RESPONSE TO NRC 6/28/77 REQUEST FOR ADDL INFO ON INSERVICE INSPECTION PROGRAM: W/ATTACHED ENCLOSURES 1 thru 5 ....DOCKET NO. 50-272
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ENCLOSURE 1

ADDITIONAL INFORMATION FOR
REVIEW OF PROPOSED INSERVICE INSPECTION AND TESTING PROGRAMS
SALEM NUCLEAR GENERATING STATION

I. INSERVICE INSPECTION

A. Examination categories missing from Table 1 (Class 1 examinations) were omitted only because there are no components or examination areas in Salem Unit No. 1 which fall into these categories. Table 1 has been revised to include these categories with an appropriate notation and the revised table is included in Attachment 1.

B. Omissions in Table 2 (Class 2 examinations) had the same basis as Table 1. Table 2 has been revised in a like manner and included in Attachment 1.

C. Many components in Table 3 (Class 3 examinations) were incorrectly classified due to a misinterpretation of NRC Regulatory Guide 1.26. These components have been designated as Class 2 for inspection purposes and moved from Table 3 to Table 2. Furthermore, some new components have been added to the revised Table 3 which is included in Attachment 1.

II. EXCEPTION TO SECTION XI REQUIREMENTS

A. General

1. Examination of bolting under categories B-G-1 and B-G-2 will be performed in accordance with Code requirements. Since the 1974 Edition of Section IX does not require bolting in these categories to be removed for examination purposes only, examination will be done with the bolts in place wherever possible. All bolts in Category B-G-1, except three bolts in each of the four reactor coolant pumps, will be examined ultrasonically in place during the inspection interval. The three bolts which are inaccessible due to interference from structural members and piping will be examined at or near the end of the inspection interval when the pumps are disassembled for maintenance. All bolts in Category B-G-2 will be examined visually during the inspection interval. If visual examination reveals indications of distress, the bolts will be removed for surface and/or volumetric examination.

2. Pumps and valves will be disassembled for visual examination of internal pressure boundary surfaces as required by Section XI if disassembly does not become necessary for other reasons.

3. Ultrasonic indications will be recorded at 50% of reference level (DAC) unless suspected by the examiner to be other than geometric in origin, in which case they will be recorded and investigated by a Level II or Level III examiner if in excess of 20% of DAC. All indications above 100% DAC will be resolved as to their shape and identity by a Level II or Level III Examiner. Justification for departure from a 20% reference level evaluation criterion for all UT examinations is explained in detail in Attachment 2, prepared by Southwest Research Institute as agents for PSE&G.

4. Ultrasonic examination of ferritic piping will be performed in accordance with Article 5 of Section V of the ASME Boiler and Pressure Vessel Code with the exception that all indications will be recorded and evaluated as indicated in paragraph 3 above.

B. Nuclear Class 1 Components

1. Inaccessibility for examination was established during the Preservice Inspection and has been described in Tables 1 and 2 of the Salem No. 1 Preoperational Baseline Examination Report. Those items which could not be examined due to inaccessibility have been extracted from these tables and compiled into an abbreviated table which has been included as Attachment 3 for convenient reference. Comments in these tables are necessarily brief. Information in greater detail has been provided in the way of additional comments, also included as part of Attachment 3. Consideration of alternate methods are discussed and in some cases sketches are attached for greater clarity.

2. Welds having limited ultrasonic examinations are treated in the same manner and are included in the tables and comments mentioned above. No distinction is made between items having no accessibility and limited inspectability except in the nature of the comment. Detailed radiographic procedures for augmented or alternative examinations will be prepared at such time as the need arises in order to take advantage of the possibility of more advanced technology at that time.

C. Nuclear Class 2 Components

1. It is the position of PSE&G that tests designated in Section XI as hydrostatic pressure tests are not true hydrostatic tests in the usual connotation of that term in that they do not provide proof testing of systems already tested at 1.25 P_D and higher, but are merely leak tests. It had been the intention of PSE&G to limit all such tests to 1.10 P_D to avoid functional problems that might be associated with higher pressures, to provide consistency among all three classes of systems, and to provide consistency with anticipated changes in future Code editions. However, the anticipated changes, as presently voted by the ASME Code Committees, do not provide sufficient relief to warrant a departure from existing Code rules, and the Salem Plan will be revised to show a test pressure of 1.25 P_D for Class 2 systems.

