback to the NRC on the sequencing of plants pursuing license renewal.
- Operator licensing - There appears to be a benefit from a consistent exam and question bank for a common NSSS design. In this regard the CEOG can help to ensure consistency.
- Fuel issues - The CEOG can work together to address extended fuel burnup issues and new fuels such as MOX

CE OWNERS GROUP REPORT

Mr. Ralph Phelps (Chairman, of the CEOG Management Committee) provided an update of several specific issues related to the CEOG. Mr. Phelps reported on progress toward addressing key CEOG strategic initiatives. The CEOG has recently formed a License Renewal Task Force and a Section XI Working Group.

Mr. Phelps acknowledged that both the CEOG and NRC are working to improve communications. Examples of this effort are: a single topical report table being maintained by both organizations, a dedicated NRC Project Manager (PM); NRC PM attendance at CEOG management meetings; and NRC/CEOG management meetings. The CEOG offered that continuity of the NRC PM would be beneficial in improving the scheduling process and for estimating and controlling NRC review fees.

Mr. Collins stated that the NRC is striving to manage changes so as to minimize the impact on stakeholders. He agreed to maintain continuity of Project Manager within the constraints of resource availability (action item 3).

REGULATORY CREDIT FOR INDUSTRY SELF ASSESSMENTS

The next topic on the agenda was regulatory credit for industry self assessments. There was considerable discussion of what action is required in order for the CEOG members to receive formal regulatory credit for the CEOG Self Assessment Program. The CEOG stated that there is considerable duplication of effort ongoing, and there may be opportunities to work with the NRC to avoid some of the duplication and to improve the overall quality of self assessment activities. The CEOG believes engineering assessments is one area where the CEOG and NRC should work together.

Mr. Collins stated that the baseline inspection level is the minimum level that the staff needs to assure the health and safety of the public. Brian Sheron, Associate Director for Project Licensing and Technical Analysis, said that there was an industry effort being coordinated through NEI (Nuclear Energy Institute) to work out the process for regulatory credit for industry initiatives and a public meeting had been recently held on that issue. Mr. Collins summarized by stating that the NRC door is open, but the CEOG must recognize that the NRC needs to be an independent regulator and there needs to be representation of all stakeholders.

The CEOG would like to meet with the NRC on this topic in the near term. The NRC agreed to meet with the CEOG (action item 4).

NRC/CEOG REGULATORY ISSUES

Angie Krainik (Chair, of the CEOG Licensing Subcommittee) reported on several key topical reports under review by the NRC.

- Elimination of PASS

The issue CEOG raised was the schedule to complete the review and issue the safety evaluation (SE). The CEOG stated that elimination of PASS remained a high priority project for them. The NRC stated that they will publish a notice in the *Federal Register* in November soliciting input from the public and in particular from the States on this issue. If the comments received can be resolved, then the target date for the SE would be February 2000. Regarding the process for the non-lead plants to apply for this request, the NRC agreed to pursue a streamlined process for handling follow-on requests (action item 5).

- Common Qualified Platform

The CEOG is seeking NRC review and approval for a significant topical report with supplementary information. The scope of the Common Qualified Platform (Common Q) Phase 2 effort is to generically qualify and license the Advant 160 Programmable Logic Controller (PLC) for Class 1E nuclear safety applications.

Several lessons learned were discussed related to this project including the necessity of a mutually agreed upon schedule for submissions and reviews, better estimates for NRC review fees and the desire to maintain the same reviewer throughout the project. The NRC is currently finalizing the draft safety evaluation and expects to release it internally for review and approval on November 30, 1999. A final safety evaluation for Phase 2 is anticipated by February 29, 2000. A detailed schedule for Common Q Phase 3 activities is being prepared by the CEOG and the NRC (action item 6).

- Pressure Temperature Limits Report (PTLR)

A topical report had been submitted to the NRC to relocate the pressure temperature limits to a non-technical specification report. After several rounds of questions, the report was withdrawn at the request of the NRC. This topic was discussed as a lesson learned such that this situation can be avoided in future submittals.

Mr. Collins and Mr. Sheron provided clarification that after the first round of questions failed to resolve the questions on the topical report, the issue should have been raised to a higher level in the NRC organization. The CEOG requested and the staff agreed to a meeting to discuss the PTL report prior to the report being submitted (action item 7).

On the subject of topical reports, Mr. Levine observed that the CEOG and the NRC have been doing a better job on prioritizing the topical reports. However, the CEOG is getting a mixed message regarding the need for lead plants.

Mr. Collins noted that the lead plant drives the review schedule based on need. He also noted that fees may be able to be waived if the topical is generic. Mr. Collins said that the need for a lead plant along with the related issue of fees and priority for review could be discussed at the pre-application meeting on the topical report (action item 8).

NRC TOPICS

The NRC staff communicated that while GSI-165 is closed, it does contain risk insights that may be useful to Combustion Engineering designed plants. It was determined that a more effective method of communicating this type of information was needed (action item 9).

CEOG RISK INFORMED INITIATIVES

Mr. Alan Hackerott, Chairman of the Probabilistic Safety Assessment Subcommittee (PSASC) provided an update on the CEOG risk informed initiatives.

- GSI-23, Reactor Coolant Pump (RCP) Seal Integrity

Mr. Hackerott stated that they will develop a seal model and submit the topical report to the NRC for review and approval. The NRC agreed to meet with the CEOG in December to discuss RCP seal model development. The CEOG agreed to submit the seal model for review by July 2000 (action item 10).

- Safety Evaluations for Joint Application Reports (JARs)

The CEOG would like the SE to state the plants the safety evaluations are applicable to and to identify any conditions that the plants will have to address when they apply for a plant specific amendment. The NRC agreed to issue SEs on future JARs with conditions that plants have to address when they apply for a plant specific amendment (action item 11).

