

APPLICANT: Tennessee Valley Authority (TVA)

December 13, 1994

FACILITY: Watts Bar Unit 1

SUBJECT: MEETING SUMMARY - NOVEMBER 29, 1994 MANAGEMENT MEETING (TAC M72494)

REFERENCE: Meeting notice by P. S. Tam, November 9, 1994

On November 29, 1994, NRC and TVA representatives met at the Watts Bar site, Spring City, Tennessee, to discuss the problems, concerns and needed actions associated with construction and licensing of Watts Bar Nuclear Plant, Unit 1. Enclosure 1 is a list of meeting participants and observers. Enclosures 2 is TVA's handout material.

This meeting is a sequel to an October 19, 1994 management meeting (see meeting summary dated November 1, 1994). During the meeting on October 19, TVA participants discussed their corrective actions for eight items previously discussed, and the underlying generic or root causes. The staff emphasized that TVA should validate open item packages before sending them to the NRC inspection staff.

Before the November 29, 1994 meeting, TVA had submitted a letter (dated November 14, 1994), describing in detail the changes that have been instituted to address the problems discussed in the October 19, 1994 meeting. TVA participants said they are still working at assuring that management expectations reach all levels of TVA organization and are carried out by the workers. TVA's presentation, as outlined in Enclosure 2, provides additional details.

TVA also briefed the staff on the recently completed integrated safeguards testing which TVA characterized as acceptable. TVA participants also said that the second hot functional test would not occur until after most systems were turned over.

Participants agreed that the next management meeting will take place in NRC's office in Atlanta on January 12, 1995.

Original signed by
Peter S. Tam, Senior Project Manager
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosures: 1. Participants and observers list
2. TVA Slides

cc w/Enclosure 1: See next page

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DATE	12/7/94		12/8/94		12/12/94		12/8/94		12/13/94
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DATE	/94		/94						

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LIST OF PARTICIPANTS AND OBSERVERS

MANAGEMENT MEETING AT NRC

SPRING CITY, TENNESSEE

November 29, 1994

<u>Name</u>	<u>Affiliation</u>
Michael Alexander	TVA
T. Arrington	Stone & Webster
Massoud Bajestani	TVA/Watts Bar Startup Manager
Paul R. Baron	TVA/NA&L
Patrick Carier	TVA/Corporate Licensing
Frank Cason	TVA/Media Relations
Doug Davis	WAYA-WDNT, Dayton, Tennessee
Stew Ebnetter	NRC/Region II
Walt Elliott	TVA/Engineering
Mike Fecht	TVA
Paul Fredrickson	NRC/Region II
Linda Gibbs	TVA/Watts Bar Site Licensing
Mike Glasman	NRC/Region II
R. L. George	TVA
Ann Harris	--
K. N. Harris	TVA (consultant)
Tony Harrison	TVA
Roger Hawkins	WMYU
Ernie Hazera	General Accounting Office/Washington D.C.
Frederick Hebdon	NRC/NRR/Project Directorate II-4
Randall Higgins	Chattanooga Times
Allen Howe	NRC/NRR/Inspection Program Branch
John Hunt	General Accountign Office/Atlanta
Ken Ivey	NRC/Region II
Johns Jaudon	NRC/Region II
Caudle Julian	NRC/Region II
Dave Kehoe	TVA
Oliver Kingsley	TVA/President, TVA Nuclear
M. Lalor	Tva/Watts Bar
Julio Lara	NRC/Region II
Barbara Martocci	TVA/Public Relations
Gil McClanahan	Channel 8, Knoxville
Tom McGrath	TVA
Mark Medford	TVA/Corporate Office
R. G. Mende	TVA/Operations
Victor Miller	Chattanooga Free-Press
Paul P. Narbut	NRC/NRR/Special Inspection Branch
Dwight Nunn	TVA/New Plant Completion
P. E. Olson	TVA
K. J. Parrish	TVA/Nuclear Assurance and Licensing
Mark Peranich	NRC/Region II
Joyce Proffitt	Meigs County government
Rick Purcell	TVA/Watts Bar Plant Manager