2. Surface examination will be used to augment ultrasonic examination whenever Section XI requirements cannot be fully complied with, such as on welds in Category C-F where UT examinations cannot be performed from either side of the weld.

III. INSERVICE TESTING OF PUMPS

A. Statements made in Enclosure 2 of the 2/28/77 submittal regarding the applicable Code edition and addenda for pump testing were written to conform with the Salem Technical Specifications. These, in turn, were written to conform with the Standardized Technical Specifications submitted by the NRC, which in themselves were apparently in error. The Inservice Testing Program for Pumps is being revised to show conformance to the 1974 Edition and Addenda through the summer 1975.

B. Pump bearing temperature is included as a parameter to be measured in the Salem pump testing program as stated in the fourth paragraph on page 1 of pump testing program (Enclosure 2 of the 2/28/77 submittal).

C. The transducer type electronic flow measuring devices described in the Pump Testing Program for measuring pumped fluid flow rate have proven successful and alternate means of testing will not be necessary.

IV. INSERVICE TESTING VALVES

A. Category A, B. (and C) Valves

1. Reasons for not full or part-stroke exercising Category C check valves identified by note (1) in enclosure 3 of the 2/28/77 submittal are described in detail in Attachment 4.

2. Reasons for exercise frequency of Category C valves identified by note (2) in enclosure 3 are also described in Attachment 4. In addition, some exceptions indicated by note (1) have been deleted and enclosure 3 revised accordingly. The revised enclosure 3 is included with Attachment 4.

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TABLE 1
CLASS 1 COMPONENTS, PARTS AND METHODS OF EXAMINATION

Item No.	Examination Category Table IWB-2500	Components and Parts to be Examined	Method
		Reactor Vessel	
B1.1	B-A	Longitudinal and circumferential shell welds in core region	Volumetric
B1.2	B-B	Longitudinal and circumferential welds in shell (other than those of Category B-A and B-C) and meridional and circumferential seam welds in bottom head and closure	Volumetric
B1.3	B-C	Vessel-to-flange and head-to-flange circumferential welds	Volumetric
B1.4	B-D	Primary nozzle-to-vessel welds and nozzle inside radiused section	Volumetric
B1.5	B-E	Vessel penetrations, including control rod drive and instrumentation penetrations.	Visual (IWA-5000)
B1.6	B-F	Nozzle-to-safe end welds	Volumetric and Surface
B1.7	B-G-1	Closure studs, in place	Volumetric
B1.8	B-G-1	Closure studs with nuts, when removed	Volumetric and Surface
B1.9	B-G-1	Ligaments between threaded stud holes	Volumetric
B1.10	B-G-1	Closure washers, bushings	Visual
B1.11	B-G-2	No components within this category	-
B1.12	B-H	No components within this category	-
B1.13	B-I-1	Closure Head cladding	1) Visual and Surface, or 2) Volumetric
B1.14	B-I-1	Vessel Cladding	Visual
B1.15	B-N-I	Vessel Interior	Visual
B1.16	B-N-2	Interior attachments and core support structures	Visual
B1.17	B-N-3	Core-support structures	Visual
B1.18	B-O	Control rod dirve housings	Volumetric
B1.19	B-P	Exempted components	Visual (IWA-5000)
		Pressurizer	
B2.1	B-B	Longitudinal and circumferential welds	Volumetric
B2.2	B-D	Nozzle-to-vessel radiused section	Volumetric
B2.3	B-E	Heater penetrations	Visual (IWA-5000)
B2.4	B-F	Nozzle-to-safe end welds	Volumetric and surface
B2.5	B-G-1	No components within this category	-
B2.6	B-G-1	No components within this category	-
B2.7	B-G-1	No components within this category	-
B2.8	B-H	No components within this category	-
B2.9	B-I-2	Vessel cladding	Visual
B2.10	B-P	Exempted components	Visual (IWA-5000)
B2.11	B-G-2	Pressure-retaining bolting	Visual