- Continuation of Risk Informed Applications Outside of 10 CFR 50 Initiatives

The CEOG has been very successful in working with the NRC on specific risk informed applications such as changes to allowable outage times. The CEOG expressed a concern that the demands of other risk informed initiatives do not impact the specific risk informed applications.

• Challenges for Maintenance Rule Implementation

Recent risk informed changes to the maintenance rule represent a significant improvement and challenge in the conduct of maintenance. The CEOG discussed the desire to interact with the NRC on implementation of the revised maintenance rule to maintain a consistency in inspection (action item 12).

• Topical Report CENPD-388-P, "Extension of the 1-Pin Burnup Limit to 65 Mwd/KgU for ABB PWR Fuel With OPTIN Cladding"

An update was provided on the subject topical report which requests the approval of fuel burnup to 65 MWd/KgU. The NRC does not have the resources to invest in the effort to go beyond 62 MWd/KgU without a firm request from a utility. Any approval of the topical report beyond 62 MWd/KgU will need additional data and compelling argument.

Gary Holahan, Director, Division of Systems Safety and Analysis, suggested that the CEOG consider a risk informed approach in which case the CEOG may be able to construct licensing basis for beyond 62 MWd/KgU. Mr. Sheron noted that the NRC is expending research money in this area and that there may be an opportunity to co-fund and/or share resources. It was noted that there are several LFAs (lead fuel assemblies) that are not getting much regulatory attention.

Y2K UPDATE

Jim Wright (BGE) reported on final plans by the CEO in preparation for the year 2000 rollover. He noted that the CEOG program is following the NEI 97-07 guidance. The NRC requested a phone number or other communication link to the ABB Y2K Support Center to follow any developments at the Korean Electric Power Company (KEPCO) plants of ABB design. The CEOG agreed to provide the requested link (action item 13).

CLOSING

It was suggested by Mr. Collins that a "lesson learned" topic be included in the next meeting agenda. The lesson learned topic would include topics such as communications and the PTLR issue that either party believes would help improve the interactions between the parties (action item 14). The list of action items was summarized (attachment 1). The meeting was adjourned at 11:40 am.

Project No. 692

- Attachments: 1. Action Item Handout
- 2. Attendance List
- 3. CEOG Meeting Slides
- 4. NRC Meeting Slide

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CE OWNERS GROUP

Project No. 692

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DISTRIBUTION OF MEETING SUMMARY HELD ON NOVEMBER 18, 1999, WITH
COMBUSTION ENGINEERING OWNERS GROUP EXECUTIVE COMMITTEE

Dated: January 4, 2000

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**ACTION ITEM LIST FROM
CEOG NOVEMBER 18, 1999, MEETING**

1. Work Planning Center

Action

The NRC will update the CEOG on the progress of the work planning center.

Resolution

The NRC will schedule a tour of the work planning center at the next CEOG / NRC meeting.

Due Date

Next CEOG/NRC management meeting

Responsible Party

NRC

2. NRC Resource Planning

Action

The NRC staff requested that the Combustion Engineering Owners Group (CEOG) inform the NRC staff as early as possible about issues that impact NRC resources (license renewal/ decommissioning). This information will enable the staff to allocate resources in the most efficient manner.

Resolution

The CEOG agreed to inform the staff of issues that could impact staff resources.

Due Date

Ongoing; report at the May 2000 CEOG/NRC management meeting

Responsible Party

CEOG

3. Continuity of NRC Project Manager

Action

The CEOG requested continuity of the NRC Project Manager. Turnover in Project Managers can cause communication and scheduling difficulties. The staff stated that the turnover was unusual this past year due to the recent NRR reorganization.

Resolution

In the future the staff agreed to maintain Project Manager continuity within the constraints of resource availability.

Due Date

Completed

Responsible Party

NRC

4. Self Assessments

Action

The CEOG requested regulatory credit for self assessments that the CEOG performs in the engineering area. The staff responded that the topic is worthy of further dialogue with all stakeholders. Some of the issues involved are assuring the NRC independence as a credible regulator, efficient use of NRC resources and reduction in regulatory burden.

Resolution

The issue requires input from all stakeholders. The CEOG would like to meet with the NRC at its earliest convenience to discuss the next steps.

Due Date

Meeting scheduled by February 25, 2000

Responsible Party

CEOG and NRC

5. Post Accident Sampling System Elimination (PASS) Topical Report Schedule

Action

The CEOG requested that the NRC meet the February 2000 due date for review of the PASS topical report.

Resolution

The NRC staff responded that meeting the due date depends on the resolution of stakeholder comments. The staff also made clear that no decision will be made prior to receiving the stakeholder comments. In parallel, the NRC will investigate a streamlined process for approval of PASS elimination applications from individual plants if the topical report is approved.

Due Date

NRC will provide feedback to CEOG on streamlined application process by January 14, 2000 and issue an SE on the PASS topical report by February 25, 2000, provided stakeholders comments can be resolved.

Responsible Party

NRC

6. Common Qualified Platform (Common Q)

Action

To maintain the Common Q on schedule, the CEOG and the NRC will develop a detailed schedule of mutually agreed upon target dates for submittals, requests for additional information (RAI) to be asked and responded to and for safety evaluation reports to be issued.

Due Date

Completed

Responsible Party

NRC and CEOG

7. Pressure Temperature Limit Report (PTLR)

Action

The CEOG requested a meeting with the staff prior to submitting their revised PTLR to discuss the review status.

Resolution

The NRC agreed to meet with the CEOG.

Due Date

The CEOG and NRC will discuss in the pre-application meeting if a lead plant is needed. The meeting will be scheduled for March 2000.

Responsible Party

CEOG and NRC to schedule a meeting.

8. Lead Plant Needed For Topical Reports

Action

The CEOG requested guidance on when a lead plant is needed for a topical report.

Resolution

The staff stated that the issue could be resolved at the pre-application meeting along with the related issue of fees and priority for review.