ENCLOSURE 1

J. R. Ratliff	TVA/Nuclear Power
William Russell	NRC/Office of Nuclear Reactor Regulation
John Scalice	TVA/Watts Bar Site Vice President
Bruce Schofield	TVA/Watts Bar Site Licensing
John Simmons	TVA (Raytheon)
Mike Singh	TVA
Mike D. Skaggs	TVA/Manager of Projects
**Steve Smith	-----
Larry Spiers	TVA/Watts Bar Site QA Manager
David Stone	The Daily Post - Athenian
Peter Tam	NRC/NRR/Project Directorate II-4
Jesse Tinsley	News-Sentinel
Glenn Tracy	NRC/Office of Executive Director
Kim Van Doorn	NRC/Region II
Frank Varga	F & K Enterprises, Inc.
Kathy Varga	F & K Enterprises, Inc.
Steve Varga	NRC/NRR/Division of Reactor Projects I & II
Martha Vauter	General Accounting Office/Atlanta
Edward J. Vigluicci	TVA/OGC
R. Wiggall	TVA/Watts Bar
Bob Williams	TVA
Michelle Williams	Associated Press
O. V. Zeringue	TVA
*John -----	Chattanooga Time

*Cannot read last name

**Cannot read affiliation

WATTS BAR NUCLEAR PLANT

cc:

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NRC/TVA
MANAGEMENT MEETING
WATTS BAR NUCLEAR PLANT

NOVEMBER 29, 1994

AGENDA

- I. OPENING REMARKS O. KINGSLEY

- II. MANAGEMENT REVIEW & CORRECTIVE ACTION EFFORTS
 - A. INTRODUCTION & OVERVIEW D. NUNN

 - B. STATUS OF LINE VALIDATION EFFORTS D. NUNN/
R. GEORGE

 - C. STATUS OF NUCLEAR ASSURANCE EFFORTS R. BARON

 - D. CONCLUSION D. NUNN

- III. OPERATIONAL READINESS J. SCALICE
 - A. STATUS OF INTEGRATED TEST SEQUENCE M. BAJESTANI

 - B. CONDUCT OF OPERATIONS R. PURCELL

INTRODUCTION & OVERVIEW

D. NUNN

INTRODUCTION & OVERVIEW

- **CONSTRUCTION DEFICIENCIES IDENTIFIED**
- **ANALYSIS OF DEFICIENCIES PERFORMED**
- **PRESENTED FINDINGS & CAUSES DURING OCTOBER 19, 1994 MEETING**
- **FOLLOWING OCTOBER 19 MEETING, TVA MANAGEMENT REEVALUATED THE FINDINGS & CAUSES**
- **CONCLUSION: TWO PRIMARY CAUSES WITH ASSOCIATED CONTRIBUTING CAUSES**

PRIMARY & CONTRIBUTING CAUSES

PRIMARY CAUSES:

- (1) MANAGEMENT'S FAILURE TO PROVIDE A MORE BALANCED ALLOCATION OF MANAGEMENT ATTENTION AND RESOURCES**

- (2) MANAGEMENT'S FAILURE TO CONSISTENTLY ESTABLISH EXPECTATIONS AND HOLD PERSONNEL INDIVIDUALLY ACCOUNTABLE FOR THEIR WORK**

CONTRIBUTING CAUSES:

- (1) MANAGEMENT/SUPERVISORY PROCESS**

- (2) WORK PRACTICES**

- (3) DESIGN INTERFACE/EQUIPMENT CONDITIONS**

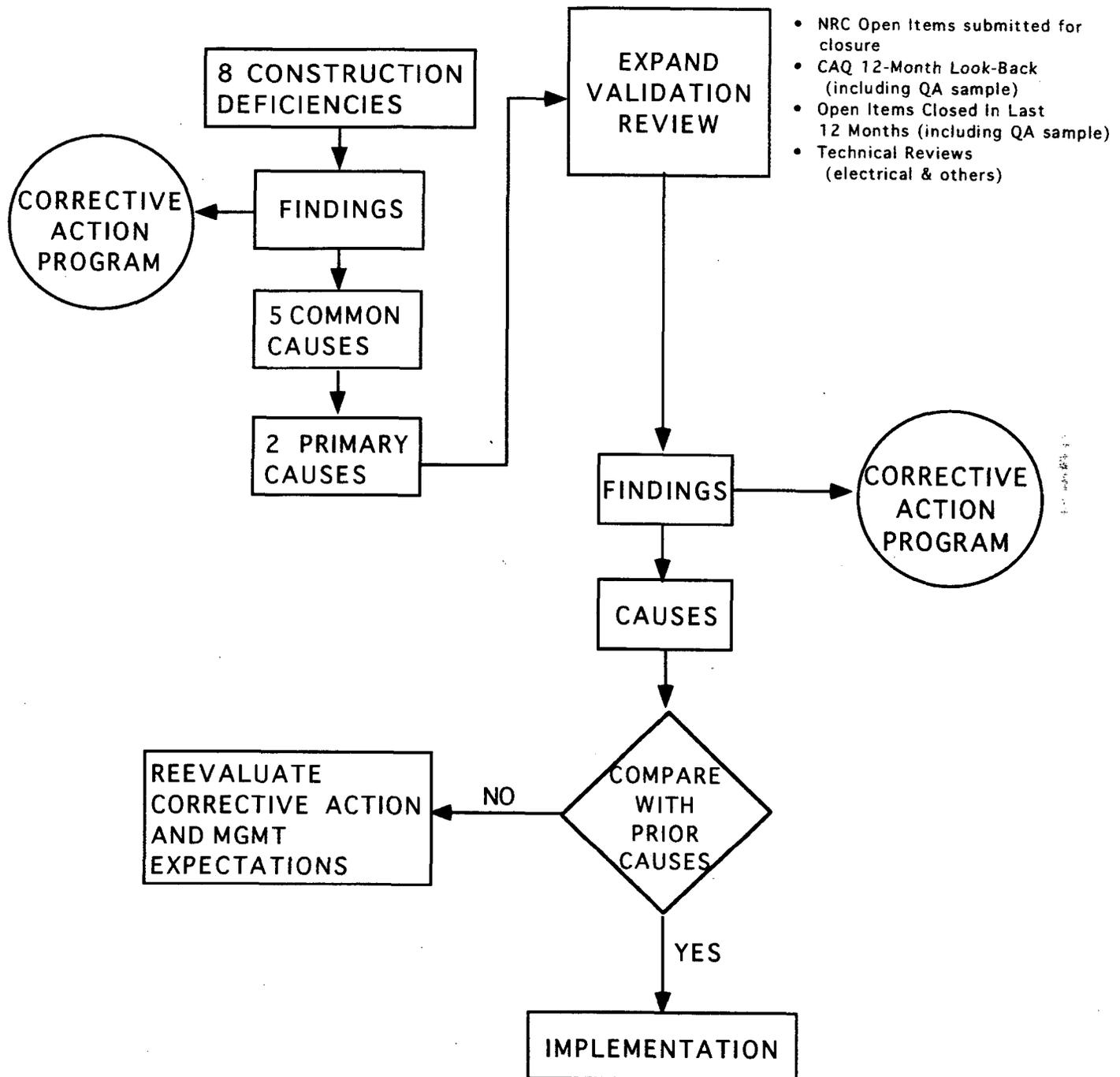
- (4) TRAINING**

CORRECTIVE ACTIONS

- **CORRECTIVE ACTIONS AND VALIDATION EFFORTS COMMUNICATED TO NRC DURING OCTOBER 19, 1994 MEETING AND LETTER DATED NOVEMBER 14, 1994**

- **CORRECTIVE ACTIONS AND VALIDATION EFFORTS PROCEEDING AS SCHEDULED**

OVERVIEW OF EVALUATION PROCESS



CORRECTIVE ACTIONS FOR PRIMARY CAUSES

1. **CAUSE: MANAGEMENT'S FAILURE TO PROVIDE A MORE BALANCED ALLOCATION OF MANAGEMENT ATTENTION AND RESOURCES**

CORRECTIVE ACTION:

- **SENIOR MANAGEMENT OVERSIGHT/FOCUS BALANCED TO ADDRESS BOTH CONSTRUCTION & STARTUP PRIORITIES**
 - **O. ZERINGUE PROVIDES ADDITIONAL OVERSIGHT OF OPERATIONS/STARTUP**
 - **IN PLACE**
 - **M. MEDFORD ASSISTS IN LICENSING INTERFACE & STRENGTHEN NUCLEAR ASSURANCE**
 - **IN PLACE**
 - **ADDITIONAL SENIOR MANAGEMENT OVERSIGHT ALLOWS D. NUNN TO FOCUS MORE FULLY ON ENGINEERING AND MODIFICATIONS**

CORRECTIVE ACTIONS FOR PRIMARY CAUSES

(continued)

1. **CAUSE:** MANAGEMENT'S FAILURE TO PROVIDE A MORE BALANCED ALLOCATION OF MANAGEMENT ATTENTION AND RESOURCES

CORRECTIVE ACTION:

- **RESOURCE ENHANCEMENTS**
 - **R. BARON ON-SITE FULL TIME TO PROVIDE ADDITIONAL NUCLEAR ASSURANCE AND LICENSING MANAGEMENT SUPPORT**
 - **IN PLACE**

