JAN 14 1991

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Docket Nos. 50-390, 50-391
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Mr. Oliver D. Kingsley, Jr.
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Dear Mr. Kingsley:

SUBJECT: SUMMARY OF DECEMBER 12, 1990, TVA/NRC MEETING ON WATTS BAR QUALITY ASSURANCE RECORDS

This letter refers to the meeting held on December 12, 1990, in the Region II office in Atlanta, Georgia. The purpose of the meeting was to discuss TVA plans to assess the quality of required records for Watts Bar. A list of attendees, a summary of the meeting and a copy of your handout are enclosed.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2 Title 10, Code of Federal Regulations, a copy of this letter and its enclosures will be placed in the NRC Public Document Room.

Should you have any questions concerning this matter, please contact us.

Sincerely,

(original signed by Paul Kellogg)

Bruce A. Wilson, Chief
TVA Projects

Enclosures:
1. List of Attendees
2. Meeting Summary
3. Handout

cc w/encls: (See page 2)

120052

1/A-3 IE45

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County Judge
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Dr. Henry Myers, Science Advisor
Committee on Interior and
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U. S. House of Representatives
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State of Tennessee

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S. Black, NRR
K. P. Barr, TVAP/RII
J. Rutberg, OGC
M. S. Callahan, GPA/CA
A. R. Long, TVAP/RII
G. C. Lainas, NRR
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U.S. Nuclear Regulatory Commission
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TVA/RII
KBarr:vyg
01/10/91

ENCLOSURE 1

ATTENDEES

TVA/NRC MEETING

DECEMBER 12, 1990

Nuclear Regulatory Commission:

K. Barr, Section Chief, Region II (RII)
S. Black, Deputy Director, Project Directorate II-4, Nuclear Reactor Regulation (NRR)
M. Branch, Senior Resident Inspector, Operations, RII
A. Gibson, Director, Division of Reactor Safety, RII
F. Hebdon, Director, Project Directorate II-4, NRR
A. Ignatonis, Technical Assistant, RII
F. Jape, Section Chief, RII
C. Julian, Branch Chief, RII
G. Lainas, Assistant Director, NRR
J. Milhoan, Deputy Regional Administrator, RII
J. Roe, Director, Division of Licensee Performance and Quality Evaluation, NRR
J. Spraul, Quality Assurance Engineer, NRR
P. Tam, Senior Project Manager, NRR
G. Walton, Senior Resident Inspector, Construction, RII
B. Wilson, Chief, TVA Projects, RII

Tennessee Valley Authority:

S. Crowe, Site Quality Manager
J. Garrity, Watts Bar Vice President
R. George, Engineering and Modification Manager
S. Kaplan, Consultant
R. Lewis, Program Team
L. Martin, Nuclear Quality Assurance Manager
J. McDonald, Special Project Manager
M. Medford, Vice President, Nuclear Assurance, Licensing and Fuels
D. Nunn, Vice President, Nuclear Projects
M. Reinders, QA Specialist
R. Stevens, Site Licensing Manager

ENCLOSURE 2

MEETING SUMMARY

This meeting was being held in response to NRC's letter and inspection report evaluating TVA's progress in the area of the QA Records Corrective Action Program.

To systematically evaluate the status of required records for the licensing of Watts Bar, TVA planned to perform an additional evaluation. This evaluation would cover all record types identified in ANSI N45.2.9 available at this time.

TVA identified that NCIG-08 would not be used and previous uses would be eliminated.

The new evaluation would be directed by TVA-Quality Assurance. TVA planned to establish a team of QA people and contractors to perform this evaluation. Supervision of the team would be by QA staff.

TVA identified that previous reviews had evaluated approximately 12,000 of the 3,000,000 records that exist to date. These reviews identified that about ten percent of the records were found with some deficiencies. Deficiencies ranged from the use of "white-out" to a missing record.

TVA's earlier work evaluated about 38 of the 209 record types in ANSI N45.2.9.

TVA identified that their planned evaluation would cover both lifetime and non-permanent types of records. Of the 209 ANSI record types, TVA concluded that 169 are common to several plant elements, 25 are unique record types and 15 are not applicable at the present time. Plant elements which would be required to have records were established by TVA based on the Element/Attribute list developed as part of the Vertical Slice Review of the component cooling water system and emergency power systems.

