

50-259/200/296



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 24, 1996

LICENSEE: Tennessee Valley Authority

FACILITY: Browns Ferry Nuclear Plant, Units 1, 2, and 3

SUBJECT: SUMMARY - OCTOBER 16, 1996 MEETING WITH TVA

On October 16, 1996, representatives of the Tennessee Valley Authority (TVA) met with the NRC staff in Rockville, Maryland. The NRR Project Manager for Browns Ferry had requested this meeting to discuss recent TVA efforts to validate information in the Browns Ferry Updated Final Safety Analysis Report (UFSAR) prior to submittal of the periodic update planned for October 22, 1996. A list of attendees is given in Enclosure 1. A copy of the handouts provided by TVA are given in Enclosure 2.

TVA previously met with the staff on July 10, 1996, and discussed its efforts to review the UFSAR for the Browns Ferry, Sequoyah, and Watts Bar sites. At that time, TVA stated that it planned an extensive UFSAR review program lasting about 18 months. TVA believed this schedule was appropriate, given that there was no indication of major problems, such as unreviewed safety questions, in the existing document.

Recently, TVA management decided to expedite portions of the review so that a large segment could be completed prior to submittal of the periodic update on October 22, 1996. Originally a line-by-line review of the UFSAR was planned on a level-of-effort basis, for completion over a 3-month span. Dedicated personnel conducted the review over a shorter span of weeks.

The scope of review included a word-by-word check by operations personnel to determine whether plant operations are consistent with the UFSAR text. Additional reviews were conducted by engineering and other personnel to determine information accuracy. This review did not include complete verification of plant configuration, vendor information, or drawings, and did not address information characterized as historical. These items will be addressed as part of future efforts.

TVA is currently dispositioning discrepancies. Thus far, the review has not identified any unreviewed safety questions, impacts on system operability, or required modification of plant equipment.

While many items will be resolved by the October 22 update, a number of items cannot be addressed by that time. Furthermore, additional review efforts are continuing. TVA is planning a supplemental update 3 months later to resolve additional items. TVA is also contemplating yet another submittal 3 months

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after the supplement to resolve remaining items. A root cause evaluation of discrepancies will also be performed.

The meeting participants also discussed handling of overall plant configuration issues. Typically, modifications are not performed simultaneously on each of the three reactors at the site. Furthermore, the extensive modifications required to return Unit 1 to operations have not been performed. TVA was advised to make the UFSAR as descriptive as possible of the plant configuration as of the date of the updated submittal. For example, if a modification has been completed on Unit 3, but not Unit 2, the update should provide an appropriate description for each unit.

At the conclusion of the meeting, TVA personnel stated that they are very sensitive to issues of UFSAR accuracy, and emphasized their interest in resolving any problems.

Original signed by

Joseph F. Williams, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260, and 50-296

Enclosures: 1. Attendance List
2. TVA Handbook

cc w/enclosures: See next page

DISTRIBUTION

Hard Copy w/enclosure 1 and 2

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J. Johnson, RII

E-Mail w/enclosure 1

F. Miraglia/AThadani (FJM) (ACT)

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S. Varga (SAV)

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G. Tracy

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| OFFICE | PDII-3/PM | PDII-3/LA | PDII-3/D | N |
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| NAME | JWilliams <i>[Signature]</i> | BClayton <i>[Signature]</i> | FHebdon <i>[Signature]</i> | |
| DATE | 10/23/96 | 10/23/96 | 10/24/96 | 10/ /96 |

BROWNS FERRY NUCLEAR PLANT

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ATTENDEES

NRC/TVA MEETING ON OCTOBER 16, 1996

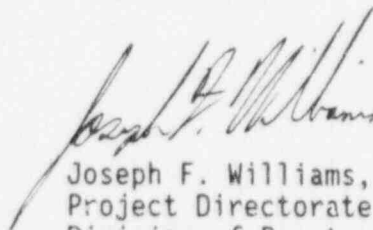
| <u>Name</u> | <u>Affiliation</u> |
|--------------|----------------------|
| Joe Williams | NRC/NRR/DRPE/PD II-3 |
| Raul Baron | TVA |
| Tim Shriver | TVA |
| Lee Williams | TVA |
| Steve Kane | TVA |

ENCLOSURE 1

after the supplement to resolve remaining items. A root cause evaluation of discrepancies will also be performed.