 - **ADDITIONAL EXPERIENCED QA MANAGERS BROUGHT FROM BROWNS FERRY AND CORPORATE**
 - **IN PLACE**

 - **CORPORATE ENGINEERING CHIEFS AVAILABLE SEVERAL DAYS EACH WEEK TO ASSIST WBN ENGINEERING**
 - **IN PLACE**

CORRECTIVE ACTIONS FOR PRIMARY CAUSES

(continued)

2. **CAUSE:** MANAGEMENT'S FAILURE TO CONSISTENTLY ESTABLISH EXPECTATIONS AND HOLD PERSONNEL INDIVIDUALLY ACCOUNTABLE FOR THEIR WORK (OWNERSHIP)

CORRECTIVE ACTION:

- **REINFORCE MANAGEMENT EXPECTATIONS CONCERNING LINE ACCOUNTABILITY**
 - **CONDUCT SPECIAL MEETINGS TO COMMUNICATE EXPECTATIONS AND OWNERSHIP**
 - **17 MEETINGS COVERING 2,400 EMPLOYEES**
 - **CONTINUE TO REINFORCE EXPECTATIONS AT ALL LEVELS AND EXERCISE FULL RANGE OF ACCOUNTABILITY MEASURES**
 - **EXAMPLES: (1) HOUSEKEEPING, (2) BREAKERS**
 - **NUCLEAR ASSURANCE REVIEWS OF LINE CORRECTIVE ACTIONS ASSIST IN REINFORCING MANAGEMENT EXPECTATIONS**
 - **UPGRADED PARTICIPATION BY MANAGEMENT REVIEW COMMITTEE**
 - **MANAGEMENT MEETINGS WITH LINE OWNERS OF OPEN ITEMS TO REINFORCE ACCOUNTABILITY**

CORRECTIVE ACTIONS FOR PRIMARY CAUSES

(continued)

2. **CAUSE:** MANAGEMENT'S FAILURE TO CONSISTENTLY ESTABLISH EXPECTATIONS AND HOLD PERSONNEL INDIVIDUALLY ACCOUNTABLE FOR THEIR WORK (OWNERSHIP)

CORRECTIVE ACTION:

- SINGLE POINT OF ACCOUNTABILITY
 - ESTABLISHED FOR OPEN ITEMS AND CAQs
 - IN PLACE

 - ESTABLISHED FOR MAJOR CAPs/SPs (FORMAL TEAM WITH TEAM LEADER)
 - IN PLACE

OVERVIEW OF VALIDATION EFFORTS

VALIDATION EFFORTS DESIGNED TO:

- **ASSESS WHETHER OTHER AREAS ARE IMPACTED BY CAUSES**
- **ASSESS WHETHER ANY OTHER DEFICIENCIES SUGGEST ADDITIONAL CAUSES**

VALIDATION EFFORTS:

- **"RE-LOOK" EFFORT -- REVIEW OF PAST**
 - **LINE REVIEW OF CLOSED CAQs OVER PAST 12 MONTHS**
 - **LINE REVIEW OF OPEN ITEMS CLOSED BY NRC OVER PAST 12 MONTHS**
 - **NUCLEAR ASSURANCE SAMPLING (10%) OF THE LINE REVIEW OF CLOSED CAQs & OPEN ITEMS OVER LAST 12 MONTHS**
 - **LINE REVIEW OF 40 ITEMS SUBMITTED FOR CLOSURE BY NRC**
- **TECHNICAL REVIEWS -- REVIEW OF PAST & PRESENT**
 - **ELECTRICAL AREA: REVIEW FROM ENGINEERING DESIGN THROUGH FIELD INSTALLATION**
 - **SELECTED ASPECTS OF MECHANICAL AND CIVIL DESIGN AND INSTALLATION**

**STATUS OF
LINE VALIDATION EFFORTS**

D. NUNN/R. GEORGE

**"RE-LOOK" EFFORT
100% LINE REVIEW OF CLOSED CAQs**

**PURPOSE: TO ASSESS EXTENT OF IMPACT ON OTHER PLANT
AREAS AND TO FURTHER VALIDATE CONCLUSIONS
REGARDING COMMON CAUSES & RESOLUTION
ACTIONS**

SCOPE OF REVIEW

- APPROXIMATELY 800 CAQs FOR LAST 12 MONTHS
- CORRECTIVE ACTIONS IN PLACE
- RECURRENCE CONTROLS EFFECTIVE

STATUS OF REVIEW

- 743 (APPROXIMATELY 90%) COMPLETE
- COMPLETION SCHEDULED FOR 12/15/94
- APPROXIMATELY 32/82 REVIEWED AS PART OF QA SAMPLING

