

SEP 1986

Radings
Bockat

- 2 -

3. Describe criteria for doing additional walkdowns if the one-system walkdown (performed under the Configuration review) uncovers significant discrepancies.
4. Clarify differences between the Construction Verification program and the Configuration program.
5. Ensure the baseline drawing list includes, but is not limited to, the schematics, logic diagrams, and on-line system and control diagrams for Electrical and I&C diagrams. TVA should clarify which drawings are going to be deferred, and the duration of the deferral.
6. Provide a list of input and output documents.
7. Consider choosing a system for the Engineering Assurance review that, among other criteria,:
 - a. interfaces with vendor designs
 - b. is primarily a TVA design
 - c. is different than that reviewed under the Configuration review of the DBLVP, and
 - d. is different than the auxiliary feedwater system (reviewed during the Black & Veatch IDVP), unless justification is provided for reviewing that system.
8. Since certain elements of structures, systems, or components reviewed in other programs are not to be rereviewed under the DBLVP, describe how TVA will ensure that all deviations found (and determined acceptable-for-service under these other programs) will be factored into the overall analysis of these structures, systems, or components to assure there are no unacceptable compounding effects.

TVA indicated they would consider the staff's comments in finalizing the DBVLP plan and procedures.

Thomas J. Kenyon, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosure: As stated

[Signature]
PWR#4/DPWR-A
TKenyon/rad
08/29/86

[Signature]
PWR#4/DPWR-A
BJYoungblood
08/29/86

8609050451 860902
PDR ADOCK 05000390
A PDR



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

2 SEP 1986

Docket No. 50-390

Applicant: Tennessee Valley Authority
Facility: Watts Bar Nuclear Plant, Unit 1
SUBJECT: SUMMARY OF MEETING TO DISCUSS DESIGN BASELINE AND LICENSING VERIFICATION PROGRAM ON THE WATTS BAR NUCLEAR PLANT, UNIT 1

On August 21, 1986, representatives of TVA and the NRC met to discuss TVA's proposed Design Baseline and Licensing Verification Program (DBLVP) for the Watts Bar Nuclear Plant, Unit 1. Enclosure 1 is a list of attendees. Enclosure 2 is the agenda and TVA's slide presentation.

TVA began their presentation with an overview of the DBLVP, including the purpose, scope and approach to performing the program. TVA then explained the objectives of each of the five program areas (Licensing, Design Basis, Design, Construction, and Configuration), as described in the attached slide presentation. The applicant then made a presentation regarding the quality assurance surveillance over the program. The final presentation was a description of the Engineering Assurance technical audit plan for the DBLVP.

At the close of the meeting, TVA responded to the salient points of NRC's August 11, 1986 letter regarding the meeting. Mr. McDonald stated that the need for the program, as described in TVA's program description of the DBLVP, developed from the need to address issues raised by TVA evaluations, external reviews, NRC concerns, and employee concerns raised in TVA's employee concern programs. TVA stated the program plan for the DBLVP was submitted on August 19, 1986.

TVA stated that they intended to manage the program with TVA managers, primarily from Watts Bar. The applicant plans to utilize personnel from Sequoyah, if available, but their program will not impact Sequoyah restart efforts. TVA intends to utilize feedback from Sequoyah restart efforts to improve their program at Watts Bar, and visa-versa.


At the close of the meeting, the NRC staff requested TVA to provide dates for significant milestones in the program, and requested TVA to provide the NRC with its procedures for performing the DBLVP. TVA stated they expected a schedule to be assembled within four weeks.

The staff made the following recommendations/requests for clarification of the proposed DBLVP:

1. Describe the method for tracking resolution of issues raised by the program.
2. Identify how engineering requirements are being adequately implemented in design output documents. TVA should clarify G-spec applicability to output documents for each system and FSAR area.

3. Describe criteria for doing additional walkdowns if the one-system walkdown (performed under the Configuration review) uncovers significant discrepancies.
4. Clarify differences between the Construction Verification program and the Configuration program.
5. Ensure the baseline drawing list includes, but is not limited to, the schematics, logic diagrams, and on-line system and control diagrams for Electrical and I&C diagrams. TVA should clarify which drawings are going to be deferred, and the duration of the deferral.
6. Provide a list of input and output documents.
7. Consider choosing a system for the Engineering Assurance review that, among other criteria,:
 - a. interfaces with vendor designs
 - b. is primarily a TVA design
 - c. is different than that reviewed under the Configuration review of the DBLVP, and
 - d. is different than the auxiliary feedwater system (reviewed during the Black & Veatch IDVP), unless justification is provided for reviewing that system.
8. Since certain elements of structures, systems, or components reviewed in other programs are not to be rereviewed under the DBLVP, describe how TVA will ensure that all deviations found (and determined acceptable-for-service under these other programs) will be factored into the overall analysis of these structures, systems, or components to assure there are no unacceptable compounding effects.

TVA indicated they would consider the staff's comments in finalizing the DBVLP plan and procedures.


Thomas J. Kenyon, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosure: As stated

Mr. S. A. White
Tennessee Valley Authority

Watts Bar Nuclear Plant

cc:

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Tennessee Valley Authority
5N156B Lookout Place
Chattanooga, Tennessee 37408-2801

Mr. Donald L. Williams, Jr.
Tennessee Valley Authority
400 West Summit Hill Drive, W10B85
Knoxville, Tennessee 37902

Resident Inspector/Watts Bar NPS
c/o U.S. Nuclear Regulatory
Commission
Rt. 2 - Box 300
Spring City, Tennessee 37381

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission,
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Mr. Ken Parr
Tennessee Valley Authority
6N 143B Lookout Place
Chattanooga, Tennessee 37402-2801

Mr. Mark J. Burzynski
Tennessee Valley Authority
Watts Bar NP
P.O. Box 800
Spring City, Tennessee 37381

MEETING SUMMARY DISTRIBUTION

Docket File
NRC PDR
L PDR
NSIC
PRC System
PWR#4 Reading File
M. Duncan
OGC
J. Partlow
E. Jordan
ACRS(10)
TKenyon