TVA proposed a sampling strategy to evaluate each record type. TVA proposed to select a minimum sample size of 60 and uniformly distribute the samples selected over the elements containing that record type. For example, for the record type of Design Change Requests, the sample of 60 would be spread over all elements required to have that record such as cable raceway, electrical equipment, large bore piping and all other items from the list of 20 plant elements. If all elements were required to have a generic record type, three records would be sampled from each of the plant elements to determine the quality of that record type.

TVA also proposed that sample results from previous evaluations also be included in the sampling strategy. Under this condition, the previous sample results would be characterized and slotted in the appropriate record type and plant element. Another sample of 60 would be selected and uniformly distributed over plant elements which did not have results from previous studies.

TVA also proposed to separate record deficiencies into two categories: primary and secondary, and provided several examples. TVA indicated that the primary category would be those which give rise to a concern about hardware adequacy while the secondary category were more administrative in nature.

TVA indicated that they planned to continue to sample until they had at least a 95 percent confidence that primary record deficiencies were less than five percent and the secondary deficiencies were less than ten percent for each record type.

Correction of record deficiencies would be addressed by different methods including regeneration of missing records, the use of alternate records or other alternatives identified in NRC's letter to TVA dated October 30, 1990.

TVA planned to provide a comprehensive description of their plan on December 25, 1990, and requested an expeditious review of the plan. TVA also raised the question of whether a confidence level of 95/95 is appropriate for QA records. No confirmation to the proposed 95 percent confidence level could be given at this meeting. More research needs to be done on previous NRC decisions.

NRC plans a detailed review of TVA submittal on the program. Once the program is accepted and started, TVA should provide interim reports of the progress.

NRC noted that there is a lack of safety significance in TVA's approach. Certain records may require a confidence level higher than 95 percent (example: hydrostatic test records for Class I piping). Although a 95 percent confidence level may be acceptable over all, a gradation is preferred based on safety significance.

NRC questioned what information would be obtained from the data contained in vertical axis of the matrix about the confidence of the records for a specific plant element. TVA stated they would look at the information in the various blocks but made no specific commitments regarding this data.

The NRC staff will focus on each of the cells in the matrix and not just on record type.

NRC expressed some concern over the use of previous sampling results in that those results could skew the new evaluation's results. Also, the use of the old results seem to be confusing. NRC requested that TVA report on the results of the 12,000 records sampled. The results should be mapped and more details given on what was found.

Some concern was also expressed regarding this sample size of 60. It was felt that a larger sample size (maybe 100) would provide more confidence.