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Division of Reactor Projects - I/II
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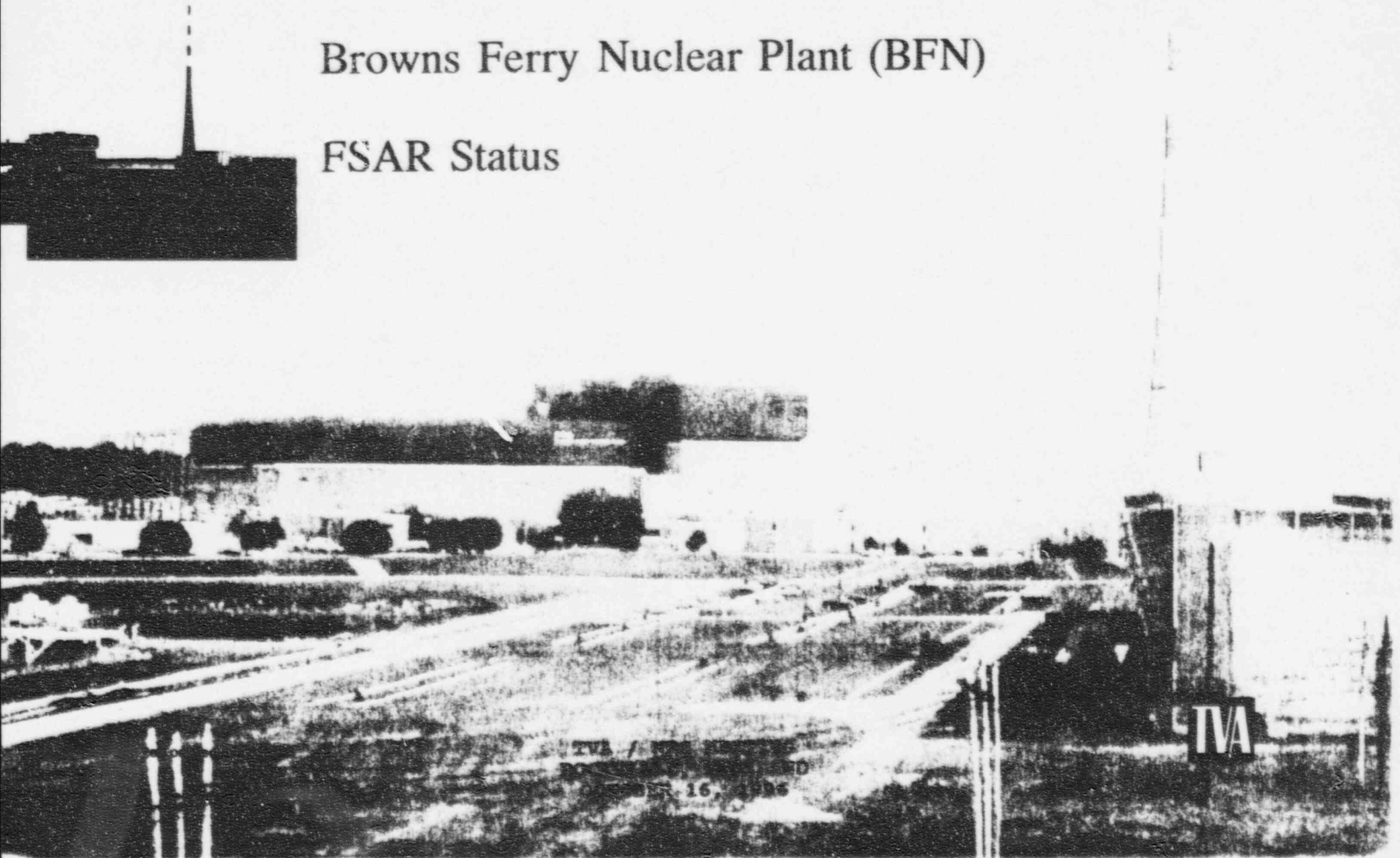
Enclosures: 1. Attendance List
2. TVA Handbook

cc w/enclosures: See next page

Tennessee Valley Authority (TVA)

Browns Ferry Nuclear Plant (BFN)