NRC Participants
B. J. Youngblood
MShymlock
J. Holonich
S. Richardson AR 5029
C. Upright
H. Thompson
G. Imbro
R. Architzel
C. Tinkler
J. Shapaker
P. Gill
R. Wessman
B. Grimes
R. Lobel

bcc: Licensee & Service List

Enclosure 1

Watts Bar Nuclear Plant

Design Baseline and Licensing Verification Program

August 21, 1986 Meeting

<u>NAME</u>	<u>ORGANIZATION</u>
Glenn Ashley	TVA-WB Site Licensing
John McDonald	TVA-WB Site Licensing
R.E. Foley	TVA-WB Phase II Task Force
G. Toto	TVA-WB Site Director
Joe Holonich	PWR#4 Licensing
B.J. Youngblood	PWR#4 Licensing
Steve Richardson	NRC TVA Project Staff
Milton Shymlock	NRC-Region II
C.M. Upright	NRC TVA Project Staff
Hugh L. Thompson	NRC TVA Project Staff
Thomas J. Kenyon	PWR#4 Licensing
Gene Imbro	NRC/IE QAB
Ralph Architzel	NRC/IE QAB
J. Frederick Weinhold	TVA-DNE Engineering Assurance
Gary W. Curtis	TVA-DNE WBEP
Dick Parker	TVA WBN DNQA
Tony Capozzi	TVA-DNE Engineering Assurance
Stevell Letourneau	Search Licensing
C.G. Tinkler	NRC/NRR/PSB
Jon Shapaker	NRC/NRR/PSB
Richard Lobel	NRC/NRR/RSB
Paul Gill	NRC/NRR/EISCB
R. Wessman	NRC TVA Project Staff
B. Grimes	NRC/IE

WATTS BAR NUCLEAR PLANT

DESIGN BASELINE AND LICENSING VERIFICATION PROGRAM

AGENDA

- | | | |
|----|---|-------------|
| A. | INTRODUCTION | J. McDonald |
| B. | PROGRAM OVERVIEW | G. Curtis |
| | 1. Purpose | |
| | 2. Scope | |
| | 3. Approach | |
| | 4. Areas | |
| C. | FIVE PROGRAM AREAS | G. Curtis |
| | 1. Licensing | |
| | 2. Design Basis | |
| | 3. Design | |
| | 4. Construction | |
| | 5. Configuration | |
| D. | QUALITY ASSURANCE SURVEILLANCE | R. Parker |
| E. | ENGINEERING ASSURANCE INDEPENDENT
TECHNICAL REVIEW | F. Weinhold |
| F. | CONCLUDING REMARKS | J. McDonald |

MEETING OBJECTIVES

- o To present WBN design baseline and licensing verification program
- o To obtain comments, questions from NRR, OIE, and Region II
- o To discuss information requested by NRC's August 11, 1986 letter

NRC August 11, 1986 Letter

Salient Points

- o Need for program
- o Program submittal
- o Program Plan
 - Scope
 - Schedule
 - Methodology
 - Acceptance criteria
- o Resource Impact
 - TVA
 - NRC
- o Feedback from SQN

SQN and WBN Verification Programs are different because of differences in:

- o Design
- o Programs
- o Problem nature and timing
- o Licensing status

TVA
The
Energy
Company

WATTS BAR NUCLEAR PLANT
DESIGN BASELINE & LICENSING VERIFICATION PROGRAM

PROGRAM PURPOSE

- o Confirm that WBN licensing, design and construction activities have implemented requirements
- o Confirm that WBN Unit 1 is ready for power operation
- o Enhance programs to maintain licensing and design baselines

NOTE: This program does not replace other TVA verification, evaluation, and corrective action programs.

PROGRAM SCOPE

- o WBN Unit 1 and common
- o Docketed licensing commitments
- o Nuclear Safety Related structures, systems and components

PROGRAM APPROACH

- o Dedicated Program Manager within Division of Nuclear Engineering
- o Planned and proceduralized activities
- o Evaluate and build on SQN program experience
- o Define and implement verification techniques
- o Acceptability based on licensing and/or engineering requirements
- o TVA Corrective Action Systems to document and manage conditions adverse to quality
- o Establish licensing and design program enhancements
- o Quality Assurance Surveillance
- o Engineering Assurance Indepth Technical Audit