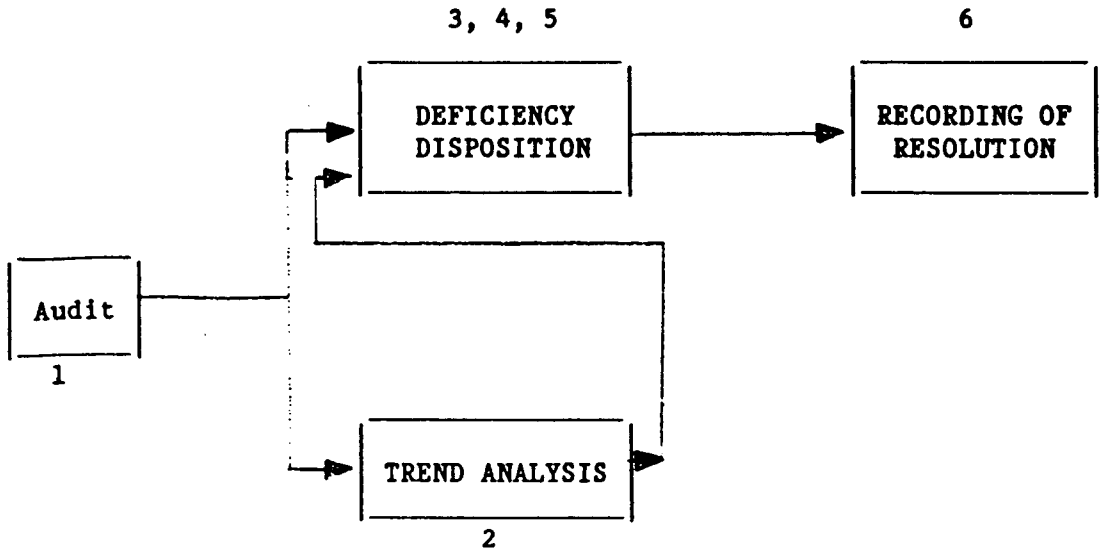
ENCLOSURE 3

MEETING OBJECTIVE

RESOLVE SPECIFIC NRC CONCERNS WITH QUALITY ASSURANCE RECORDS CORRECTIVE ACTION PROGRAM

DEMONSTRATE IMPROVEMENTS IN STANDARDIZING PROGRAM FOR SELECTING, REVIEWING AND EVALUATING WATTS BAR NUCLEAR QA RECORDS

INTRODUCTION



NRC CONCERNS	RESOLUTION
1. AUDIT COVERAGE	ADDITIONAL REVIEW
2. SIGNIFICANCE TRENDING CRITERIA	CRITERIA FOR COLLECTIVE SIGNIFICANCE, BOUNDING
3. USE OF ALTERNATE RECORDS FOR MISSING RECORDS	USE OF NRC LETTER, OCTOBER 30, 1990
4. NCIG-08	NO LONGER USED (PREVIOUS USE ELIMINATED, NOT TO BE USED IN FUTURE)
5. REINSPECTION/RETEST TO SAME CRITERIA AS ORIGINAL	EQUIVALENT OR JUSTIFIED
6. CAP/SPECIAL PROGRAM RECORDS	DEMONSTRATE QUALIFICATION, RETRIEVABLE