FSAR Status



October 1, 1996

R. D. Machon, PAB 1E-BFN

FSAR VERIFICATION SCOPE

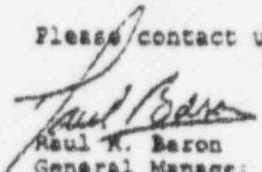
Based on telephone discussions on September 27, 1996 and September 30, 1996, the items listed below should be included in the Browns Ferry Nuclear (BFN) Plant updated FSAR (UFSAR) verification process to support the UFSAR amendment submittal scheduled for October 22, 1996. The time period to be covered is from the end point of the 1991 FSAR certification (January 22, 1990) to six months prior to the current update (April 22, 1996). In addition, any changes currently incorporated in the living FSAR, even if submitted after April 22, 1996, should also be verified.

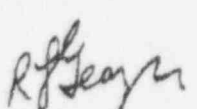
The BFN FSAR verification should include:

1. Verification of consistency between the FSAR and technical specifications, including the technical specification bases.
2. Review of modifications to verify that the FSAR adequately reflects requirements of relevant SA/SEs.
3. Review of Operations procedures for consistency with the FSAR.
4. Review of FSAR change requests for proper incorporation, and that all affected FSAR sections were changed.
5. Review of the FSAR by knowledgeable personnel to identify obvious errors, with particular emphasis on critical areas such as abandoned equipment and system lineup and operation.
6. Responsible managers, as defined in SSP-4.2, "Management of the Final Safety Analysis Report (FSAR)," certify, to the best of their knowledge, the accuracy and completeness of each section, in addition to normal certification criteria.
7. Quality Assurance will evaluate the verification process to ensure adequacy.

Please note that this effort is intended to further enhance the accuracy of the upcoming amendment 13 submittal and will be used to compliment the detailed FSAR validation effort planned for 1997/98.

Please contact us if you have questions.


Raul K. Baron
General Manager
Nuclear Assurance and Licensing
BR 4J-C


R. L. George
Chief Engineer
BR 5C-C

JDR:RME
cc: See page 2

AGENDA

- | | | |
|------------|---|-----------------------------------|
| 1.0 | Introduction / Meeting Objectives | R. Baron |
| 2.0 | FSAR Review Chronology | T. Shriver |
| 3.0 | Current FSAR Review and Results | T. Shriver H. Williams |
| 4.0 | Current Licensing Basis Review and Results | T. Shriver |
| 5.0 | Remaining FSAR Issues and Reviews | T. Shriver |
| 6.0 | Summary and Open Discussion | R. Baron |