"RE-LOOK" EFFORT
100% LINE REVIEW OF CLOSED CAQs
(continued)

FINDINGS TO DATE

- **84 CAQs SUPPLEMENTED DUE TO ADMINISTRATIVE ERRORS AND CLARIFICATION**

- **56 CAQs IDENTIFIED AS CLOSED WITH FIELD WORK COMPLETE; ENGINEERING CLOSURE PROCESS ONGOING**

- **2 HARDWARE ISSUES**
 - **CAUTION TAG MISSING FROM INTAKE PUMPING STATION EMBEDMENTS**

 - **SUPPORT NOT INSTALLED TO CORRECT DIMENSIONS**

**"RE-LOOK" EFFORT
100% LINE REVIEW OF CLOSED NRC OPEN ITEMS**

PURPOSE: TO ASSESS EXTENT OF IMPACT ON OTHER PLANT AREAS AND TO FURTHER VALIDATE CONCLUSIONS REGARDING COMMON CAUSES & RESOLUTION ACTIONS

SCOPE OF REVIEW

- APPROXIMATELY 260 OPEN ITEMS FOR LAST 12 MONTHS
- CORRECTIVE ACTIONS IN PLACE
- RECURRENCE CONTROLS EFFECTIVE

STATUS OF REVIEW

- 206 (APPROXIMATELY 80%) COMPLETE
- COMPLETION SCHEDULED FOR 12/7/94
- 4/27 REVIEWED AS PART OF QA SAMPLING

FINDINGS TO DATE

- CORRECTIVE ACTIONS & RECURRENCE CONTROL MEASURES FOR 206 ITEMS FOUND ACCEPTABLE

"RE-LOOK" EFFORT REVIEW 40 OPEN ITEMS SUBMITTED FOR CLOSURE

PURPOSE: TO ASSESS EXTENT OF IMPACT ON OTHER PLANT AREAS AND TO FURTHER VALIDATE CONCLUSIONS REGARDING COMMON CAUSES & RESOLUTION ACTIONS

SCOPE OF REVIEW

- **40 OPEN ITEM PACKAGES**
- **CLOSURE VERIFICATION (HARDWARE AND DOCUMENTATION)**
- **RECURRENCE CONTROLS EFFECTIVE**

STATUS OF REVIEW

- **16 COMPLETE**
- **19 OF THE REMAINING 24 ITEMS SCHEDULED FOR COMPLETION BY 12/29/94**

FINDINGS TO DATE

- **3 ISSUES**
 - **TEMPERATURE SWITCH INSTALLATION**
 - **ORIENTATION OF ASCO VALVES**
 - **RADIATION MONITOR LINE INSTALLATION**

**STATUS OF
TECHNICAL REVIEWS**

R. GEORGE

TECHNICAL REVIEWS

PURPOSE: (1) PERFORM TECHNICAL REVIEWS OF A BROAD CROSS-SECTION OF DESIGN OUTPUT TO CONFIRM ADEQUACY OF ELECTRICAL AND I&C DESIGN AND INSTALLATION

SCOPE OF REVIEW

- **CALCULATION REVIEW**
- **RHR TECHNICAL REVIEW**
- **VERIFY TRANSLATION OF ELECTRICAL SPECIFICATIONS TO INSTALLATION PROCEDURES**
- **ASSESSMENT OF FIELD INSTALLATION**
- **5,000 MAN-HOURS REVIEW**

TECHNICAL REVIEW TEAM

- **TVA General Manager**
- **TVA QA**
- **TVA Discipline Chiefs**
- **ESI Discipline Chiefs**
- **ESI Manager of Engineering**
- **ESI Power System Manager**
- **ESI Electrical Installation Expert**
- **Outside Industry Experts**

ELECTRICAL CALCULATION REVIEW

SCOPE OF REVIEW

- **REPRESENTATIVE CROSS SECTION OF ELECTRICAL AND I&C CALCULATIONS**
- **INTERFACE BETWEEN DISCIPLINE CALCULATIONS**
- **FIVE BROAD CALCULATIONS PLUS 24 CALCULATIONS ASSOCIATED WITH CAPs TO BE REVIEWED**
- **COMPLETED 50% OF REVIEW**

NATURE OF OBSERVATIONS

- **FOURTEEN CALCULATIONS REVIEWED, FOUR IN PROGRESS**
 - **CALCULATIONS ACCEPTABLE, METHODOLOGY ADEQUATE**
- **EVALUATING IMPLEMENTATION OF CALCULATION PROGRAM**
 - **RESULTS TO DATE ACCEPTABLE**