Due Date

Completed

Responsible Party

NRC

9. GSI-165 Safety Relief Valves

Action

The NRC staff communicated that while GSI-165 is closed, it does contain risk insights that may be useful to Combustion Engineering designed plants. Provide a more effective method of communicating this type of information to licensees.

Resolution

NRC will issue a Regulatory Issue Summary for GSI-165. When closing generic safety issues the NRC will evaluate if a Regulatory Issues Summary is needed to communicate this type of information to the licensees.

Due Date

Issue Regulatory Issue Summary for GSI-165 by February 15, 2000.

Responsible Party

NRC

10. Reactor Coolant Pump (RCP) Seals

Action

CEOG will develop and submit to the NRC for review an RCP seal model by July 2000.

Resolution

CEOG to submit seal model by July 2000.

Due date

July 2000 seal model to be submitted to NRC for review.

Responsible Party

CEOG

11. Safety Evaluations for Joint Application Reports

Action

The CEOG requested that the SEs for Joint Application Reports state which plants the report is applicable to and the conditions that the plant will have to address when they apply for a plant specific amendment.

Resolution

The staff agreed.

Due Date

Completed

Responsible Party

NRC

12. Maintenance Rule Implementation

Action

The CEOG and the NRC to meet and hold discussions on developing Maintenance Rule Implementation guidance.

Resolution

The NRC agreed to meet with the CEOG on this topic. These meetings may be in conjunction with CEOG Probabilistic Safety Assessment Subcommittee (PSASC) meetings.

Responsible Party

NRC and CEOG

13. Y2K

Action

The NRC requested contact information on ABB Y2K Support Center to keep abreast of issues arising from millennium change over experience at KEPCO plants with ABB design.

Resolution

CEOG will provide phone number and other information as requested.

Due Date

Completed

Responsible Party

CEOG

14. Lesson Learned

Action

The lesson learned topic would include items that would improve NRC and CEOG interactions and performance. In addition, the status of the action items from the previous meeting will be discussed. Include a lesson learned topic in the agenda for the next NRC/CEOG meeting.

Resolution

NRC and CEOG agreed.

Due Date

Ongoing; report at the May 2000 CEOG/NRC management meeting

Responsible Party

NRC and CEOG

ATTENDANCE LIST

MEETING BETWEEN NRC AND THE CE OWNERS GROUP

November 18, 1999

NRC

S. Collins
B. Sheron
G. Holahan
J. Cushing
S. Dembek
J. O'Brien
C. Holden
M. Fields
J. Wermiel
K. Wichman
D. Wessman
M. Reinhart
J. Medoff
C. Grimes
D. Spaulding
G. Hammer
K. Mortensen
D. Terao
A. Serkiz
A. Marinos

ABB/CE

I. Rickard
C. Brinkman
L. Collins
S. Lurie
C. Cruse
G. Bischoff

McGRAW-HILL

J. Weil

NUS

D. Palmrose

**CE OWNERS GROUP UTILITY
REPRESENTATIVES**

R. Hutchinson (Entergy Operations Inc.)
D. Nunn (Southern California Edison)
A. E. Scherer (Southern California Edison)
J. Levine (Arizona Public Service)
A. Krainik (Arizona Public Service)
G. Overbeck (Arizona Public Service)
E. J. Weinkam (Florida Power & Light)
M. Schoppman (Florida Power & Light)
N. Haskell (Consumers Energy)
R. Phelps (Omaha Public Power District)
A. Hackerott (Omaha Public Power District)

KOYEA ELECTRIC POWER CORP.

Jang-Hee Hong
Hee Yong Lee

NRC/CEOG Senior Management Meeting

November 18, 1999

NRC Offices

Rockville, Maryland

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- 3. NRC/CEOG Regulatory Issues**
- 4. CEOG Risk Informed Initiatives**
- 5. CEOG Y2K Update**
- 6. CEOG Topical Report Status**

Attachment 3

Agenda
NRC/CEOG Senior Management Meeting

Location: NRC Offices, One White Flint Building, Room (5B4)
Rockville, Maryland
Phone: (301) 415-1270

Thursday, November 18, 1999

- 8:30 am **Introductions and Opening Remarks**
- 8:35 am **Feedback from NRR on the CEOG – Sam Collins (NRC)**
- 9:15 am **Break**
- 9:30 am **CE Owners Group Report – Ralph Phelps (OPPD)**
- Update on CEOG strategic initiatives.
 - CEOG/NRC Communications
 - CEOG Self Assessments
- 10:00 am **NRC/CEOG Regulatory Issues – Angie Krainik (APS)**
- Elimination of PASS
 - Common Q, Phase 2
 - Pressure Temperature Limits Report (PTLR)
- 10:30 am **NRC Topics**
- Experience with W laser welded SG sleeves in CE plants
 - GSI-165, Safety Relief Valves
- 11:00 am **CEOG Risk Informed Initiatives – Alan Hackerott (OPPD)**
- Regulatory Credit for CEOG PSA Cross Comparisons
 - Issuance of SERs for CEOG PSA Joint Application Reports
 - Continuation of Risk Informed Applications Outside of 10 CFR 50 Initiatives
 - Challenges for Maintenance Rule Implementation
 - GSI-23, RCP Seal Integrity
- 11:30 am **Y2K Update – Jim Wright (BGE)**
- 11:40 am **Adjourn**

Chairman's Report

Ralph Phelps
November 18, 1999

NRC/CEOG Senior Management Meeting

Topics

- CEOG Strategic Issues
- CEOG Organization
- CEOG/NRC Communications
- CEOG Self Assessments

NRC/CEOG Senior Management Meeting

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November 18, 1999

1999 CEOG Strategic Issues

1. **Steam Generator Integrity**
 - » Tools for Operational Assessments and Condition Monitoring
 - » Tubesheet Region Inspections
2. **Design/Licensing Basis**
 - » License Renewal Issues
 - » Risk-informed Regulation
 - » Maintenance Rule Implementation
 - » RCP Seal Integrity
 - » ECCS Sump Strainer Performance