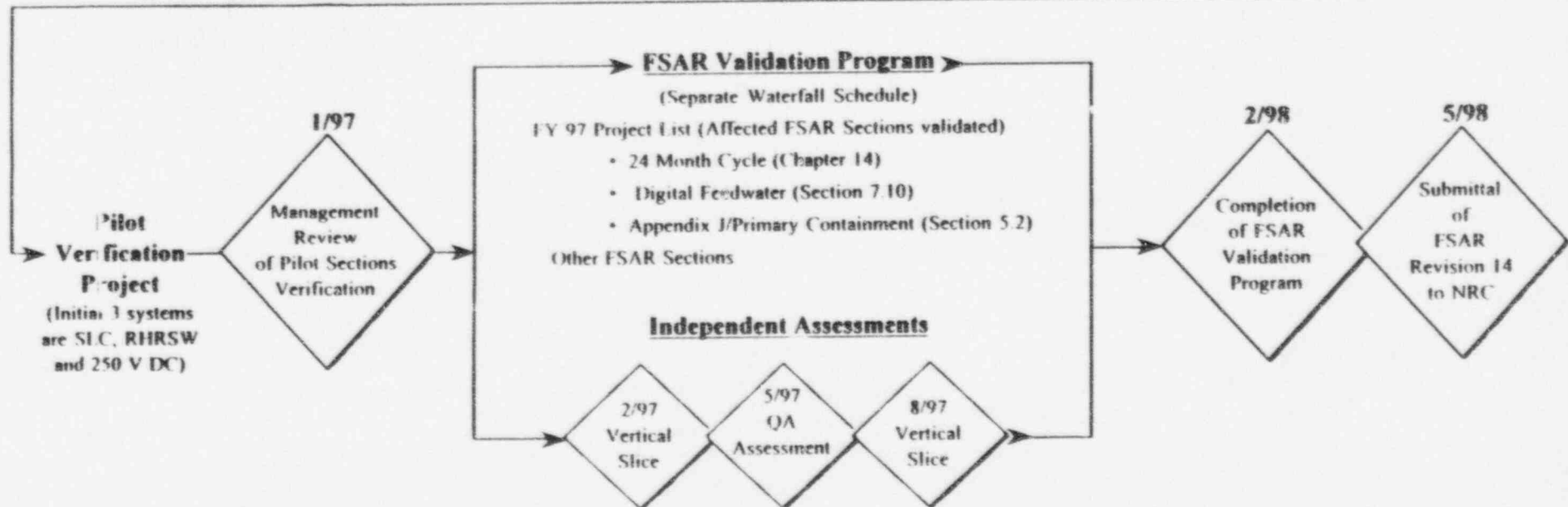
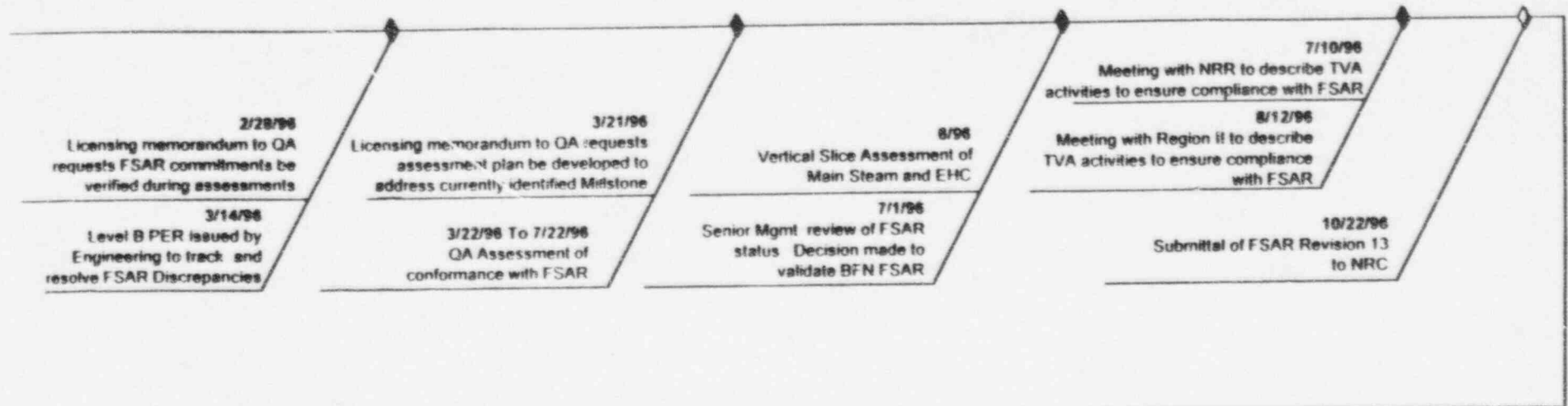
1.0 INTRODUCTIONS AND MEETING OBJECTIVES

- **Previous FSAR Review Meetings**
- **Current FSAR Review and Results**
- **Discuss Outstanding FSAR Issues**

2.0 FSAR REVIEW CHRONOLOGY

- **History of BFN FSAR Reviews**
 - **FSAR Verification Completed During Unit 2 Restart Program (1988 - 1990)**
 - **TVA Re-visited Issue to Address Industry Events (Millstone and Maine Yankee)**
 - **Immediate Response to Millstone Refueling Event**
 - **Instituted Multiple Levels of Review**
 - **FSAR Included in QA Audits and Assessments**
 - **Vertical Slice Reviews**
 - **Safety Evaluation (10 CFR 50.59) Process**
- **Met With the Staff on July 10, 1996 in Rockville to Review TVA's Initiatives**
- **Briefed the Region on August 12, 1996 to Discuss These Initiatives and Review Identified Discrepancies. Discrepancies Did Not Result in a USQ, Impact to System Operability, or Result in a Modification to Plant Equipment.**
- **Presented the FSAR Validation Program Plan Summary to the Staff at the August 23, 1996 Plant Status Meeting (Attached)**