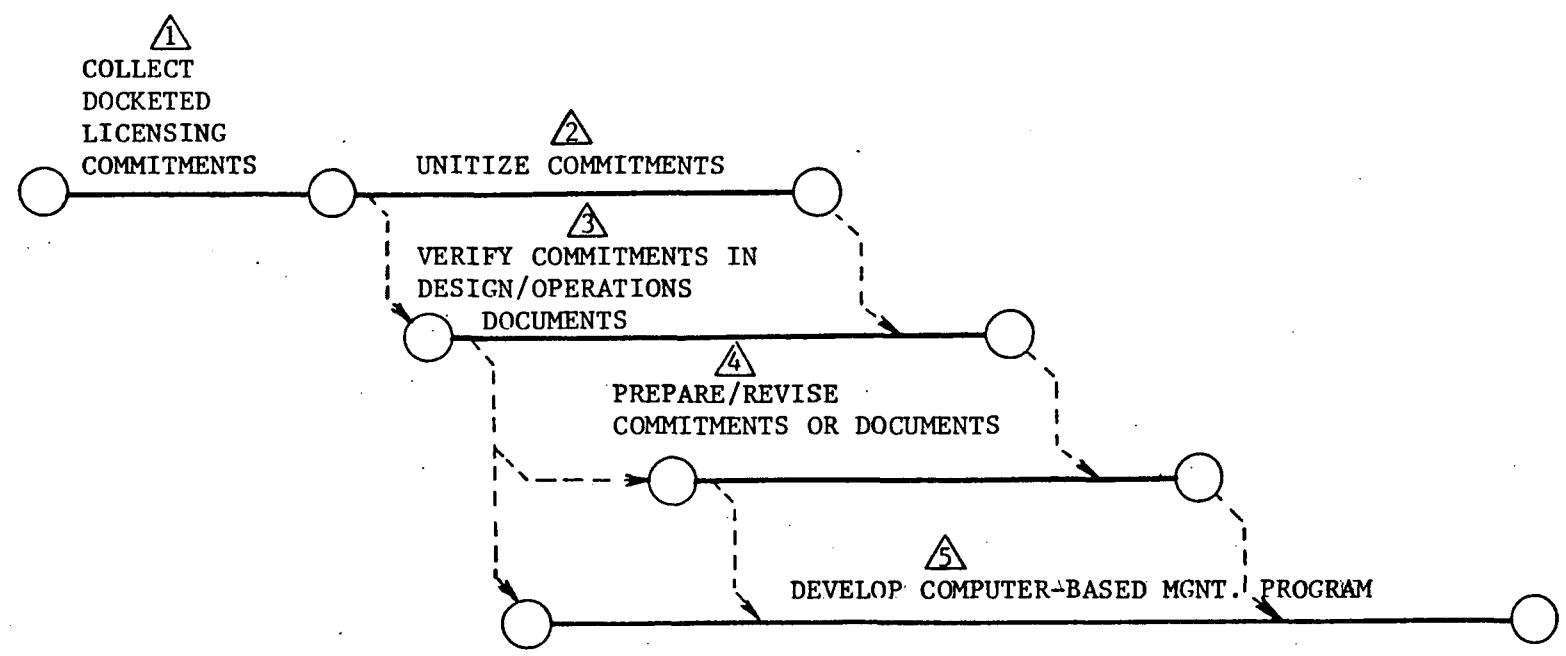
PROGRAM AREAS

- o Licensing
- o Design Bases
- o Design
- o Construction
- o Configuration

LICENSING AREA OBJECTIVES

- o Compile licensing commitments
- o Verify commitments are implemented in TVA documents
- o Reconcile verification results
- o Generate a commitment document matrix cross reference and maintain licensing documentation compatibility

LICENSING

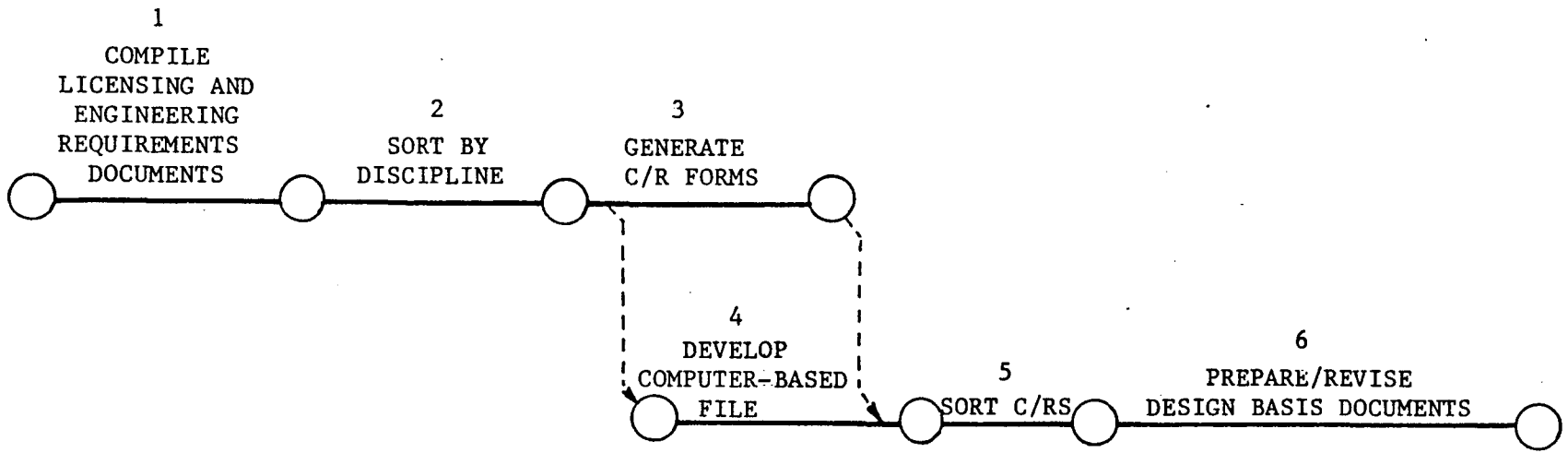


DESIGN BASES AREA OBJECTIVES

- o Compile licensing commitments and engineering requirements which affect plant design bases
- o Verify that the plant design baseline captures appropriate licensing commitments
- o Ensure that the plant design baseline is adequately documented and will be maintained in design criteria and system descriptions

DESIGN BASES

TVA
Atomic Energy
Division



SAMPLE

C/R Data Sheet

(1) C/R No. _____ (2) RIMS No. _____
(3) Topic _____
(120 spaces)

(4) System No. _____ (5) TVA Should Change This Commitment? / /

(6) Structure

(7) Component

1. Aux Bldg.	_____	1. Check Valves	_____	15. Batteries/Chargers	_____
2. Containment	_____	2. Control Valves	_____	16. Cables	_____
3. Control Bldg.	_____	3. Cranes	_____	17. Circuit Breakers	_____
4. Cooling Tower Lift P.S.	_____	4. Dampers	_____	18. Computers	_____
5. Diesel Gen. Bldg.	_____	5. Ducts	_____	19. Control Cabinets	_____
6. ERCW P.S.	_____	6. Fans	_____	20. Diesel Generators	_____
7. Intake P.S.	_____	7. Heaters	_____	21. Fuses	_____
8. Reactor Bldg.	_____	8. Heat Exchangers	_____	22. Instruments	_____
9. Turbine Bldg.	_____	9. Isolation Valves	_____	23. Motor Control Centers	_____
10. Demineralizer Bldg.	_____	10. Piping	_____	24. Motors	_____
11. Hypochlorite Bldg.	_____	11. Piping Supports	_____	25. Penetrations	_____
12. Water Treatment Bldg.	_____	12. Pumps	_____	26. Relays	_____
29. Air Compressor	_____	13. Tanks	_____	27. Switch gear	_____
30. Annunciators	_____	14. Turbines	_____	28. Transformers	_____
31. Barriers	_____	37. Dryers	_____	45. Process Control Cabs	_____
32. Cathode Ray Tubes	_____	38. Electrical Isolaters	_____	46. Reactor Fuel	_____
33. Chillers	_____	39. Gates	_____	47. Reactor Vessel	_____
34. Control Panels	_____	40. Generators	_____	48. Safety-Relief Valves	_____
35. Control Rods/Drive	_____	41. Handswitches	_____	49. Sense Lines	_____
36. Doors	_____	42. Logic Cabinets	_____	50. Steam Generators	_____
		43. Local Instru. Panels	_____	51. Strainers	_____
		44. Orifices	_____	52. Traveling Screens	_____