1999 CEOG Strategic Issues

3. **Reactor Plant Materials Issues**
 - » Reactor Vessel Internals Aging
 - » Coordination with EPRI MRP
4. **Plant Performance Improvements**
 - » Indepth Analysis of UCLF Contributors
5. **Shorter Refueling Outages**
 - » Peer Review Program
 - » Alternate Decay Heat Removal in Mode 6

1999 CEOG Strategic Issues

6. O&M and Capital Cost Reduction

- » Eliminate PASS
- » Extend RV ISI Interval
- » License Alloy 600 Nozzle Repairs

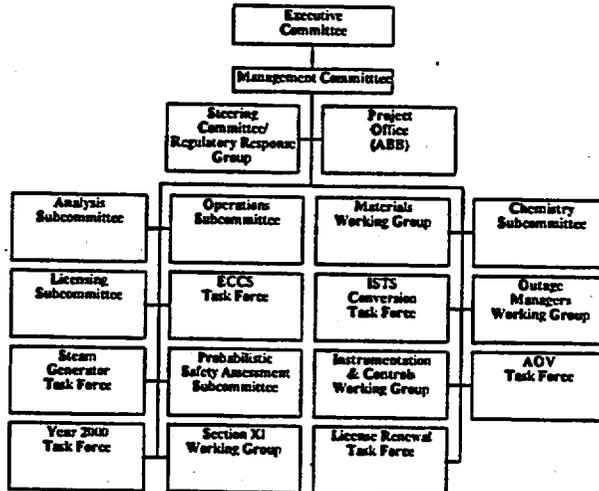
7. Equipment Obsolescence

- » License Common Q Technology
- » Strategic I&C Modernization

CEOG Organization Changes

- Since the May CEOG/NRC Senior Management Meeting...
 - » Added License Renewal Task Force
 - » Disbanded Equipment & Maintenance Subcommittee

2000 CEOG Organization



NRC/CEOG Senior Management Meeting

7

November 18, 1999

CEOG/NRC Communications

- Since May, more than 20 meetings with NRC/ACRS on RCP Seals, PASS Elimination, RTT, PTLR, Common Q
- Several changes in NRC Project Manager for CEOG
- Good working relationship with current Project Manger, Jack Cushing
 - » NRC Project Manager attended the October CEOG Management Committee Meeting
 - » Daily phone calls

NRC/CEOG Senior Management Meeting

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November 18, 1999

CEOG Self Assessments

- Current Initiatives
- Self Assessment Example

Current Initiatives

- PSA Certification Peer Review
- Outage Preparations Readiness Review
- Outage Peer Review
- SSFA/Resource Sharing Project
- Steam Generator Program Peer Review
- Y2K Program Self Assessments

20,000 manhours of CEOG self assessments & peer reviews since 1997

Current Initiatives

- **Self Assessment is a vital element of the New Regulatory Oversight Process**
 - » self assessment process
 - » corrective action program
- **Benefits of CEOG Self Assessments**
 - » increased regulatory confidence
 - » sharing of resources
 - » transfer "best practices" among the CE fleet

CEOG Self Assessment - Example

- **SSFA/Resource Sharing Project**
 - » Discussed with Region 4 Administrator
 - » NRC participation in "lesson learned" meetings
 - » Uses NRC inspection manual guidance
 - » Formal processes and assessment criteria
 - » Rigorous, high quality 2 week onsite self assessment
- **SSFA's completed for**
 - Main Steam and Feedwater
 - Spent Fuel Pool Cooling
 - Reload Analysis Methods
 - Control Room HVAC

**NRC/CEOG Senior Management Meeting
Licensing Issues**

**Angie Krainik (APS)
Chair, Licensing Subcommittee**

November 18, 1999

PASS Elimination

- **Background**
- **Current Status and Planned Activities**
- **Actions for NRC**

PASS Elimination

- **Background:**

- » Joint Application Report submitted 5/99:
- » ANO2 (lead plant) submitted proposed license amendment 7/99
- » ACRS presentations 9/99
 - ACRS recommends NRC approve CEQG PASS elimination request 10/99

PASS Elimination

- **Current Status:**

- » ACRS Position 10/99
 - NRC should approve CEQG proposal to eliminate PASS from plant licensing and design bases
 - NRC should review need for new generic requirements for measurement of in-containment fission products and sump water pH

PASS Elimination

- **Current Status (continued):**

- » **NRC in agreement with CEOG request to eliminate PASS (draft SER written)**
 - No remaining technical issues
- » **Federal Register Notice for public comment on elimination of PASS (11/99)**
 - Notify State EROs
 - Acknowledge that PASS is not required

NRC/CEOG Senior Management Meeting

Slide 5 of 20

November 18, 1999

PASS Elimination

- **Future Activities:**

- » **Federal Register Notice comment period ends 1/00**
 - Recommend CEOG utilities contact State EROs
- » **NRC resolve comments and issue SER by 2/00**
- » **CEOG lead plant (ANO2) license amendment expected to be approved concurrently**
- » **Other CEOG plants expected to follow with license amendments**

NRC/CEOG Senior Management Meeting

Slide 6 of 20

November 18, 1999

Requested Action

- Confirm agreement with NRC to issue final SER (no later than 2/00) and approve ANO2 license amendment
- Inform NRC that other CEOG plants will submit license amendments early in 2000

Common Q Project

- Overview
- Activities
- CEOG Implementation Plans
- Actions for NRC

Common Q Project Overview

- **Purpose:**

- » Obtain favorable NRC SER for the Advant 160 PLC (programmable logic controller) for safety applications

- **Completed Status:**

- » Submit topical report to NRC, addressing PLC platform qualification for safety related applications (7/99)
- » Document compliance to EPRI PLC specification (6/99)
- » Document supplemental environmental qualification (10/99)