TABLE 1 CONTINUED

Item No.	Examination Category Table IWB-2500	Components and Parts to be Examined	Method
		Steam Generators	
B3.1	B-B	Longitudinal and circumferential welds, including tube sheet-to-head or shell welds on the primary side	Volumetric
B3.2	B-D	Nozzle-to-head welds and nozzle inside radiused section on the primary side	Volumetric
B3.3	B-F	Nozzle-to-safe end welds	Volumetric and surface
B3.4	B-G-1	No components within this category	-
B3.5	B-G-1	No components within this category	-
B3.6	B-G-1	No components within this category	-
B3.7	B-G-1	No components within this category	-
B3.8	B-I-2	Vessel Cladding	Visual
B3.9	B-P	Exempted components	Visual (IWA-5000)
B3.10	B-G-2	Pressure-retaining bolting	Visual
		Tubing	Eddy Current
		Vessel Cladding (Steam Generator #14)	Volumetric
		Piping Pressure Boundary	
B4.1	B-F	Safe-end to piping welds and safe-end in branch piping welds	Volumetric and surface
B4.2	B-G-1	No components within this category	-
B4.3	B-G-1	No components within this category	-
B4.4	B-G-1	No components within this category	-
B4.5	B-J	Circumferential and longitudinal pipe welds	Volumetric
B4.6	B-J	Branch pipe connection welds exceeding six in. diameter	Volumetric
B4.7	B-J	Branch pipe connection welds six in. diameter and smaller	Surface
B4.8	B-J	Socket welds	Surface
B4.9	B-K-1	Integrally welded supports	Volumetric
B4.10	B-K-2	Support components	Visual
B4.11	B-P	Exempted components	Visual (IWA-5000)
B4.12	B-G-2	Pressure-retaining bolting	Visual
		Reactor Coolant Pumps	
B5.1	B-G-1	Pressure-retaining bolts and studs, in place	Volumetric
B5.2	B-G-1	Pressure-retaining bolts and studs, when removed	Volumetric and surface
B5.3	B-G-1	Pressure-retaining bolting	Visual
B5.4	B-K-1	Integrally-welded supports	Volumetric

TABLE 1 CONTINUED

Item No.	Examination Category Table IWB-2500	Components and Parts to be Examined	Method
B5.5	B-K-2	Support components	Visual
B5.6	B-L-1	Pump casing welds	Volumetric
B5.7	B-L-2	Pump casing	Visual
B5.8	B-P	Exempted components	Visual (IWA-5000)
B5.9	B-G-2	No components within this category	-
		Pump Flywheel	Volumetric and surface
		Valves	
B6.1	B-G-1	No components within this category	-
B6.2	B-G-1	No components within this category	-
B6.3	B-G-1	No components within this category	-
B6.4	B-K-1	No components within this category	-
B6.5	B-K-2	Support components	Visual
B6.7	B-M-2	Valve bodies	Visual
B6.8	B-P	Exempted components	Visual (IWA-5000)
B6.9	B-G-2	Pressure-retaining bolting	Visual

ATTACHMENT 1

TABLE 2
CLASS 2 COMPONENTS, PARTS, AND METHODS OF EXAMINATION

Item No.	Examination Category Table IWC-2520	Components and Parts to be Examined	Method
		Pressure Vessels [1]	
C1.1	C-A	Circumferential butt welds	Volumetric
C1.2	C-B	Nozzle-to-vessel welds	Volumetric
C1.3	C-C	Integrally-welded supports	Surface
C1.4	C-D	Pressure-retaining bolting	Visual and either surface or volumetric
		Piping	
C2.1	C-F,C-G	Circumferential butt welds	Volumetric
C2.2	C-F, C-G	Longitudinal weld joints in fittings	Volumetric
C2.3	C-F, C-G	Branch pipe-to-pipe weld joints	Volumetric
C2.4	C-D	Pressure-retaining bolting	Visual and either surface or volumetric
C2.5	C-E-1	Integrally-welded supports	Surface
C2.6	C-E-2	Support components	Visual
		Pumps [1]	
C3.1	C-F, C-G	Pump casing welds	Volumetric
C3.2	C-D	Pressure-retaining bolting	Visual and either surface or volumetric
C3.3	C-E-1	Integrally-welded supports	Surface
C3.4	C-E-2	Support components	Visual
		Valves	
C4.1	C-F, C-G	No components within this category	-
C4.2	C-D	Pressure-retaining bolting	Visual and either surface or volumetric
C4.3	C-E-1	Integrally-welded supports	Surface
C4.4	C-E-2	Support components	Visual