(8) Source of C/R _____

(9) General Design Criteria Subjects

1. Access/Egress	_____	17. I&C	_____	32. Power Generation	_____
2. Anchorage	_____	18. Installation	_____	33. QA	_____
3. Auxiliary Power	_____	19. Insulation	_____	34. Radiation	_____
4. Classification	_____	20. Lighting	_____	35. Radiation Waste	_____
5. Communications	_____	21. Maintenance	_____	36. Refueling	_____
6. Containment	_____	22. Materials	_____	37. Regulatory Compliance	_____
7. Control/Instr. Power	_____	23. Mech. Components	_____	38. Seismic	_____
8. Design Basis Events	_____	24. Missiles	_____	39. Separation	_____
9. Design of Structure	_____	25. Noise	_____	40. Single Failure	_____
10. Elec. Raceways	_____	26. Operation	_____	41. Site	_____
11. EQ	_____	27. Penetrations	_____	42. System Interactions	_____
12. Fire	_____	28. Pipe Break	_____	43. Testing	_____
13. Floods	_____	29. Piping Analysis	_____	44. Tech. Spec's	_____
14. Hazards	_____	30. Plant Discharges	_____	45. Tornado	_____
15. HVAC	_____	31. Plant Security	_____	46. Vibration	_____
16. Human Factors	_____			47. Water Chemistry	_____

48. Appendix "R" _____
49. Aux Control _____ 50. Instr. Accuracies, Setpoint _____ 51. Main Control Room _____
52. Station Blackout _____

(10) Affected Systems _____
(80 spaces)

(11) Prepared by _____ Date _____
(12) Checked by _____ Date _____
(13) Approved by _____ Date _____
1715C

(14) Action Code
 Add Change
 Delete

DESIGN AREA OBJECTIVES

- o Obtain confidence through selective sampling of elements in safety related systems that design baseline requirements have been properly translated into design output documents used by construction and operations
- o Evaluate any areas of inadequate or improper design and develop needed corrective actions

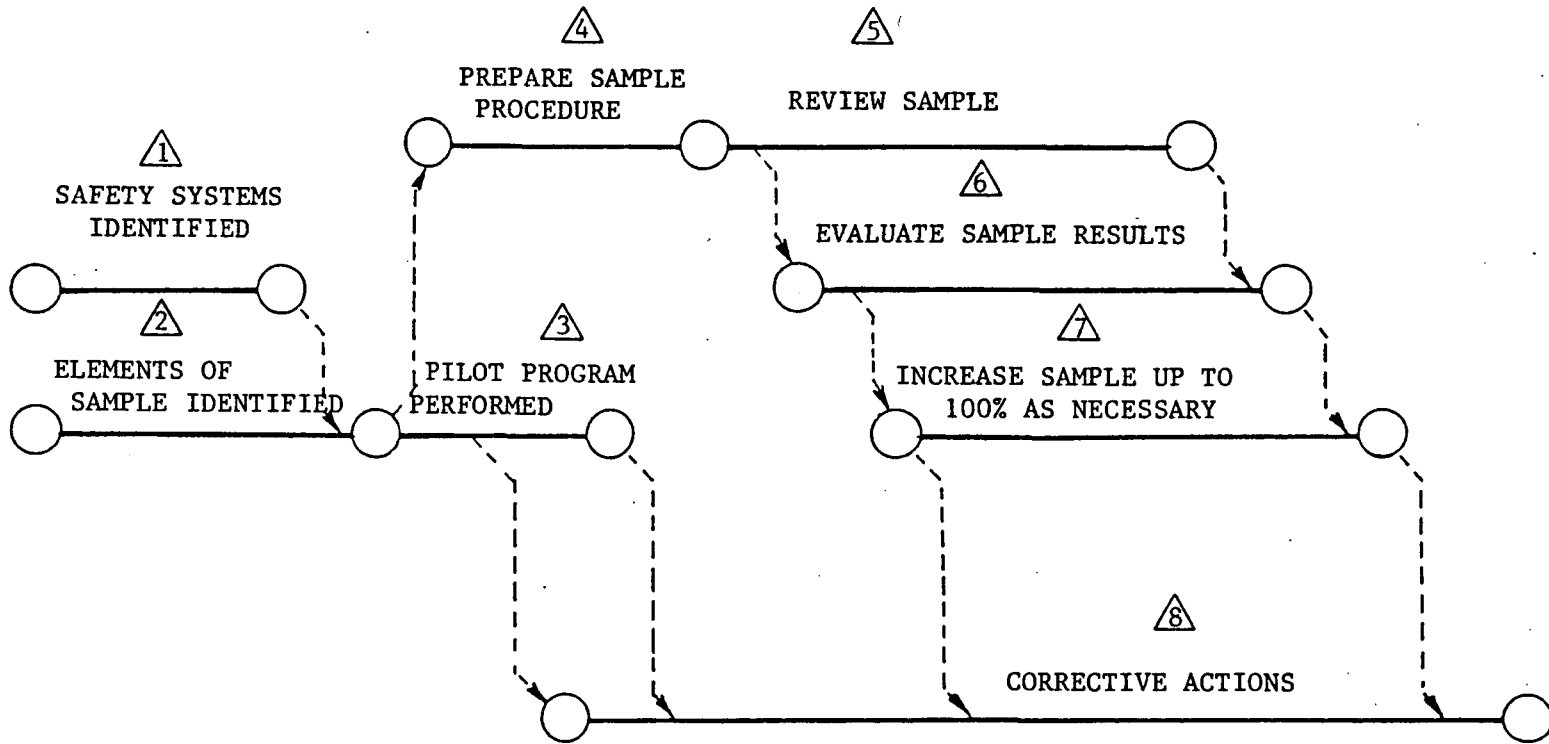
MECHANICAL ELEMENTS

		<i>Residual Heat Removal</i>	<i>Reactor Coolant</i>	<i>Component Cooling Water</i>	<i>Chemical and Volume Control</i>	<i>Essential Raw Cooling Water</i>	<i>ETC. →</i>
PUMPS							
ATTRIBUTES	Sizing						
	Materials						
	Seismic Qual.						
	Anchoring						
	0						
	0						
	0						
Valves							
ATTRIBUTES	Orientation						
	Seismic Qual.						
	Code Class						
	Valve Type						
	Envir. Qual.						
	0						
	0						
	0						

ETC.