Common Q Project Overview

- **Planned Activities:**

- » NRC completes draft SER (11/99)
- » Receive SER on Topical Report (2/00)
- » Submit additional EQ information (3/00)
- » Revise Topical Report (Rev 01) and submit (4/00)
- » Receive SER on Rev 1 Topical Report (7/00)

Common Q Topical Report Overview

- **Generic PLC platform description**
 - » Hardware, software, failure modes
 - » Software & hardware change management
- **Qualification to EPRI TR-107330 Requirements**
- **Appendices describing applications to:**
 - » CEOG RPS, PPS, ESFAS, CPCS, PAMS
 - » Generic Plant-wide Integrated Solution
- **Establishes review process for additional applications via Integrated Solution**

NRC/CEOG Senior Management Meeting

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Interactions with NRC

- **Challenges:**
 - » New lead reviewer assigned
 - » NRC review fees greater than estimate
 - » Final SER schedule uncertain
- **Strengths:**
 - » 8 meetings with NRC since April (1-2 days long)
 - Numerous phone calls
 - Positive working relationship
 - » New reviewers have come up to speed
 - » NRC holding to latest schedule commitments
 - Draft SER expected 11/99

NRC/CEOG Senior Management Meeting

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Common Q Application Development

- Work begins in 11/99 and scheduled to complete by 7/01:
 - › Completes EQ of equipment
 - › Flat panel displays (generic)
 - › Post accident monitoring system
 - › Core protection calculator system
 - › Builds, tests prototype systems

- CEOG plant system installations planned beginning in 2001

Common Q - Implementation

- CEOG utilities plan to implement Common Q applications beginning in 2001
 - › PAMS: BG&E, FPL and Entergy (WSES)
 - › CPCS: APS, Entergy (WSES)
 - › Common Q Power Supplies & Flat Panel Display: Entergy (ANO)

- Letters have been issued to NRC from the CEOG and BGE expressing the significance of this project

Requested Action

- Firm commitments to schedules:
 - › Draft SER on Topical Report (rev 00) by 11/99
 - › Final SER on PLC platform including system appendices by 2/00
 - › Submit additional EQ information by 3/00
 - › Revise Topical Report (Rev 01) and submit by 4/00
 - › Receive SER on Rev 1 Topical Report by 7/00
- Discuss impact of changing reviewers

Pressure Temperature Limits Report

- Background
- Current Status
- Actions for NRC

PTLR - Background

- CEOG developed the generic Pressure Temperature Limits Report (PTLR) which eliminates PT, LTOP, and material limits from the Technical Specifications
- OPPD lead plant submittal (1/98)
- NRC questions received (3/99)
- Topical Report revised and re-submitted (5/99)
- July 13 meeting with NRC to close open issues
- Numerous conference calls on RAIs from March - September

NRC/CEOG Senior Management Meeting

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Pressure Temperature Limits Report

- **Current Status**
 - » After several rounds of questions NRC suggested that OPPD withdraw topical report
 - Report not accepted for review (OPPD subsequently withdrew Rev 3)
 - Communications and expectations unclear by all
 - Surprised to learn that the multiple rounds of questions were part of 'acceptance review' process
 - » PTLR revised to address all known NRC questions
 - » Project on-hold pending Management Committee direction and authorization

NRC/CEOG Senior Management Meeting

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Pressure Temperature Limits Report

- **Plan (subject to Management Committee Action)**
 - » **Submit Rev 4 as CEOG Generic Report**
 - **Meet with NRC to reach agreement on all changes before submitting the report (3/00)**
 - **Address any final NRC comments and submit report for NRC review (4/00)**
 - **Receive SER and issue report as CE NPSD 683 Rev 4-A**

Requested Action

- **Recognition of process and review expectations for technical and administrative changes**
- **Regarding PTLR...**
 - » **Request meeting with NRC prior to submittal of Rev 4 to determine the acceptance of PTLR**
 - » **Support review, approval of Rev 4 consistent with CEOG utility implementation plans**

Risk Informed Initiatives

**CEOG/NRC Senior Management Meeting
November 18, 1999**

CEOG/NRC Senior Management Meeting

Risk Informed Initiatives

- **Topics for Discussion:**

- » **RCP Seal Integrity**
- » **Regulatory Credit for CEOG PSA Cross Comparisons and Certification**
- » **SERs for PSA Joint Applications Reports**
- » **Risk Informed Applications Outside of 10 CFR 50**
- » **Challenges for Maintenance Rule Implementation**

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RCP Seal Integrity

- **CEOG provided extensive presentations to the NRC and ACRS on RCP seal integrity**
 - seal design
 - off normal operating experience
 - test results
- **Zero seal failures; all leakage within SBO capability**
- **Staff recognizes robust design of CEOG seals**
 - expected leakage under loss of cooling may be small
- **NRC closing GI-23 through plant specific reviews**
 - applied "Rhodes" model to evaluate seal integrity
 - CEOG believes Rhodes model not correct for CE plants

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RCP Seal Integrity

- **Applying wrong seal model to CEOG plants negatively impacts maintenance rule, oversight process and PSA applications**
- **CEOG approved a task to develop a detailed model of the RCP seals**
 - mechanistic and PSA based model
 - similar to WOG model per NRC suggestion
- **Report and model to be completed by July 2000**
 - submit for NRC review and approval
- **CEOG requests a meeting with the NRC (12/99)**
 - agreement on depth of modeling details

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Regulatory Credit for CEOG PSA Cross Comparisons

- Cross Comparison of PSA results ongoing for four years
 - global
 - application specific
- Provides insight into plant and modeling differences
 - resolve modeling differences
- Process enhanced by PSA Peer Reviews (Certification)
- Provides a mechanism to increase the quality of PSAs
- Provides assurance of the robustness and technical adequacy of a PSA insight for specific applications
- Cross Comparison referenced in NRC Regulatory Guide
- CEOG requests engagement of NRC Staff on means to better utilize PSA cross comparisons to address overall quality