1 Components subject to examination:

Charging Safety Injection Pumps 11, 12, and 13
No. 1 Reactor Coolant Filter
No. 1 Excess Letdown Heat Exchanger (Tube Side)
No. 1 Regenerative Heat Exchanger
No. 1 Letdown Heat Exchanger (Tube Side)
Accumulators 11, 12, 13, and 14
Boron Injection Tank
Refueling Water Tank
Safety Injection Pumps 11 and 12
RHR Heat Exchangers 11 and 12
RHR Pumps 11 and 12
Chemical Volume and Control Tank
Head Tanks 11, 12, 13 and 14
Refueling Water Storage Tank Heat Exchanger
Refueling Water Storage Tank Heating Water Recirc. Pump
Containment Spray Pumps 11 and 12
Steam Generators 11, 12, 13 and 14 (Shell Side)

ATTACHMENT 1

TABLE 3

CLASS 3 COMPONENTS

Examination In Accordance With IWD-2400 (Visual)

Reactor Coolant System

Pressurizer Relief Tank

Chilled Water System

1. Chillers #11, 12 and 13
2. Chilled Water Strainers
3. No. 1 Expansion Tank
4. Chilled Water Pumps

Chemical Volume & Control - Operations

1. Resin Fill Tank[2]
2. No. 1 Chemical Addition Tank[2]
3. No. 1 Boric Acid Batching Tank[2]
4. Boric Acid Tanks 11 and 12[2]
5. Boric Acid Transfer Pumps[3]
6. Boric Acid Filter[1]
7. Seal Water Filter[1]
8. Seal Water Injection Filter 11 and 12[1]
9. No. 1 Excess Letdown Heat Exchanger (Shell Side)[2]
10. No. 1 Letdown Heat Exchanger (Shell Side)[2]
11. No. 1 Seal Water Heat Exchanger[1]
12. Mixed Bed Demineralizers 11 and 12
13. Deborating Demineralizers 11 and 12[1]
14. Cation Bed Demineralizer[1]
15. Boric Acid Blender[2]

Chemical Volume & Control-Boric Acid Recovery

1. Hold-up Tanks 11, 12 and 13[1]
2. No. 1 Concentrates Holding Tank[2]
3. No. 1 Hold-Up Tank Recir. Pump[3]
4. Gas Stripper Feed Pumps 11 and 12[3]
5. Concentrates Holding Tank Transfer Pump 11 and 12[3]
6. No. 1 Concentrates Filter[1]
7. No. 1 Ion Exchange Filter[1]
8. Evaporator Feed Ion Exchangers 11, 12, 13 and 14[1]
9. Gas Stripper and Boric Acid Evaporator Package[1&2]

Footnotes 1, 2 and 3 - See Page 4

ATTACHMENT 1

TABLE 3 (CONTINUED)

Chemical Volume & Control - Primary Water Recovery

1. Monitor Tanks 11 and 12[1]
2. No. 1 Primary Water Storage Tank[1]
3. Monitor Tank Pumps 11 and 12[3]
4. Primary Water Make-Up Pumps
5. Primary Water Storage Tank Heating Recirc. Pump
6. No. 1 Distillate Filter[1]
7. No. 1 Primary Water Storage Tank Heat Exchanger[2]
8. Evaporator Distillate Demineralizers 11 and 12[1]

Containment Spray

1. Spray Additive Tank[1]

Auxiliary Feedwater

1. Auxiliary Feed Storage Tank[1]
2. Auxiliary Feed Pump 11 and 12[3]
3. No. 1 Auxiliary Feedwater Storage Tank Heating Water Circulator Pump
4. No. 1 Feedwater Storage Tank Heat Exchanger[2]

Waste Disposal Liquid

1. Waste Monitor Tanks
2. No. 1 Reactor Coolant Drain Tank
3. No. 1 Spent Resin Storage Tank
4. Waste Monitor - Holdup Tank
5. Waste Holdup Tank 11 and 12
6. Auxiliary Building Sump Tank
7. No. 1 Reagent Tank
8. Laundry and Hot Shower Tank 11 and 12
9. No. 1 Chemical Drain Tank
10. Reactor Coolant Drain Pumps
11. Waste Monitor Tank Pumps
12. Waste Monitor Holdup Tank Pumps
13. Waste Evaporator Feed Pumps
14. No. 1 Laundry Pump
15. No. 1 Chemical Drain Tank Pump
16. Waste Disposal Filter
17. No. 1 Waste Evaporator

Footnotes 1, 2 and 3 - See Page 4

ATTACHMENT 1

TABLE 3 (CONTINUED)