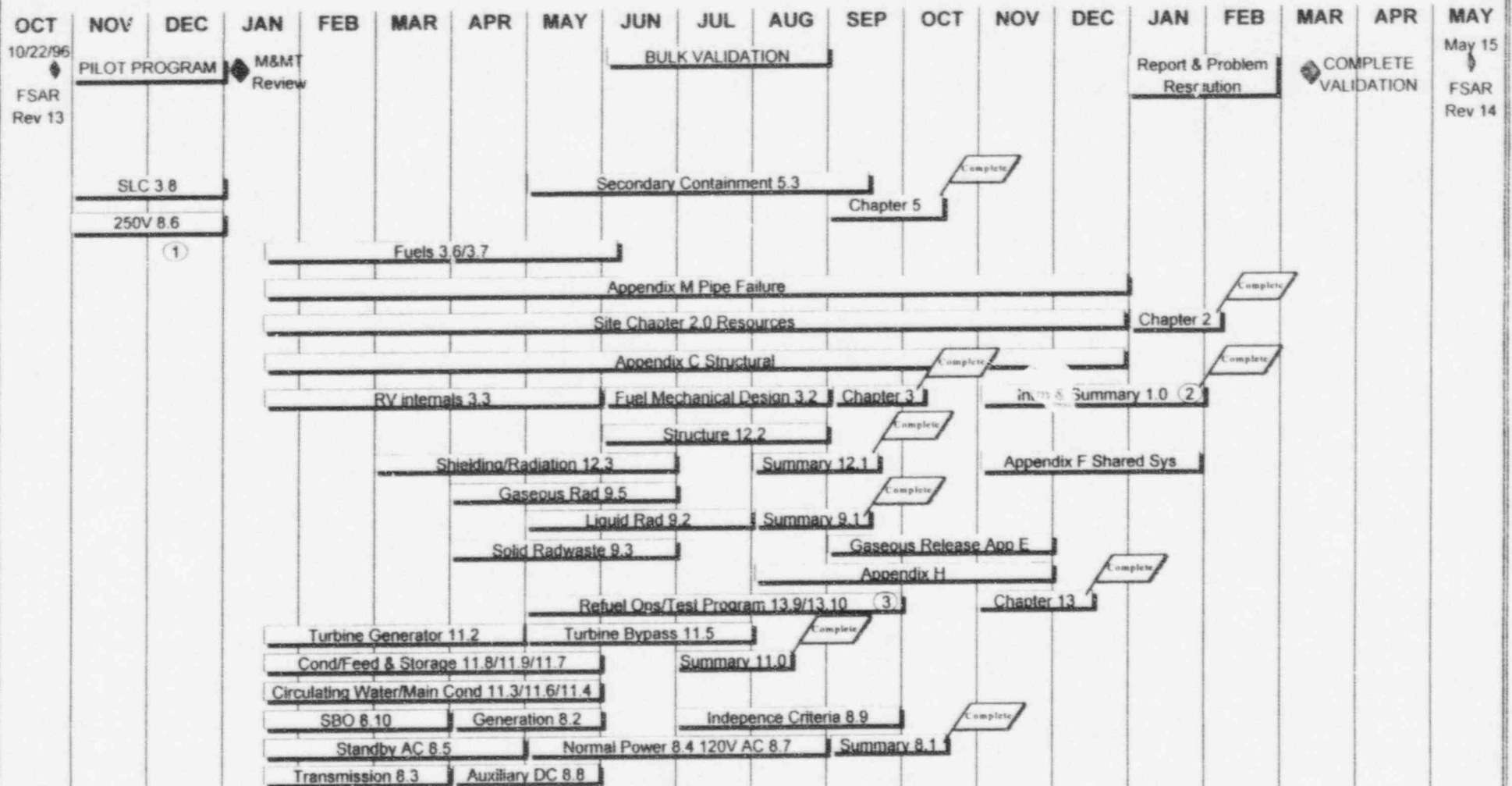
FSAR PROGRAM PLAN SUMMARY



2.0 FSAR REVIEW CHRONOLOGY (CONT.)