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SERs for PSA Joint Applications Reports

- CEOG has submitted six PSA Joint Applications Reports (JARs)
 - compilation of plant specific analyses results, methods, differences, for a specific PSA application
- JARs on safety injection tanks, low pressure safety injection, and emergency diesel generator never received SERs
 - pilot plant SER issued
 - requirements for other plant license amendment approvals not clear
- Remaining JARs to have SERs issued
 - request NRC to identify additional plant specific information required to facilitate approval of license amendments
 - identify applicability of SER to plants referenced in JAR

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Risk Informed Applications Outside of 10 CFR 50

- NRC is pursuing to risk inform 10 CFR Part 50
 - Option 2 - treatment of non-risk significant equipment
 - Option 3 - treatment of risk and non-risk significant equipment
- Risk informing 10 CFR Part 50 an important longer term initiative with rulemaking
- On-going risk informed applications must continue to receive priority
 - further ingrains a risk informed culture
 - demonstrates benefits now
 - increases the quality of the PSA and supporting technology
- Request that the NRC provides sufficient resources to review and approve incremental risk informed applications

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Challenges for Maintenance Rule Implementation

- Maintenance Rule A(4) incorporates a requirement to perform a risk assessment prior to performing maintenance
- PSA modeling and assumptions may affect regulatory interpretations, for example
 - update of initiating event frequencies for equipment out of service
 - acceptability of contingencies
- CEOG requests engagement of NRC staff
 - develop mutual understanding of utility implementation and NRC inspection expectations - details

CEOG/NRC Senior Management Meeting

November 18, 1999

CEOG Year 2000 Activities Report

**Jim Wright (BGE), Chairman
CEOG Y2K Task Force**

November 18, 1999

CEOG/NRC Senior Management Meeting

Topics

- **CEOG Y2K Systems Preparations**
 - **Inventory - Phase 1**
 - **Detailed Assessment - Phase 2**
 - **Remediation - Phase 3**

- **CEOG Y2K Millennium Changeover Preparations**
 - **Y2K Korea Link**
 - **ABB Support Center**

- **CEOG Y2K Task Force**

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Phase 1: Inventory & Preliminary Assessment

- **Inventory Scope:**
 - Included on-line, off-line computer systems & analysis codes provided by ABB
 - Initial assessment & categorization of software/ systems
- **Schedule:**
 - February, 1998 - May, 1998
- **Results:**
 - 27 on-line systems
 - 4 off-line Systems
 - 245 analysis codes

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Phase 2: Detailed Assessment

- **Detailed Assessment Scope:**
 - Prioritized, performed system assessments to support utilities outage schedules
 - Defined system contacts and system boundaries
 - Prepared testing guidelines, as required
- **Schedule:**
 - June, 1998 - October, 1998
- **Results:**
 - Assessed 23 on-line Systems and 4 off-line systems
 - found 2 (monitoring systems) systems that required remediation

No safety or control issues found in CEOG systems, software that would interrupt plant operation due to Y2K

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Phase 3: Remediation

- Remediation Scope:
 - » CEA position display system (CEAPDS) testing
- Schedule:
 - » December, 1998 - June, 1999
- Results:
 - » Technical Specification timer software required fix to make Y2K ready

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Y2K Korea Link

- Purpose: Observe any millennium change problems at YGN 3/4 and report problems to USA
- Scope:
 - » deploy small ABB, utility team to observe millennium changeover in Korea
 - I&C, operations expertise
 - » distribute information in USA to CEOG utility contacts through ABB Y2K support center
 - ABB plant RSMs will also receive all information

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Y2K Korea Link

- **Schedule:**
 - › **ABB; utility team staff departs for Korea by 12/27/99**
 - on station in Korea through 1/7/00 (TBD - based on problems to be resolved)
 - › **ABB Windsor Y2K support center staffed beginning 12/31/99**
 - on station through 1/3/00 (TBD)
- **No direct interface with NRC has been requested**
 - › **NRC will rely on direct interface with Korean Regulators**
 - › **NRC YEWS is available to monitor and volunteer information**

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CEOG Y2K Task Force

- **Purpose: CEOG utility / ABB Task force to respond to Y2K issues associated / related to systems and software supplied by ABB**
 - › **CEOG utility members named to Y2KTF formed in June, 1998**
 - › **effective key contacts working with ABB to complete inventory, detailed assessment projects in 1998**
- **Current status:**
 - › **standing by to respond to millennium changeover Y2K issues**
 - › **integral part of ABB Y2K contact / communication plan**
- **Schedule:**
 - › **Task Force will remain in place through March, 2000, or longer if required**

CEOG/NRC Senior Management Meeting

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CEOG Topical Reports Under NRC Review