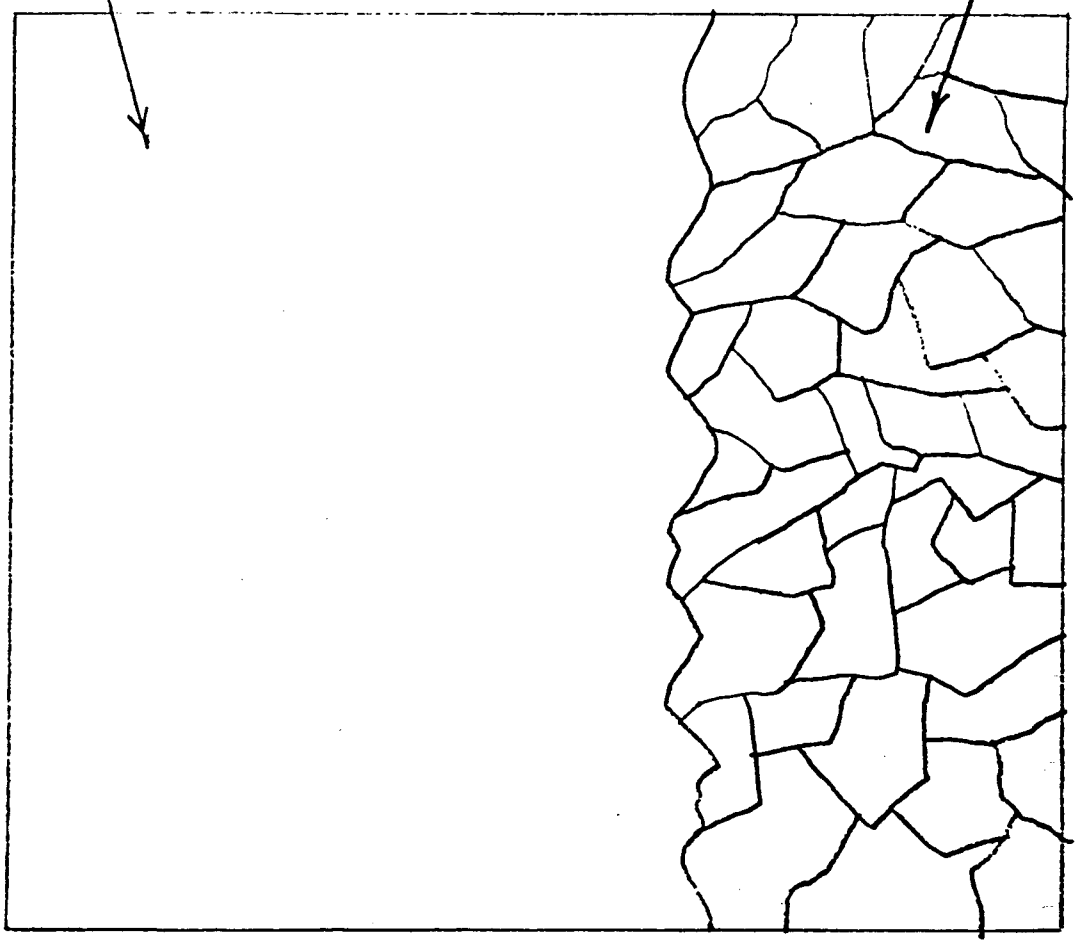
2194U

WATTS BAR NUCLEAR PLANT

RECORDS FOR LICENSING

ACCEPTABLE RECORDS CONFIRMED
OR DISPOSITIONED UNDER QA
RECORDS CAP AND/OR NRC
LETTER, OCTOBER 30, 1990

RECORDS RECONFIRMED
RECREATED BY CAP/SPs



2194U

PRESENT KNOWLEDGE OF WATTS BAR NUCLEAR RECORDS

FROM PREVIOUS REVIEWS

- REVIEWED APPROXIMATELY 12,000 OF 3,000,000 RECORDS
  - APPROXIMATELY 10 PERCENT TOTAL DEFICIENCES
  - FEW RECORDS INACCURACIES NOTED
  - NO HARDWARE DEFICIENCES INDICATED BY RECORDS QUALITY PROBLEMS
  - NO EVIDENCE OF CONCEALED OR OTHERWISE FALSIFIED INFORMATION
  - 99.3 PERCENT RECORDS RETRIEVED
  - NO GROUP OR TYPE OF RECORDS MISSING

- PREVIOUS SAMPLE IS "FOCUSED", THAT IS LIMITED TO APPROXIMATELY 38 of 209 ANSI N45.2.9 RECORD TYPES

- NRC STAFF POSITION REQUIRES "SYSTEMATIC" SAMPLE (BROAD ANSI COVERAGE)

2194U

ANSI RECORD TYPES

COMMON TO SEVERAL PLANT ELEMENTS (169)

- DESIGN CHANGE REQUESTS
- PROCUREMENT SPECIFICATIONS
- CERTIFICATE OF INSPECTION AND TEST PERSONNEL QUALIFICATION
- NONCONFORMANCE REPORTS
- AGGREGATE TEST REPORTS
- HEAT TREATMENT PROCEDURES
- CODE DATA REPORTS
- CABLE PULLING PROCEDURES
- FIELD AUDIT REPORTS
- SPECIAL TOOL CALIBRATION RECORDS

UNIQUE RECORDS (25)

- HYDROSTATIC PRESSURE TEST PROCEDURES AND RESULTS
- PREOPERATIONAL TEST PROCEDURES AND RESULTS
- WATER CHEMISTRY REPORTS

NOT APPLICABLE (15)

- INITIAL PLANT LOADING DATA
- RADIOACTIVITY LEVELS OF LIQUID AND GASEOUS WASTE RELEASED TO ENVIRONMENT
- ABNORMAL OCCURRENCE RECORDS