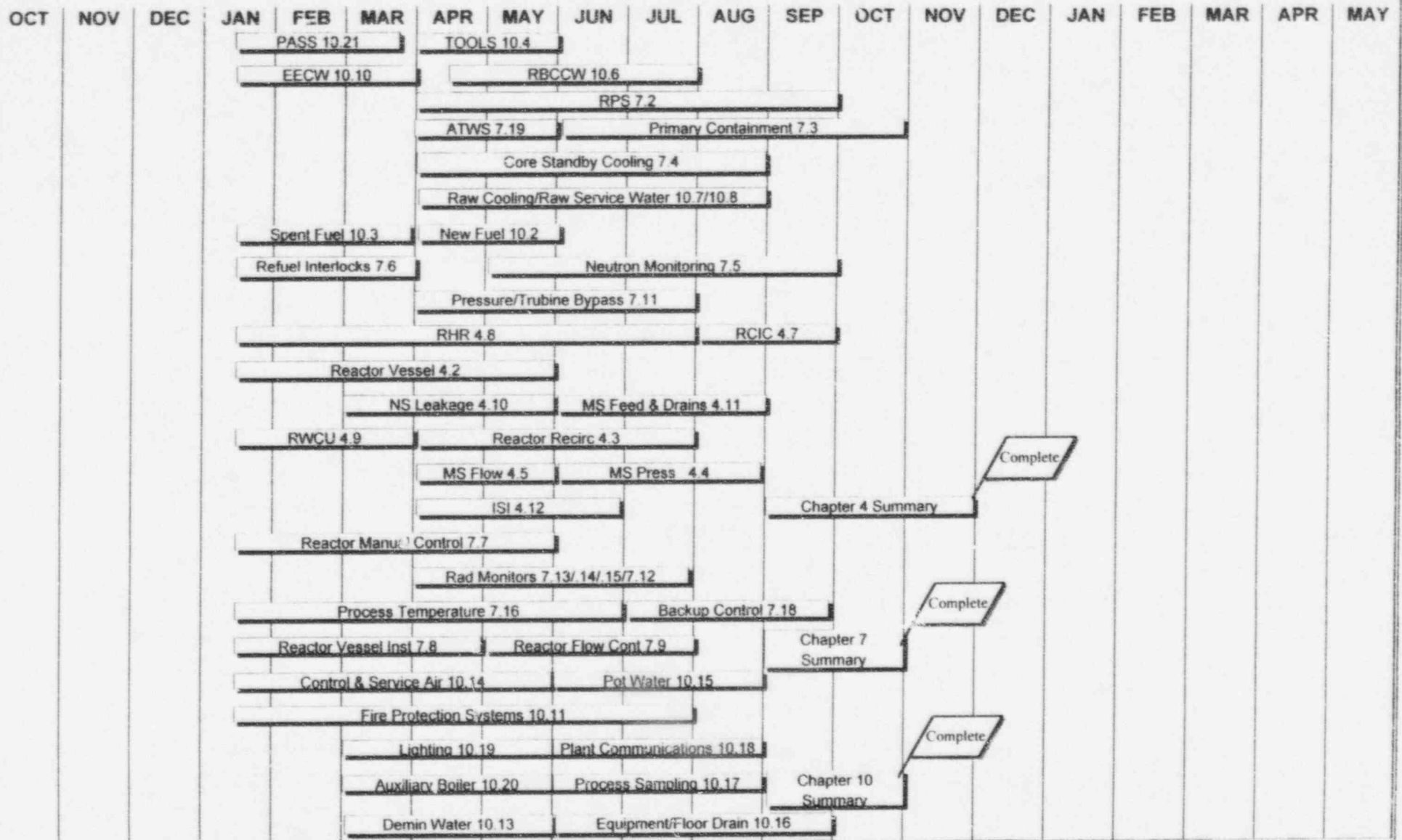
- **Developed a Waterfall Schedule for FSAR Sections to be Validated (Attached)**