Topical Report Number and Title	Submittal Date and Ref. memo	Lead Plant and Review Priority	NRC Lead; TAC No.	Review Status and Comments
CE NPSD-1157 <i>Elimination of PASS Requirements (Task 1072)</i> Schneider x-3962; Lurie x-9263	5/5/99 CEOG-99-137	ANO-2 – High	Jim O'Brien- 415-2919; MA5661	Fed Register notice for public comment pending. SER scheduled by 2/18/00.
CE NPSD-1041 <i>Joint Application for HPSI System Technical Specification Modifications (Task 849)</i> Schneider x-3962; Hijeck x-3115	3/11/98 CEOG-98-117	WSES-3 – High	N. Gilles 415-1180; MA1555	CEOG and licensees have requested a coordinated review of the reports and facility license amendments. NRC / Windsor conference call ~12/01 to review closeout actions. SER target = 1/15/00.
CE NPSD-1045 <i>Joint Applications Report for Modifications to the CS and LPSI Technical Specifications (Task 849)</i> Schneider x-3962; Hijeck x-3115	4/6/98 CEOG-98-155	APS – High	N. Gilles 415-1180; MA1956	CEOG and licensees have requested a coordinated review of the reports and facility license amendments. SER target 11/30/99.
CE NPSD-911 & Amendment 1 <i>Analysis of Moderator Temperature Coefficients in Support of a Change in the Technical Specifications End-of-Cycle Negative MTC Limit (Task 1009)</i> J. Brown x-5575; Hijeck x-3115	12/9/94, W3F1-94-0131 12/20/94, CEOG-94-714	WSES-3 – Low	M. Chatterton 415-2889; MA3781	Reviewed RAIs in conference call with WSES-3, Windsor & NRC on 10/25/99. Need statement on applicability of topical to other organizations to complete SER. SER target < 12/31/99.
CENPD-396-P, CE-CES-195-P <i>Common Q Platform Qualification and System Appendices 1-4, (Task 1067)</i> Collette x-9272; Stofko x-9284 Lurie x-9263	7/2/99 LD-99-040	Joint Application Report – High	K. Mortensen 415-2915; MA1677	Phase 2: Issue draft SER by 11/30/99; final SER by 2/29/00. Phase 3: EQ of additional equipment to be completed by 3/31/00. CEOG to submit revised Topical Report, SPM and Appendices by 4/30/00. Phase 3 SER target is 7/31/00.

CEOG Topical Reports Under NRC Review

Topical Report Number and Title	Submittal Date and Ref. memo	Lead Plant and Review Priority	NRC Lead; TAC No.	Review Status and Comments
<p>CENPD-388-P <i>Extension of the 1 Pin Burnup Limited to 65 MWd/kgU for ABB PWR Fuel with OPTIN Cladding (Task 1010)</i> G.Smith 687-8070; Lurie x-9263</p>	<p>2/16/98 CEOG-98-069</p>	<p>WSES-3 – High</p>	<p>M. Chatterton 415-2889; MA1058</p>	<p>Staff waiting CEOG response on clad oxidation found at BGE on aggressively burned fuel. CEOG submit schedule = TBD. SER schedule = TBD + 1 month.</p>
<p>CE NPSD-1167, Rev 01 <i>Elimination of Pressure Sensor Response Time Testing Requirements (Task 1070)</i> D.McQuade x-4653; Lurie x-9263</p>	<p>9/30/99 CEOG-99-304</p>	<p>BG&E, APS – Medium</p>	<p>P. Loeser 415-2825; MA6010</p>	<p>SER schedule = 1/31/00.</p>
<p>CE NPSD-1168 <i>Joint Applications Report for Risk Informed TS changes Containment Isolation Valves AOT Extension. (Task 849)</i> Schneider x-3962; Hijeck x-3115</p>	<p>7/27/99 CEOG 99-239</p>	<p>SCE – High</p>	<p>R. Lobel 415-2865; M.Wohl 415-1180; MA6288</p>	<p>CEOG has requested a coordinated review of the report and facility license amendments. SER schedule governed by PRA branch workload; SER target < 4/30/00.</p>

CEOG Topical Reports Under Development

Topical Report Number and Title	Submittal Date and Ref. memo	Lead Plant and Review Priority	NRC Lead; TAC No.	Review Status and Comments
<i>Risk-Informed AOT Extension Tech Spec Changes for One DC Power System Out of Service (Task 849)</i> Schneider x-3962; Hijeck x-3115	12/31/99	SCE – High	N. Gilles 415-1180	CEOG topical report to be submitted.
<i>Global Risk-Informed Tech Spec Changes to 3.0.3 Actions (Task 1115)</i> Schneider x-3962; Hijeck x-3115	12/31/99	SCE – High	TBD	CEOG topical report to be submitted.
<i>Global Risk-Informed Tech Spec Changes to Mode Restraints (i.e., modes 5 to 4 to 3) (Task 1115)</i> Schneider x-3962; Hijeck x-3115	N/A	SCE – High	TBD	CEOG topical report to be submitted.
<i>Global Risk-Informed Tech Spec Changes to Safe Mode End State (i.e., mode 4 to 5) (Task 1115)</i> Schneider x-3962; Hijeck x-3115	12/31/99	SCE – High	TBD	CEOG topical report to be submitted.
CE NPSD-683, Rev. 04 <i>Development of a RCS Pressure Temperature Limits Report for the Removal of P-T Limits and LTOP Requirements from the Technical Specifications (Task 1120)</i> T.Sowers x-3146; Molnar x-5205; Lurie x-9263	3/2000	TBD –	TBD	Meeting with NRC planned to determine suitability of information to be provided in Rev 04.
<i>Low Alloy Steel Analyses to Support A600/A690 Nozzle Repairs (Task 1131)</i> J.Hall x-4762; Lurie x-9263	6/2000	TBD –	TBD	Topical report will reference similar analyses on docketed submittals. SER requested by 12/00.

CEOG Topical Reports Under Development

Topical Report Number and Title	Submittal Date and Ref. memo	Lead Plant and Review Priority	NRC Lead; TAC No.	Review Status and Comments
RCP Seal Failure Model (Task 1136) D.Finnicum x-3926; Hijeck x-3115	7/07/2000	TBD -	TBD	Meeting with NRC to be held to discuss planned failure model.