RHR TECHNICAL REVIEW

SCOPE OF REVIEW

- **SYSTEM CAPABILITY TO MEET ELECTRICAL AND I&C DESIGN AND LICENSING REQUIREMENTS**
- **ELECTRICAL: LOAD PATH**
 - **System to Load**
 - **DG to Load**
 - **DC Source to Load**
- **I&C: DESIGN OF SELECTED INSTRUMENT LOOPS**
- **INTERFACE OF DESIGN REQUIREMENTS TO INSTALLATION, SELECTED OPERATION PROCEDURES AND TESTING PROCEDURES (including surveillance)**
- **OVER 300 DOCUMENTS BEING EVALUATED**
- **FIELD ASSESSMENT OF SELECTED ATTRIBUTES**

NATURE OF OBSERVATIONS

- **NO FINDINGS TO DATE**

TRANSLATION OF ELECTRICAL DESIGN TO INSTALLATION

SCOPE OF REVIEW

- **VERIFY DESIGN CRITERIA ARE PROPERLY TRANSLATED INTO ADEQUATE FIELD INSTALLATION**
 - **GENERAL DESIGN SPECIFICATIONS**
 - **CONSTRUCTION/MAINTENANCE INSTRUCTIONS**
 - **WORK PLAN DEVELOPMENT**
 - **QC HOLD POINTS**
 - **INSTALLATION**
 - **CLOSURE**
- **ELECTRICAL GENERAL DESIGN SPECIFICATION AND MODIFICATIONS AND MAINTENANCE INSTALLATION INSTRUCTIONS DEALING WITH CABLE AND RACEWAY**
- **COMPLETED 50% OF REVIEW**

NATURE OF OBSERVATIONS

- **MAINTENANCE PROCEDURE NOT IN COMPLIANCE WITH DESIGN SPECIFICATION RELATED TO INSULATION OF SHIELD ON LOW VOLTAGE CABLE**
 - **PROCEDURE TO BE REVISED**
- **A TWO-WAY SPLICE CONNECTOR IN MODIFICATION PROCEDURES NOT REFERENCED BY DESIGN SPECIFICATION**
 - **TO BE INCLUDED IN ONGOING SPLICE RESOLUTION ASSESSMENT**

ASSESSMENT OF INSTALLED ELECTRICAL ATTRIBUTES

SCOPE OF REVIEW

- **TRANSLATION OF ELECTRICAL DESIGN REQUIREMENTS TO
FIELD INSTALLATIONS**
- **PERFORMED FOR:**
 - **CALCULATION REVIEW**
 - **RHR SYSTEM REVIEW**
 - **DESIGN SPECIFICATION/CONSTRUCTION AND
MAINTENANCE PROCEDURE REVIEW**
 - **GENERAL WORKMANSHIP**
 - **OVER 1000 OBSERVATIONS TO BE MADE**

NATURE OF OBSERVATIONS

- **AREAS NEEDING FURTHER EVALUATIONS**
 - **FIELD INSPECTION OF CABLE ROUTE VERSUS CABLE
ROUTING PROGRAM**
 - **OVERFILL NON-SAFETY CABLE TRAY**
- **BASED ON 10% FIELD ASSESSMENT NO SIGNIFICANT
DISCREPANCIES FOUND**

TECHNICAL REVIEWS

PURPOSE: (2) EVALUATE SELECTED ASPECTS OF MECHANICAL AND CIVIL DESIGN AND INSTALLATION

SCOPE OF REVIEW

- **CALCULATION REVIEW**
 - **SEVEN BROAD MECHANICAL CALCULATIONS**
 - **CROSS-SECTION OF CIVIL CALCULATIONS**
- **RHR TECHNICAL REVIEW**
 - **MECHANICAL: DESIGN CALCULATIONS, REQUIREMENTS, AND SYSTEM OPERATIONAL CHARACTERISTICS**
 - **CIVIL: DESIGN CALCULATIONS, SUPPORTS, SEISMIC QUALIFICATIONS**
- **FIELD INSPECTION OF MECHANICAL AND CIVIL ATTRIBUTES**
 - **PLACEMENT OF EQUIPMENT TAGS WITH CABLE COULD AFFECT MOVING COMPONENTS**
 - **CIVIL/MECHANICAL FIELD ASSESSMENT RECENTLY INITIATED; NO CONCLUSIONS TO DATE**
- **2000 MAN HOURS REVIEW**