DESIGN



CONSTRUCTION AREA OBJECTIVES

- o Obtain confidence through selective sampling of elements in safety related systems that design requirements have been satisfactorily implemented in the plant
- o Evaluate any areas of improper or inadequate construction and develop needed corrective actions

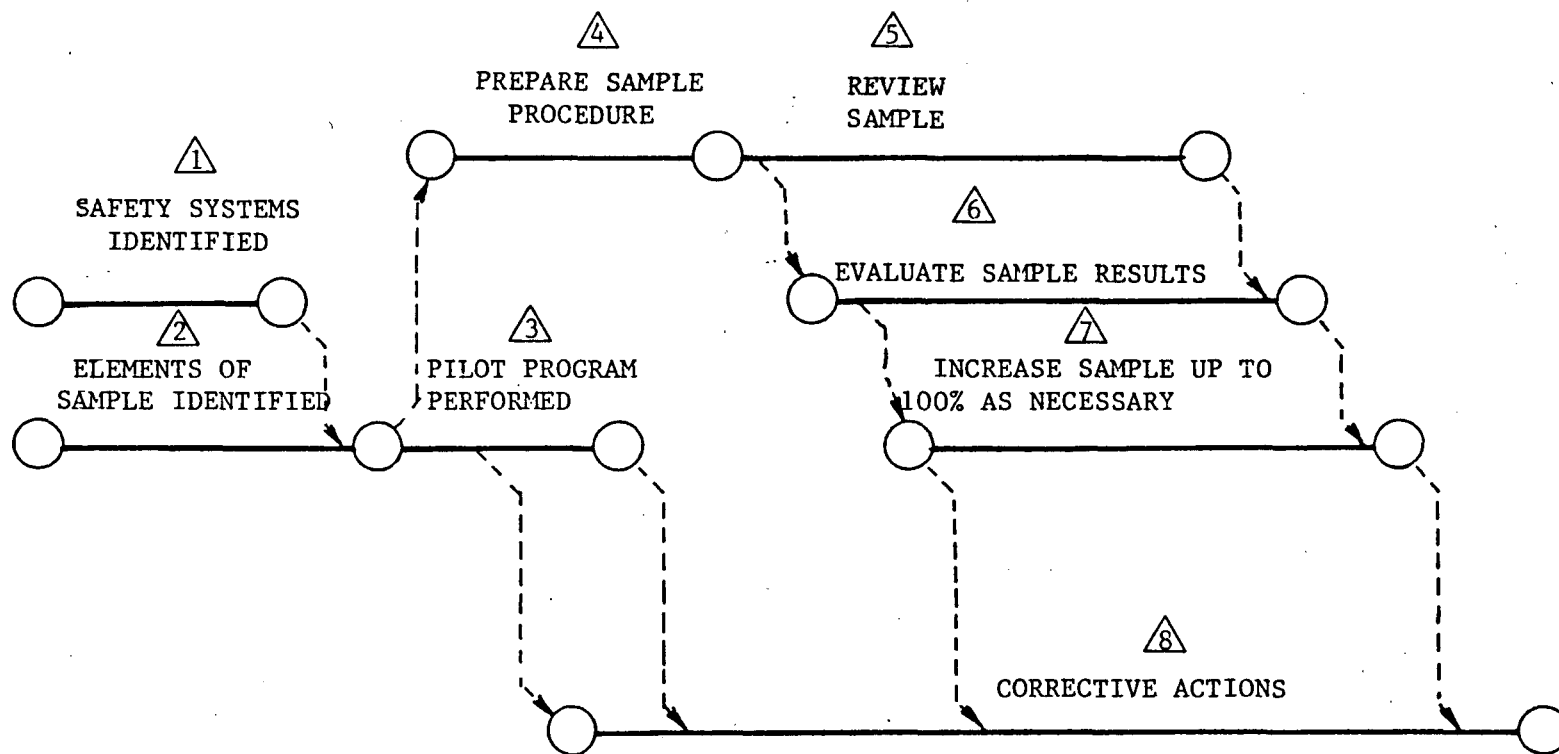
MECHANICAL ELEMENTS

		<i>Residual Heat Removal</i>	<i>Reactor Coolant</i>	<i>Component Cooling Water</i>	<i>Chemical and Volume Control</i>	<i>Essential Raw Cooling Water</i>	<i>ETC. →</i>
VALVES & OPERATORS							
ATTRIBUTES	Orientation						
	Materials						
	Packing Seals						
	Bolting						
	Locking Devices						
	0						
	0						
PIPING							
ATTRIBUTES	Idnet./Marking						
	Tapes/Adhesives						
	Pipe Clearance						
	Pipe Bending						
	Insulation						
	0						
	0						
0							

ETC.
 ↓

CONSTRUCTION

TVA
Energy Research Corp.