Sampling

1. Volume Control Tank Sample Vessel[1]
2. Boron Sample Tank[1]
3. Pressurizer Steam Sample Vessel[1]
4. Pressurizer Liquid Sample Vessel[1]
5. Reactor Coolant Sample Vessel[1]
6. Steam Generator Sample Heat Exchanger 11, 12, 13 and 13 and 14[1]
7. Steam Generator Main Steam Sample Heat Exchanger[1]
8. Pressurizer Steam Sample Heat Exchanger[1]
9. Pressurizer Liquid Sample Heat Exchanger[1]
10. Reactor Coolant Sample Heat Exchanger[1]

Waste Disposal Solid

1. No. 1 Seal Water Tank
2. Evaporator Bottoms Hold-up Tank
3. Evaporator Bottoms Trans. Pump 1 and 2
4. Evaporator Bottoms Metering Pump 1 and 2
5. Resin Slurry Metering & Trans. Pump 1 and 2
6. Waste Removal Pump 1 and 2

Component Cooling

1. Component Cooling Surge Tank[2]
2. Component Cooling Pumps 11, 12 and 13
3. Component Cooling Heat Exchangers[2]

Spent Fuel Cooling

1. Spent Fuel Pit Pumps 11 and 12
2. Spent Fuel Pit Skimmer Pump
3. Refueling Water Purification Pump
4. Spent Fuel Pit Skimmer Filter
5. Spent Fuel Pit Filter[1]
6. Refueling Water Purification Filter[1]
7. Spent Fuel Pit Heat Exchanger[1]
8. No. 1 Spent Fuel Pit Demineralizer[1]

Service Water

1. Service Water Pumps 11, 12, 13, 14, 15 and 16
2. Service Water Pump Strainers 11, 12, 13, 14, 15 and 16[1]
3. Service Water Intake Sump Pumps

Footnotes 1, 2 and 3 - See Page 4

Footnote #1 - Designed to 1968 Edition ASME Section III Class C - Classified Nuclear Class 3 in accordance with NRC Regulatory Guide 1.26.

Footnote #2 - Designed to 1968 Edition ASME Section VIII - Classified Nuclear Class 3 in accordance with the 1970 Winter Addenda of ASME Section III, and NRC Regulatory Guide 1.26.

Footnote #3 - Designed to the 1968 ASME Pump and Valve Code - Classified Nuclear Class 3 in accordance with NRC Regulatory Guide 1.26.

Title: Comments Concerning the 20 Percent Versus 100 Percent Evaluation Level for Ultrasonic Examination of Nuclear Power Plant Piping

Introduction

I. The Nuclear Regulatory Commission (NRC) has asked several plant owners for detailed information to justify two things.

A. That a 20% reference level evaluation criterion is impractical and

B. That a 100% reference level evaluation criterion will provide a level of safety comparable to the Section V code requirements (of evaluation at 20%).

Discussion

II. Southwest Research Institute (SwRI) presents the following considerations on these two closely related questions, taking them in order:

A. The impracticality of recording/evaluation at the 20% reference level.

1. The welded joints in nuclear piping frequently contain code-allowable wall thickness differences (12-1/2% of thickness) as well as allowable weld dropthrough and other conditions such as counterbore taper, crown, etc. These conditions can provide an extremely large number of geometric reflectors (with or without mode conversion) which produce ultrasonic examination (UT) indications greater than 20% of the UT reference level (DAC) (see attached graph). Weld metal in stainless steel piping contains, in addition, reflectors due to metallurgical grain structure which can also produce indications greater than 20% DAC. It appears that the incidence of geometric reflectors increases exponentially as the amplitude is reduced.

2. Two stress-corrosion cracks are known to have been missed by SwRI normal examination techniques. However, they were not missed because of lack of detectability; indications of 141% and 159% DAC were obtained from these stress-corrosion cracks in the HAZ. They were not identified because of the large number of equally high amplitude geometric indications from the adjacent root area which, in effect, masked the test data to preclude identifying these cracks. Reducing the recording level to 20% will cause this problem to exist on a much larger scale in that the tremendous increase in recorded indication data will obscure real flaw indications.