**STATUS OF
NUCLEAR ASSURANCE EFFORTS**

R. BARON

NUCLEAR ASSURANCE ACTIONS

NUCLEAR ASSURANCE'S REVIEW OF RECENT CONSTRUCTION DEFICIENCIES AND RELATED ISSUES RESULTED IN THE FOLLOWING ACTIONS:

- **IDENTIFICATION OF AREAS TO BE STRENGTHENED IN QA/QC AND INITIATION OF RELATED IMPROVEMENTS**
- **ADDITIONAL REVIEWS TO ASSIST IN BOUNDING IDENTIFIED ISSUES FOR BOTH QA/QC AND LINE**
- **ADDITIONAL MONITORING OF SELECTED LINE AND QA/QC ACTIVITIES TO ASSESS EFFECTIVENESS OF IMPROVEMENTS**

AREAS BEING STRENGTHENED BY QA/QC

IDENTIFIED AS A RESULT OF REVIEWS OVER THE PAST 5-6 MONTHS:

- **RESOURCE ALLOCATION--GREATER MANAGEMENT AND RESOURCE FOCUS NEEDED ON FIELD REVIEWS**
- **MANAGEMENT EXPECTATIONS--MESSAGE TO LINE ABOUT IDENTIFIED PROBLEMS NEEDS TO BE MORE FORCEFUL**
- **MANAGEMENT EXPECTATIONS--INCREASED MANAGEMENT FOCUS ON QA/QC ATTENTION TO DETAIL TO ACHIEVE CONSISTENT RESULTS**

STATUS OF NUCLEAR ASSURANCE VALIDATION ACTIVITIES

**TO ASSIST IN BOUNDING ISSUES IDENTIFIED IN BOTH QA/QC AND LINE,
NUCLEAR ASSURANCE IS CONDUCTING:**

- **REVIEW ADEQUACY OF FIELD INSPECTIONS AND PROCEDURES USED TO PERFORM INFREQUENT OR COMPLEX INSPECTION ACTIVITIES (9 AREAS) -- ONGOING**

- **AUDIT (10% SAMPLE) OF LINE'S 100% REVIEW OF CAQs/OPEN ITEMS CLOSED DURING THE PAST 12 MONTHS**
 - **STATUS OF REVIEW: APPROXIMATELY 32/82 CAQs AND 4/27 OPEN ITEMS REVIEWED. JANUARY COMPLETION**

 - **FINDINGS TO DATE:**
 - **NO ISSUES IDENTIFIED**

- **100% REVIEW OF RE-LOOK AT 40 OPEN ITEMS SUBMITTED FOR CLOSURE**

STATUS OF NUCLEAR ASSURANCE MONITORING ACTIVITIES

MONITOR RESULTS OF LINE REVIEW OF ALL CAQs/OPEN ITEMS

- **RESULTS TO DATE:**
 - **RECENT IMPROVEMENT NOTED**
 - **SUSTAINED PERFORMANCE NEEDED**

NUCLEAR ASSURANCE MANAGERS TO MONITOR QA/QC IMPROVEMENTS

- **RESULTS TO DATE:**
 - **IMPROVEMENT IN QA/QC ACTIVITIES**
 - **INCREASED CONSISTENCY**

OVERALL CONCLUSIONS

- **MANAGEMENT EXPECTATIONS HAVE BEEN CLARIFIED AND COMMUNICATED AND WILL BE CONTINUALLY REINFORCED**

- **SENIOR MANAGEMENT OVERSIGHT/FOCUS HAS BEEN APPROPRIATELY BALANCED TO ADDRESS BOTH CONSTRUCTION & STARTUP PRIORITIES AND RESOURCES ARE IN PLACE TO SUPPORT THESE PRIORITIES**

- **AREAS OF FURTHER IMPROVEMENT INCLUDE:**
 - **LINE ATTENTION TO DETAIL/OWNERSHIP**

 - **CONTINUED IMPROVEMENT ON QA/QC (PARTICULARLY REGARDING FIELD VERIFICATIONS)**

- **PRELIMINARY RESULTS OF TECHNICAL REVIEW AND "RE-LOOK" AT CAQs AND OPEN ITEMS HAS NOT IDENTIFIED ANY NEW/ADDITIONAL ISSUES THAT WOULD RESULT IN CHANGES TO OUR CONCLUSIONS OR CORRECTIVE ACTIONS DESCRIBED IN OUR NOVEMBER 14, 1994 LETTER**