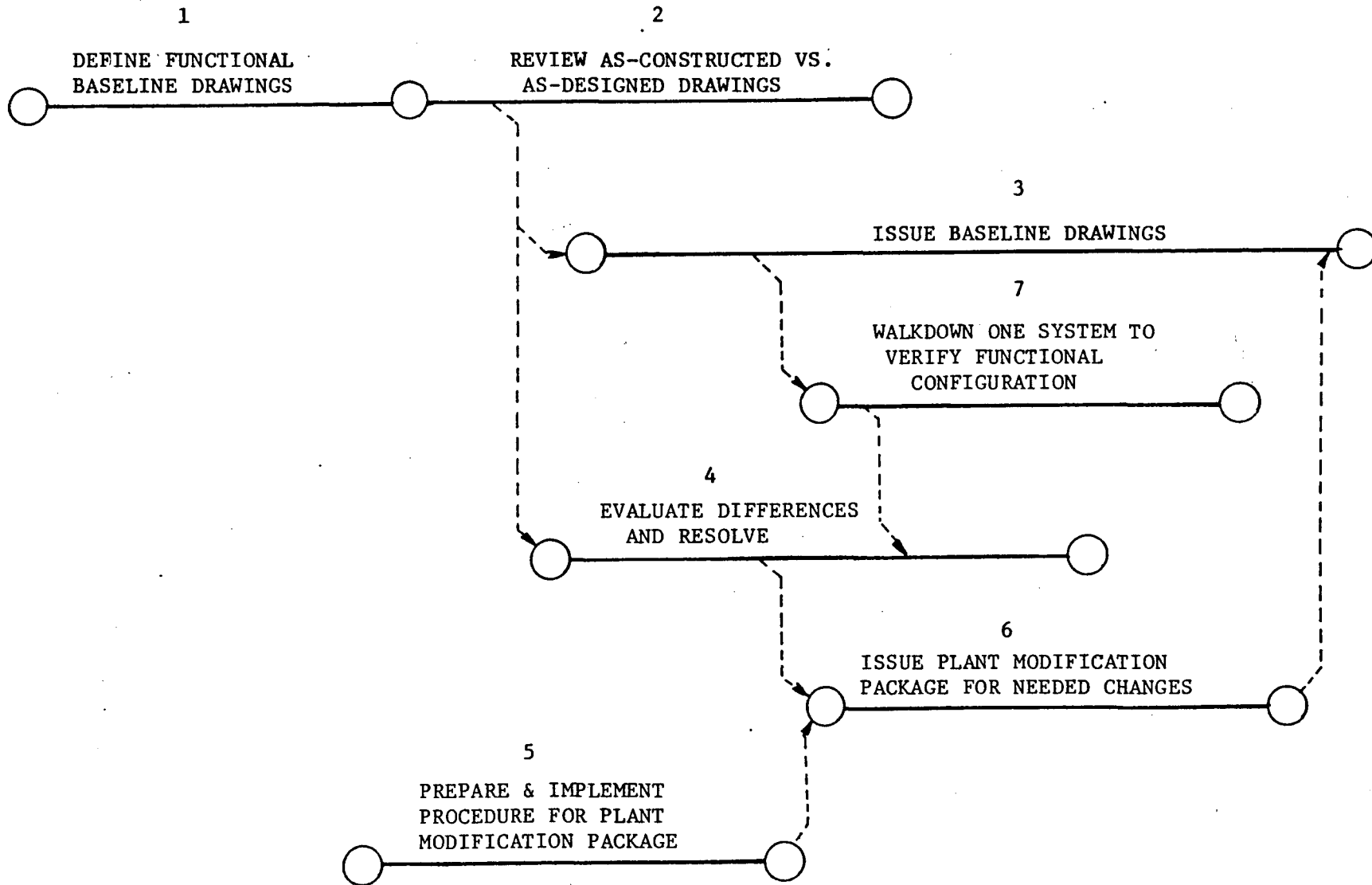


CONFIGURATION AREA OBJECTIVES

- o Define a Plant Modification Package (PMP) program which will ensure that design changes include appropriate revisions to affected licensing and design documents.
- o Define a single set of Baseline Drawings which will reflect the functional/operational as-built condition of the plant. The PMP program will ensure that these drawings are maintained up-to-date.
- o Review the "as-designed" and "as-constructed" drawing's to be baselined, perform an engineering evaluation of the differences, and produce a complete set of Baseline Drawings.
- o Obtain confidence in the accuracy of the Baseline Drawings by verifying that they reflect the as-built configuration. This will be verified by the walkdown of one safety related system.