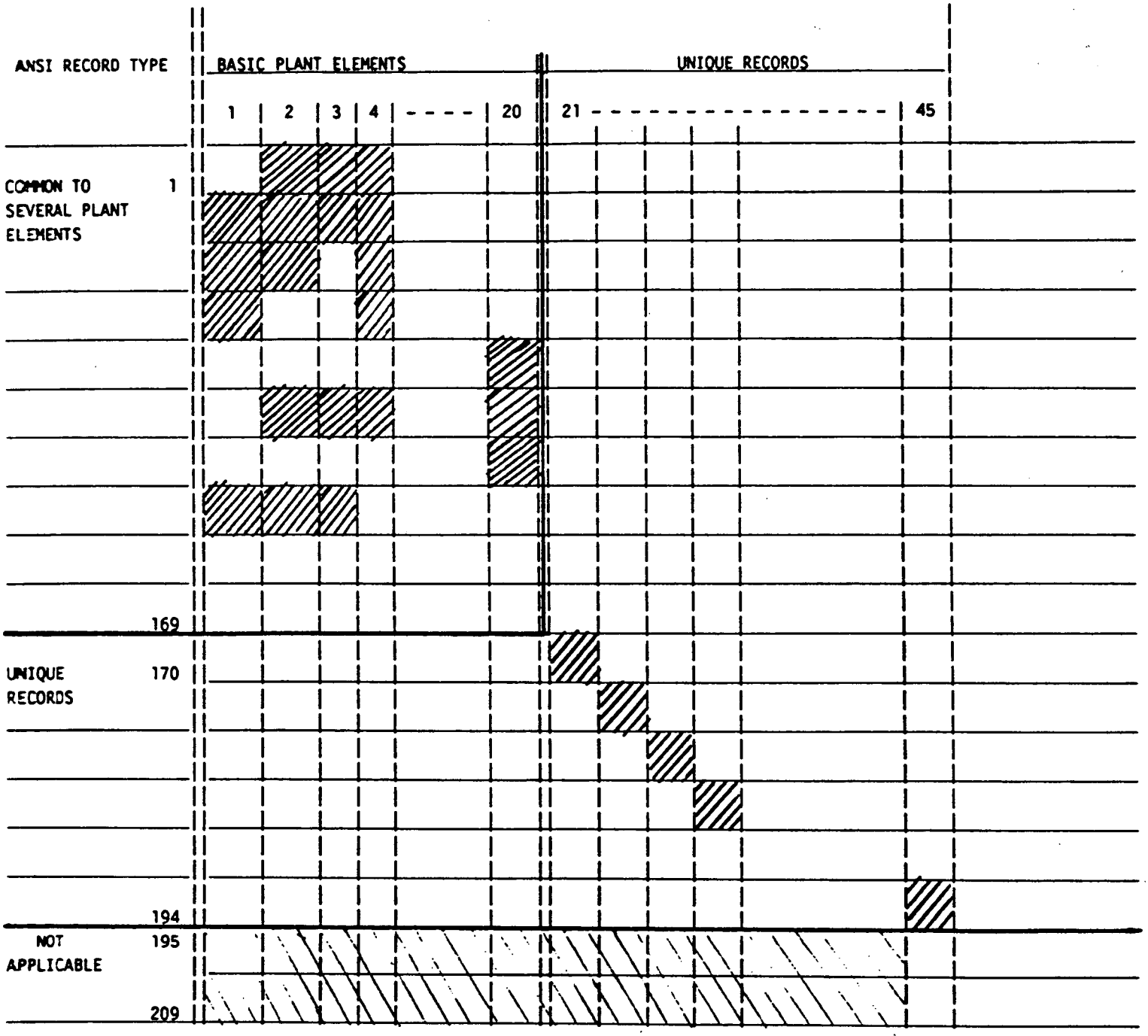
2194U

PLANT ELEMENTS

20 PLANT ELEMENT TYPES

1. CABLE
2. CABLE RACEWAY
3. CABLE RACEWAY SUPPORTS
4. ELECTRICAL EQUIPMENT
5. HVAC DUCT AND EQUIPMENT
6. HVAC SUPPORTS
7. INSTRUMENTS
8. INSTRUMENT LINES
9. INSTRUMENT LINE SUPPORTS
10. LARGE BORE PIPING
11. LARGE BORE PIPING SUPPORTS
12. SMALL BORE PIPING
13. SMALL BORE PIPING SUPPORTS
14. VALVES
15. MECHANICAL EQUIPMENT
16. CONCRETE STRUCTURES
17. FOUNDATIONS
18. STRUCTURAL STEEL / MISC. STEEL
19. MASONARY WALLS
20. COATINGS