OPERATIONAL READINESS

J. SCALICE

INTEGRATED SAFEGUARDS TEST

TEST OBJECTIVES

- ALL SAFETY-RELATED LOADS AUTOMATICALLY START AND SEQUENCED PROPERLY PER DESIGN REQUIREMENT WITH AND WITHOUT OFFSITE POWER WITH ACCIDENT SIGNAL
- DEMONSTRATE PROPER DYNAMIC RESPONSE OF DIESEL GENERATORS - (GOVERNOR AND VOLTAGE REGULATOR)
- PROPER LOAD SHEDDING OF SAFETY AND NON-SAFETY-RELATED LOADS

TEST RESULTS

- SUCCESSFUL WITH RESPECT TO
 - DG FREQUENCY AND VOLTAGE
 - AUTO SEQUENCING
 - LOAD SHEDDING

PROBLEMS

- FUSES WERE NOT INSTALLED
- ERCW STARTED LATE
- FIRE PUMP 2B DID NOT START
- SWITCHES WERE MISPOSITIONED
- CHILLERS DID NOT START

TEST DEFICIENCIES HAVE BEEN REVIEWED AND DISPOSITIONED

- RETESTED LOOP 1B

SUMMARY OF ITS CONDUCT OF OPERATIONS OBSERVATIONS

COMMAND AND CONTROL

RESULTS ARE POSITIVE:

- **MAIN CONTROL ROOM CONDUCT WAS ORDERLY**
- **UNIT SRO CLEARLY IN CHARGE OF PLANT EQUIPMENT**
- **THE OPERATIONS SUPERINTENDENT CONDUCTED
MANAGEMENT EXPECTATIONS BRIEFING**

OWNERSHIP

RESULTS ARE POSITIVE:

- **EXAMPLES**
 - **OPERATIONS PERSONNEL ACTIVELY INVOLVED IN
TROUBLE SHOOTING PROBLEMS ENCOUNTERED**
 - **AUO IDENTIFIED A MISSING EXHAUST LINE PLUG AFTER
PRE-TEST ALIGNMENT**
 - **AUO STOPPED VALVING EVOLUTION AFTER HIS INQUIRIES
CONFIRMED THE CONTROLLING WORK ORDER DID NOT
CONTROL CONFIGURATION. OFF NORMAL LOG ENTRY
MADE**

**SUMMARY OF ITS CONDUCT OF
OPERATIONS OBSERVATIONS**
(continued)

COMMUNICATIONS

RESULTS ARE GENERALLY POSITIVE:

- **OBSERVATIONS BY BOTH ORP ASSESSMENT TEAM AND QA CONCLUDED THAT COMMUNICATIONS WERE CLEAR AND CONCISE, GOOD USE OF REPEAT BACK**
- **AREAS FOR IMPROVEMENT: UNIT SRO DID NOT ALWAYS REPEAT BACK ACKNOWLEDGED ALARMS. UNIT OPERATOR DID NOT ALWAYS ANNOUNCE COMPLETED ACTIONS**
 - **IMMEDIATE FEED BACK PROVED EFFECTIVE. THESE CONDITIONS OBSERVED TO BE CORRECTED IN SUBSEQUENT TESTS**

CONFIGURATION CONTROL

AREA TO BE STRENGTHENED

- **EXAMPLE**
 - **SEVERAL 6.9KV BREAKERS OUT OF POSITION**

PROCEDURE ADHERENCE

- **OPERATING PROCEDURES--VERY GOOD**
- **ADMINISTRATIVE PROCEDURES - NEEDS IMPROVEMENT**

SUMMARY OF ITS CONDUCT OF OPERATIONS OBSERVATIONS

(continued)

- **OTHER PROGRAMS OBSERVED INCLUDED:**

- **MAINTENANCE**
- **WORK CONTROL**
- **CONDUCT OF CHEMISTRY**
- **SWITCH YARD CONTROL**
- **SITE ENGINEERING SUPPORT**
- **DIESEL GENERATOR RELIABILITY PROGRAM**
- **SYSTEM ENGINEERING**

- **GENERALLY THE RESULTS WERE SATISFACTORY**

- **PROGRAMS WERE BEING FOLLOWED**
- **PERSONNEL WERE KNOWLEDGEABLE IN THEIR TASKS**
- **GOOD SUPERVISION INVOLVEMENT WAS OBSERVED**
- **RESPONSIVENESS TO SUPPORT OF THE PLANT WAS GOOD**

- **AREAS FOR IMPROVEMENT ARE IDENTIFIED**

- **NEED FOR BETTER PRE-STAGING OF MATERIAL**
- **IMPROVEMENTS NEEDED IN LOG KEEPING WERE POINTED OUT
(CHEMISTRY)**
- **IMPROVEMENTS IN WORK COORDINATION**