CONFIGURATION

TVA
American
Electric
Power
Company

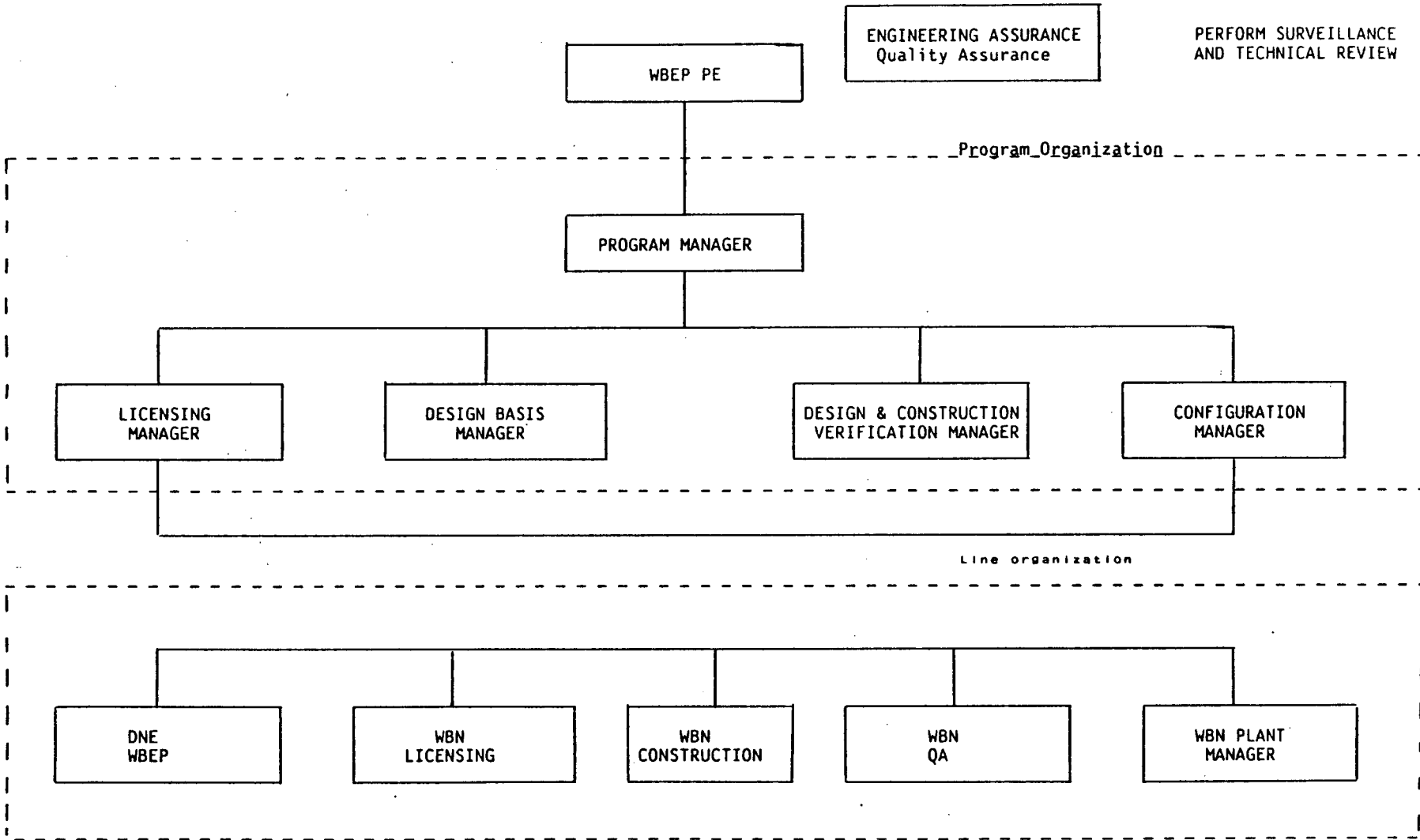


ORGANIZATION FOR
WBN DESIGN BASELINE AND LICENSING VERIFICATION PROGRAM



ENGINEERING ASSURANCE
Quality Assurance

PERFORM SURVEILLANCE
AND TECHNICAL REVIEW



The program manager and his organization will interface with the existing organizations to accomplish the work required by this program.

QUALITY ASSURANCE SURVEILLANCE

OF THE

WATTS BAR DESIGN BASELINE AND LICENSING VERIFICATION PROGRAM

SURVEILLANCE TEAM

- o Headed by Senior Quality Manager
- o Dedicated effort for life of program
- o Team size currently planned at 6 to 8 evaluators
- o Training
 - Auditor or INPO Observation Training
 - Procedures applicable to activity being surveyed

DESIGN BASELINE & LICENSING VERIFICATION SURVEILLANCE SCHEDULE

EXAMPLE OF SCHEDULING METHOD

ACTIVITY	MONTHS									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>
	**									
Procedure No. XXX	#####									
	**									
Training	#####									
			****		***					
ID Design Elements			#####	#####	#####	#####	#####	#####	#####	#####
		****						***		
ID Const. Elements		#####	#####	#####	#####	#####	#####	#####	#####	#####

Validate Commitment			#####	#####	#####	#####	#####	#####	#####	#####

ID Safety Systems						#####	#####	#####	#####	#####

Modify FSAR								#####		

Evaluate Samples						#####	#####	#####	#####	#####

EXAMPLE ONLY

ACTUAL SCHEDULE BEING DEVELOPED

- * - Surveillance Activity
- # - Program Activity

EXAMPLE
SURVEILLANCE CHECKLIST

TVA
Federal Energy
Regulatory
Commission

Activity Design Criteria Identification and Documentation by XYZ Co. Inc.

Surveillance Number: _____

Page 1 of 2

Prepared by: _____ Approved by: _____

CHECKLIST ITEM	(1) A	(1) D	(2) NA	(2) NC
I. Verify that XYZ Co. Instruction 0060-593-PI-1, "Design Criteria Identification and Documentation," was issued and implemented during XYZ Co.'s review.	()	()	()	()
II. Verify that XYZ Co. project team members were trained to the instruction controlling the activity.	()	()	()	()
III. Verify that the following documents have been received and are being reviewed by XYZ Co.: (Reference: B45 860730 251)	()	()	()	()
a. WBN FSAR				
b. SER (including supplements)				
c. NRC-NRR request for additional information (TVA response)				
d. 10CFR50-55(e) reports (final)				
e. TVA response to NRC-OIE violations/deviations/infractions				
f. TVA response to NRC-OIE Bulletins				
g. TVA response to NRC COA/show-cause letters				
h. Meeting notes on TVA meetings with NRC, ACRS, AEC, or ASLB				
i. LER (none issued on WBN)				
j. TMI "Blue Book" and "Green Book"				
k. TVA Nuclear Performance Plan				

For a selected sample of documentation:

IV. Verify that the responsibility assignments are documented using the Commitment Document Assignment (CDA) sheet. (XYZ Co. Project Instruction 0060-593-PI-1, para. 3.1.1)	()	()	()	()
V. Verify that all documentation provided by TVA was recorded on a CDA sheet as either a commitment/requirement or N/A. (XYZ Co. Project Instruction 0060-593-PI-1, para. 3.1.1)	()	()	()	()

SURVEILLANCE OBSERVATION FORM

SURVEILLANCE NO. _____ OBSERVATION No. _____ DATE: _____

OBSERVATION:

ACTIONS:

DATE TO BE COMPLETED: _____

RESPONSIBLE MANAGER: _____ DATE: _____

EVALUATOR: _____ DATE: _____

OBSERVATION
CLOSED BY: _____ DATE: _____

VERIFICATION COMMENTS:

SURVEILLANCE REPORT

Title: _____

Surveillance Report No.: _____

Page ____ of ____

Report Category: _____

Performance Dates: _____ to _____

Surveillance Participants:

<u>Name</u>	<u>Organization</u>
_____	_____
_____	_____
_____	_____

Personnel Contacted:

<u>Name</u>	<u>Organization</u>
<u>(List individuals contacted</u>	
<u>during the course of the</u>	
<u>surveillance. Add asterisk</u>	
<u>for responsible manager)</u>	
_____	_____

SURVEILLANCE BRIEF

SCOPE

(Briefly describe the purpose and scope of the review.)