STRUCTURE OF RECORD SPACE

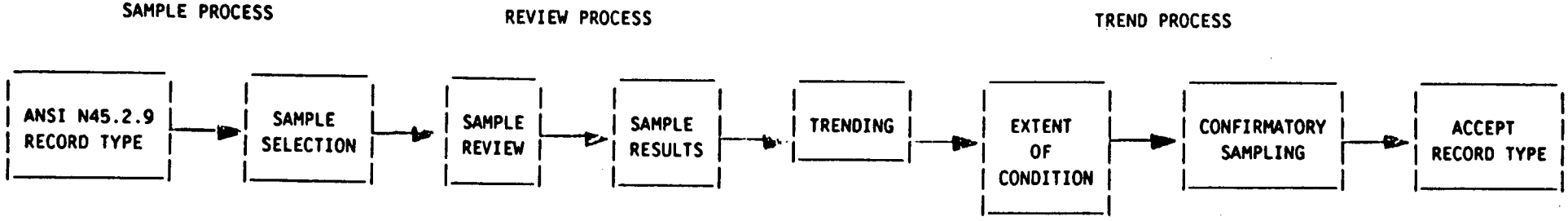


- Cross-hatched records required for element
- 20 elements have much record commonality
- 25 unique records not tied to elements
- 15 record types not yet required

DEFINITIONS OF DEFICIENCY CATEGORIES

CATEGORY		EXAMPLES
Primary		
1.	Existence	Record missing
2.	Incomplete Results Data	Results blank, N/A in error
Secondary		
3.	Incomplete References/ Authorization	Authorization not signed, not initialed, not dated Referencing blank or N/A in error
4.	Legibility	Results, authorization, referencing illegible
5.	Referencing	Reference incorrect procedure, Revision level, or component identifier
6.	Incorrect Changes	Results, references, or authorizations changed by White-out, Cross-out not initialed and dated

ADDITIONAL REVIEW AND TRENDING



PROPOSED SAMPLING PLAN

- SAMPLE MINIMUM 60 RECORDS PER ANSI RECORD TYPE
- DISTRIBUTE EVENLY OVER ELEMENTS
- MAKE APPROPRIATE USE OF PREVIOUS SAMPLING
- RECORD OF CURRENT CONFIGURATION
- CONTINUE SAMPLING UNTIL AT LEAST 95% CONFIDENCE FOR EACH RECORD TYPE THAT:
  - PRIMARY DEFICIENCIES <5% ($\leq$1/60)
  - SECONDARY DEFICIENCIES <10% ($\leq$3/60)
- EOC BOUND AND RESOLVE WHEN ABOVE CRITERIA NOT MET
- CONFIRMATORY SAMPLING UNTIL ABOVE CRITERIA MET
- IDENTIFIED RECORD DEFICIENCIES IN SAMPLE ARE CORRECTED, REGENERATED, OR DEALT WITH IN ACCORDANCE WITH THE NRC OCTOBER 30, 1990 LETTER
- ASSOCIATED HARDWARE DEFICIENCIES, IF ANY, ARE CORRECTED, INCLUDING GENERIC CORRECTION FOR DESIGN SIGNIFICANT DEFICIENCIES

CONCLUSIONS

- NRC RAISED SEVERAL VALID ISSUES WITH QA RECORDS CAP
- TVA HAS PROVIDED A SYSTEMATIC RESPONSE TO RESOLVE SPECIFIC NRC CONCERNS AND TO STANDARDIZE PROGRAM METHODOLOGY AND RECORDING OF RESULTS
- POSITIONS WILL BE FORMALLY SUBMITTED BY DECEMBER 25, 1990