CEOG Topical Reports Completed or Awaiting Implementation

Topical Report Number and Title	Submittal Date and Ref. memo	Lead Plant and Review Priority	NRC Lead; TAC No.	Review Status and Comments
CE NPSD-994 <i>Joint Applications Reports for SIT AOT Extensions (Task 836)</i> Schneider x-3962; Hijeck x-3115	7/10/95	SCE – High	N. Gilles 415-1180; M92981	Review completed, SER issued. SIT AOT change license amendments issued.
CE NPSD-995 <i>Joint Applications Reports for LPSI AOT Extensions (Task 836)</i> Schneider x-3962; Hijeck x-3115	7/10/95	SCE – High	N. Gilles 415-1180; M92981	Review completed, SER issued. LPSI AOT change license amendments issued to lead plant (SCE) 9/98. NRC waiting other CEOG members to submit revised license amendments.
CE NPSD-996 <i>Joint Applications Reports for EDG AOT Extensions (Task 836)</i> Schneider x-3962; Hijeck x-3115	7/10/95	SCE – High	N. Gilles 415-1180; M92981	Review completed, SER issued. EDG AOT change license amendments issued to lead plant (SCE) 9/98. NRC waiting other CEOG members to submit revised license amendments.
CE NPSD-1085 <i>CEOG Response to NRC GL 97-01, Degradation of CEDM Nozzle and Other Vessel Closure Head Penetrations (Task 992)</i> J. Hall x-4762; Lurie x-9263	7/97	All CEOG members – High	Jim Medoff 415-2715; MA0203	Review complete; vessel head penetration issue closed based on J. Strosnider (NRC) letter to D. Modeen (NEI) dated 3/21/99.
CE NPSD-951, Rev 01 <i>Reactor Trip Circuit Breakers Surveillance Frequency Extension (Task 787)</i> Paggen x-4700; Hijeck x-3115	7/17/96, Letter W3F1-96-0004	WSES-3 – Medium	I.Ahmed 415-3252; M96366	Review completed and SER issued in June 1999. Approved version of Topical Report issued.

ABB Topical Reports Under NRC Review

Topical Report Number and Title	Submittal Date and Ref. memo	Lead Plant and Review Priority	NRC Lead; TAC No.	Review Status and Comments
CENPD-132, Supplement 4-P <i>Calculative Methods for the ABB CENP Large Break LOCA Evaluation Model</i> Jageler x-2289; Molnar x-5205	4/30/99 LD-99-026	ANO-2 – TBD	Yi-Hsiung Hsui 415-2877; MA5660	RAIs expected by 12/31/99. SER target = 10/31/00 (ABB), 12/31/2000 (NRC).
CENPD-387-P <i>ABB Critical Heat Flux Correlations for PWR Fuel</i> Karoutas 687-8059; Joffre 687-8062	Prop = 6/30/99 LD-99-038 NonP = 7/15/99 LD-99-043	BG&E – TBD	Tony Attard 415-2808; MA6109	SER target = 2/01/00.
CENPD-390-P <i>The Advanced PHOENIX and POLCA Codes for Nuclear Design of Boiling Water Reactors</i> D.E-Koeing 687-8018; B.Harris -8014	4/15/99 LD-99-023	WNP-2 – TBD	Tony Uises 415-1194; MA5659	RAIs expected by 11/12/99. SER target = 4/00.
CENPD-392-P <i>10x10 SVEA Fuel Critical Power Experiments and CPR Correlations: SVEA-96</i> D.E-Koeing 687-8018; B.Harris -8014	5/28/99 LD-99-031	WNP-2 – TBD	Tony Attard 415-2808; MA5999	SER target = 4/00.
CENPD-397-P <i>Improved Flow Measurement Accuracy using CROSSFLOW Ultrasonic Flow Measurement Technology.</i> Doney x-3400; Molnar x-5205	8/23/99 LD-99-047	Duane Arnold – High	I. Ahmed 415-3252; input from SRXB; MA6452	RAIs rec'd 10/26 & 11/01/99. Conf call to discuss RAIs held 10/28 & 11/05/99. RAI responses = 11/24/99 target. SER target = 1/1/00 (ABB); 3/20/00 (NRC).

**GENERIC SAFETY ISSUE 165
" SPRING-ACTUATED SAFETY AND RELIEF VALVE RELIABILITY"**

PURPOSE:

To provide information to the CEOG regarding the resolution of GSI 165.

BACKGROUND:

- GSI 165 was identified after a spring-actuated relief valve at Shearon Harris significantly degraded the function of the high head safety injection system.
- Primary generic concern was that there could potentially be diversion of sufficient system flow to degrade the function of some emergency core cooling systems (ECCS).
- GSI 165 was prioritized "HIGH", both due to safety significance and estimated cost for additional reliability.
- During issue resolution, it was found that Shearon Harris was somewhat unique, and that HPSI in certain CE plants represented the worst case configurations, in terms of number and size of valves.
- Due to the low probability of failure of both trains of ECCS, even the limiting CE configurations were determined to result in an acceptable increase in core damage frequency (CDF).
- Based on the results of probabilistic safety assessment (PRA) studies and the recent improvements made to the ASME inservice testing requirements, GSI 165 was resolved without any new regulatory requirements.

CONCLUSION:

The NRC staff is providing a copy of the GSI 165 final resolution documentation to the CEOG. The staff believes this information may benefit CE plant licensees in determining possible improvements in configuring and/or operating certain plant systems to reduce vulnerabilities of relief valve malfunctions.

Mail Envelope Properties (3874B530.493 : 16 : 18743)

Subject: DIST: Of Meeting Sum Held on 11/18/99 with Combustion Engineering
Owners Group Executive Committee

Creation Date: Thu, Jan 6, 2000 10:30 AM

From: Ann Murtha

Created By: OWFN_DO.OWF4_PO:AXM3

Recipients	Action	Date & Time
Post Office OWFN_DO.owf2_po CGH (Charles Hammer) DWS (Deirdre Spaulding) ECM (Evangelos Marinos) FMR (F. Mark Reinhart) GMH (Gary Holahan) JSW1 (Jared Wermiel) KRW (Keith Wichman) RHW (Richard Wessman) SCB (Suzanne Black) WKM (W. Keith Mortensen)		
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OWFN_DO.owf2_po	Pending	OWFN_DO.owf2_po
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Files	Size	Date & Time
mts1118a.wpd	52879	Thursday, January 6, 2000 10:23 AM
MESSAGE	790	Thursday, January 6, 2000 10:30 AM

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