FSAR Validation O&M

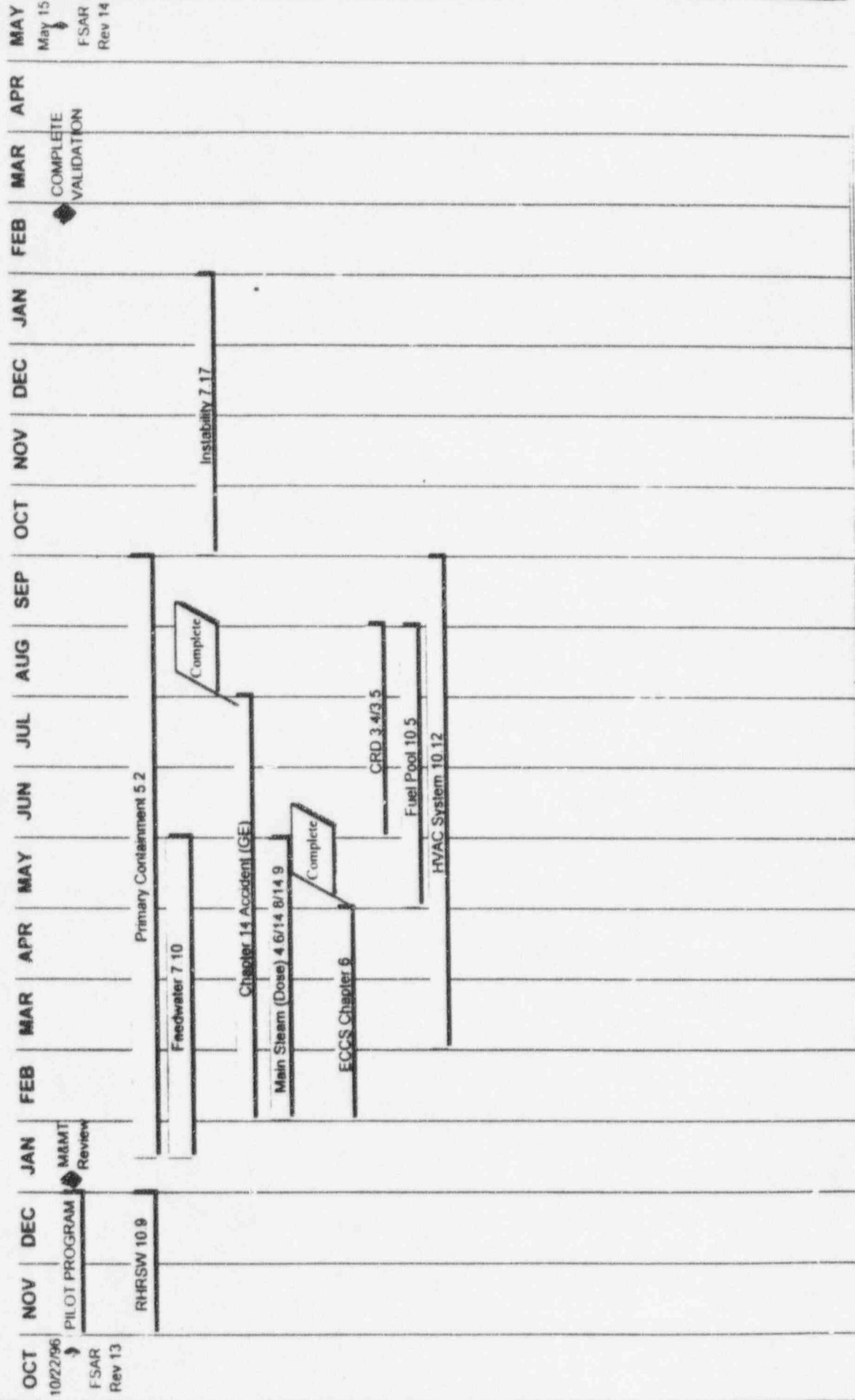


- 1 Do SA/SE, CRLD to delete historical sections (1.11, 9.4, Appendix A, D, G, I, J, K, L - Remaining Appendixes to be relettered.
- 2 LIC, QA, Site Support have some sections in Chapter 1.
- 3 Human Resources, Site Support, NA&L have some sections in Chapter 13.