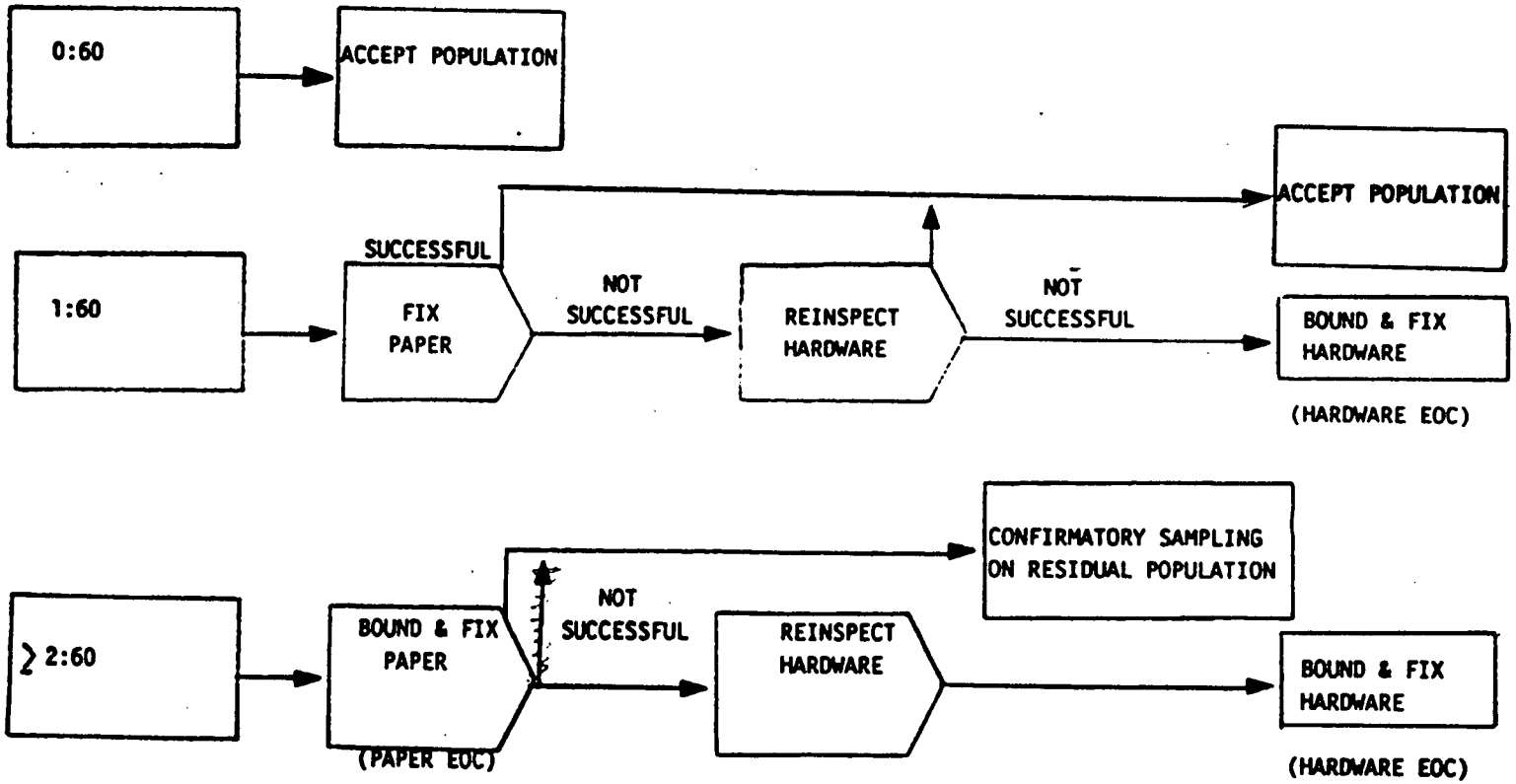
2194U

ADDITIONAL NRC CONCERNS	RESOLUTION NEEDING CLOSURE
THE ADEQUACY OF AUDIT COVERAGE OF RECORDS REQUIRED BY CODES (BEYOND ANSI N.45.2.9).	ANSI N45.2.9 ADEQUATELY COVERS THE RECORDS REQUIRED BY CODES
RECORDS RETRIEVAL GUIDE NOT SUBJECT TO QA SOFTWARE. THIS RESULTS IN AN ESSENTIAL PART OF THE DOCUMENT CONTROL RECORDS MANAGEMENT SYSTEM NOT BEING ADEQUATELY CONTROLLED.	QA PROGRAM IN PLACE AND RETRIEVAL WORKING

EXAMPLE OF SAMPLING RESULTS DISPOSITION

ANSI RECORD CATEGORY: HYDROSTATIC TEST RECORDS

SAMPLE (PRIMARY DEFECTS) RESULTS



*FIX PAPER = CORRECT, REGENERATE, OR DEAL WITH PER NRC LETTER 10/30/90