SURVEILLANCE RESULTS SUMMARY

(Summarize your conclusions.)

Prepared by: _____ Date: _____

ENGINEERING ASSURANCE TECHNICAL AUDIT
FOR THE
WATTS BAR DESIGN BASELINE AND LICENSING VERIFICATION
PROGRAM

PURPOSE OF EA TECHNICAL AUDIT FOR WBN:

- o EVALUATE THE TECHNICAL ADEQUACY AND QUALITY OF DESIGNS USED IN CONSTRUCTING THE PLANT
- o EVALUATE THE CONTROL OF THE DESIGN PROCESS
- o PROVIDE ADDED ASSURANCE OF TECHNICAL ACCEPTABILITY OF DESIGN BASELINE AND LICENSING VERIFICATION PROGRAM RESULTS

APPROACH TO IN-DEPTH TECHNICAL AUDIT

- 0 AUDIT PLAN TO BE ISSUED FOR THE ENGINEERING ASSURANCE REVIEW
- 0 DETAILED CHECKLISTS USED TO PERFORM REVIEW
- 0 APPROPRIATE SAMPLE OF WORK FROM EVERY AREA OF ACTIVITY
- 0 IMMEDIATE NOTIFICATION OF CONCERNS/PROBLEMS TO PROJECT VIA ACTION ITEMS
- 0 IN-PROCESS RESOLUTION OF CONCERNS/PROBLEMS

DISTINCTION BETWEEN PROGRAM/TECHNICAL AUDITS

TYPE OF AUDITPRIMARY FOCUS

PROGRAM

PROCEDURES

CONTROLS

REVIEW AND APPROVALS

DOCUMENTATION

IN-DEPTH TECHNICAL

DESIGN CONSISTENCY

TECHNICAL ADEQUACY

TECHNICAL AUDITS MORE CRITICALLY AND THOROUGHLY EVALUATE THE
TECHNICAL ASPECTS OF THE ENGINEERING PROCESS AND ITS PRODUCTS

IN-DEPTH TECHNICAL AUDIT FOR WBN PROJECT

- o DESIGN REVIEW OF TWO SYSTEMS (VERTICAL SLICE REVIEW)
 - FLUID SYSTEM
 - ELECTRICAL SYSTEM
- o MULTIDISCIPLINE TEAM OF SENIOR EXPERIENCED ENGINEERS

SYSTEM SELECTION CRITERIA

- 0 PERFORMS SAFETY-RELATED FUNCTIONS
- 0 CONTAINS MULTIDISCIPLINE INPUTS AND INVOLVEMENTS
- 0 INTERFACES WITH OTHER SYSTEMS
- 0 HAS DIFFERENT MODES OF OPERATION

AUDIT TEAM

- 0 LED BY ENGINEERING ASSURANCE
- 0 CONSISTS OF SENIOR ENGINEERS WITH EXPERIENCE IN EACH OF THE TECHNICAL DISCIPLINES BEING REVIEWED
- 0 AUDIT TEAM PERSONNEL ARE INDEPENDENT OF ANY DIRECT RESPONSIBILITY FOR PERFORMANCE OF THE ACTIVITIES BEING AUDITED
- 0 TEAM EXPERIENCE FROM SQN OVERSIGHT REVIEW WILL BE UTILIZED

ACTION ITEMS

- o ACTION ITEMS ISSUED AS SOON AS PROBLEMS IDENTIFIED.
- o PROJECT RESPONSES WILL INCLUDE:
 - CAUSE
 - CORRECTIVE ACTION
 - EXTENT
 - PREVENTIVE ACTION
- o RESPONSES WILL PROVIDE BASIS FOR:
 - FULL EVALUATION OF ACTIONS TAKEN ON THE SPECIFIC ITEM
 - MONITORING OVERALL QUALITY PERFORMANCE

FINAL
ENGINEERING ASSURANCE REPORT

- 0 DETAILED DISCUSSION OF ALL ACTION ITEMS
- 0 INDEPENDENT ASSESSMENT
 - ADEQUACY OF DESIGNS USED IN CONSTRUCTING THE PLANT
 - ADEQUACY AND EFFECTIVENESS OF DESIGN PROCESS
 - ADEQUACY OF PROJECT RESULTS FROM BASELINE PROGRAM
- 0 UNRESOLVED FINDINGS
- 0 CONCLUSION/RECOMMENDATIONS
- 0 ISSUED EXPEDITIOUSLY UPON COMPLETION OF ENGINEERING ASSURANCE REVIEWS
- 0 MADE AVAILABLE FOR NRC REVIEW

SCHEDULE FOR IN-DEPTH TECHNICAL AUDIT

- o TO BE INITIATED WHEN BASELINE VERIFICATION PROGRAM 50-60% COMPLETE.
- o AUDIT WILL CONSIDER THE RESULTS OF THE WBN EA/QA SURVEILLANCE ALREADY COMPLETED.

2 SEP 1986


- 2 -


3. Describe criteria for doing additional walkdowns if the one-system walkdown (performed under the Configuration review) uncovers significant discrepancies.
4. Clarify differences between the Construction Verification program and the Configuration program.
5. Ensure the baseline drawing list includes, but is not limited to, the schematics, logic diagrams, and on-line system and control diagrams for Electrical and I&C diagrams. TVA should clarify which drawings are going to be deferred, and the duration of the deferral.
6. Provide a list of input and output documents.
7. Consider choosing a system for the Engineering Assurance review that, among other criteria,:
 - a. interfaces with vendor designs
 - b. is primarily a TVA design
 - c. is different than that reviewed under the Configuration review of the DBLVP, and
 - d. is different than the auxiliary feedwater system (reviewed during the Black & Veatch IDVP), unless justification is provided for reviewing that system.
8. Since certain elements of structures, systems, or components reviewed in other programs are not to be rereviewed under the DBLVP, describe how TVA will ensure that all deviations found (and determined acceptable-for-service under these other programs) will be factored into the overall analysis of these structures, systems, or components to assure there are no unacceptable compounding effects.

TVA indicated they would consider the staff's comments in finalizing the DBVLP plan and procedures.

Thomas J. Kenyon, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosure: As stated


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