FSAR Validation



FSAR Validation (Capital Work)



3.0 CURRENT FSAR REVIEW AND RESULTS

- **Previously Identified FSAR Discrepancies Justified the Schedule of the FSAR Validation Program Plan Summary (I.E., Identification, Resolution and Incorporation of Correction into next Amendment [May '98])**
- **President TVA Nuclear and Chief Nuclear Officer Requested an Expedited Review be Performed Prior to Submittal of Current Amendment (October 22, 1996)**

3.0 CURRENT FSAR REVIEW AND RESULTS (CONT.)

- **This Review Has Been Extensive**
 - **Word by Word Review of Text by Operations Personnel to Ensure Plant is Operated Consistent With FSAR Descriptions. Other Identified Issues Documented and Referred to Responsible Organization for Resolution.**
 - **Independent Review of FSAR Text by Responsible Site Organizations as Defined in BFN Procedure for FSAR Control (I.E., Engineering [Design/Systems], Licensing, Training, Quality Assurance, Chemistry)**
 - **Verification of Consistency Between the FSAR and Technical Specification Amendments**
 - **Review of Modifications to Verify That the FSAR Reflects Requirements of Safety Assessments / Safety Evaluations**
 - **Review of FSAR Change Requests for Proper Incorporation and All Affected FSAR Sections Were Changed**
 - **Quality Assurance Evaluating the Reviews**

3.0 CURRENT FSAR REVIEW AND RESULTS (CONT.)

- **Reviews Are Nearly Completed**
 - **Reviews Have Not Resulted in USQ's, Impacts to System Operability, or Required Modifications to Plant Equipment**
 - **Discrepancies Have Been Identified. Discrepancies Range from Typographical / Editorial to Obsolete / Abandoned Equipment and Errors in System Operational Descriptions.**
- Examples Include:**
- **FSAR States BFN Has Equipment to Automatically Respond to Load Changes. This Equipment Was Never Operated.**
 - **FSAR States There Are Six Stages of Feedwater Heaters. There Are Five Stages of Feedwater Heaters and One Drain Cooler.**
 - **FSAR States Charcoal in Purge System is 99 Percent Efficient. Analyses Assume 90 Percent.**
 - **Improper Specification of Numerical Values or Setpoints**
- **Initial Review of Sections Complete. Resolution of Identified Issues and Evaluation of FSAR Changes In Progress.**

4.0 CURRENT LICENSING BASIS REVIEW AND RESULTS

- **Current Licensing Basis Assessment Approximately 60 Percent Complete**
- **Tailored to Evaluate the BFN Programs in Place That Identify and Control Commitments That Effect the Current Licensing Basis as Defined in 10 CFR 54.3**
- **Assessment Followed the Guidelines of NEI 96-05, Guidelines for Assessing Programs for Maintaining the Licensing Basis**
- **Sample Areas Include Orders, License Conditions, Exemptions, Regulatory Requirements, Technical Specifications, Bulletins, Generic Letters, Enforcement Actions, Licensee Event Reports, and NRC Safety Evaluations**
- **No New Deficiencies Identified**
- **Based on Previous Assessment Findings, Deficiencies Exist in Preparation of SA/SEs to Support the 10 CFR 50.59 Process. Corrective Action and Training Have Been Initiated to Address This Issue.**

5.0 REMAINING FSAR ISSUES AND REVIEWS

- **Remaining Review Effort**
 - **Engineering Will Continually Review Each FSAR Section Affected By Ongoing Design Activities**
 - **Primary Focus Will Center on QA Audits and Assessments**
 - **Remaining Review Composed of Mini-Vertical Slices, Focused Assessments, and Incorporation of FSAR Reviews Into Assessment Instructions. Reviews Will Be Prioritized Using Risk and Safety Based Criteria. Reviews Will Include:**
 - **Original and Current Design Basis Requirements and Controls**
 - **Proper Reflection in the FSAR and Technical Specifications**
 - **Inclusion of Vendor Information**
 - **Incorporation Into Operating, Maintenance and Testing Procedures, Including Supporting Records**
 - **Field Verification of As-Built and As-Modified Conditions**
 - **Review of Problem Identification and Use of Corrective Action Program**
 - **Schedule Being Developed to Complete Review Over the Next 18 Months**
- **Root Cause of FSAR Discrepancies Will Be Determined By Late November**

5.0 REMAINING FSAR ISSUES AND REVIEWS (CONT.)

- **Schedule for Future FSAR Amendments**
- **Applicability of FSAR Descriptions to Unit 1**
- **Addressing Unit 2 / Unit 3 Differences**
- **Drawings**

6.0 SUMMARY AND OPEN DISCUSSION