3. During the performance of inservice inspections, significant radiation exposure is being experienced by all the inservice examination personnel. In SwRI's experience the examination staff receives essentially all of the legally allowed radiation exposure when recording 50% DAC data. To evaluate and record

20% data would require that the personnel spend several times as much time in a radiation area to obtain additional ultrasonic data which is not practically decipherable and would require a proportional increase in radiation exposure to the available examination personnel. Therefore, these personnel would not be available for the performance of ultrasonic examinations of as many lines or at as many sites. Necessarily, this would force the industry to reduce the sampling rate of examinations because of the inavailability of trained personnel. The reduction of sample size would have a detrimental effect on the monitoring of plant integrity through inservice inspection and would eliminate the non-mandatory examinations presently performed by the utilities in the interest of promptly examining known or suspected problem areas.

4. A typical example of the impracticality of the 20% level recording/evaluation practice involved the examination of the 4" Recirculation Bypass lines in a nuclear power plant. The job required both 45-degree and 60-degree angle-beam examinations on one or both sides of 20 pipe welds having a total of 450 inches of weld examination length. To demonstrate the impact of the 20% recording criteria to the utility, a small sample of a randomly selected weld was examined. Because of radiation levels, the demonstration was limited to one hour. In that hour, 15 separate indications were recorded with the 60-degree examination in 5/8-inch of weld length while 10 indications were recorded with the 45-dgree examination in 1-7/8 inches of weld length. Only maximum amplitude positions were recorded and most indications were found in the 20-28% DAC range. All indications of 20% DAC and greater were recorded. It is recognized that this was a very small sample, but it is believed to be typical of 4" bypass line welds. The three-man crew successfully completed the examinations recording at the 50% level within the one-day of examination time available on the unit. Evaluation time would have been increased proportionately with dubious conclusions due to the sheer volume of data. The welds were judged to be free of cracks based on the 50% DAC recording and 100% evaluation criteria and several months of successful operation without leaking confirmed that these examinations, like those performed at several other sites, were effective.

B. Evaluation at 100% and greater provides equivalent safety.

1. Equivalent safety, comparable to code* requirements, is assured by the recording/evaluation criteria developed, refined, and

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*It must be noted that the 100% evaluation criteria was (and is) the Code requirement for utilities committed to the 1971 Edition of Section XI (S71 Addenda). The inconsistency arose when the 1974 Edition of Section XI incorporated Section V by reference. In the Summer 1976 Edition (IWA-2232) the ASME has reconfirmed its previous position by clearly requiring evaluation of only indications of 100% DAC or greater.

qualified by SwRI through many years of research and experience. This criteria is embodied in current SwRI practice, which requires that:

(a) All indications 50% of DAC or greater shall be recorded.

(b) All indications 100% of DAC or greater shall be investigated by a Level II or Level III operator to the extent necessary to determine the shape, identity, and location of the reflectors.

(c) Any indication 20% of DAC or greater and suspected by the operator to be other than geometric in nature, including all 20% or greater indications originating in the base metal, shall be recorded and investigated by a Level II or Level III examiner to the extent necessary to determine the shape, identity, and location of the reflector.

(d) Any indications investigated and found to be other than geometric in nature shall be reported to the owner for evaluation and disposition.

SwRI's long-standing requirement to record 50% DAC information reflects the necessity to record a sublevel of data below that point at which we feel a concern. The prime reason for recording this information is to allow for the known variation in reproducibility of test data. We have shown data reproducibility to be a factor caused by many things including operator experience, training, procedure, equipment variations, environmental encumberances, test piece conditions, calibration standards, etc. These facators are routine and will continue to occur during the application of examinations of this nature on piping. This practice is believed to be more conservative than the intent of any edition of the Code and to provide greater safety at less cost in time, dollars, and radiation exposure to personnel than simply requiring the recording/evaluation of all 20% DAC data.

2. The adequacy of this practice is supported by the following:

(a) Except for a very limited number of applications of the 20% evaluation level criteria of Paragraph IX-3470 of the 1971 issue of Section III, the 100% reference level evaluation criteria of Paragraph IS-213.5 of the Summer 1971 Addenda to Section XI was in effect until the adoption in late 1976 of the 1974 Edition of Section XI. The 100% recording criteria was endorsed by the Section V Subcommittee for Nondestructive Examination in a Code Inquiry of 1973, and appeared in Paragraph T-544 of the 1974 Edition of Section V. There is no question of the overall success of the inservice examination program during these many years, and the 100% evaluation criteria was reconfirmed by ASME in Paragraph IWA-2232 of the Summer 1976 Addenda to the Section XI code.

(b) As a result of the different failure mode of austenitic piping (noted in Paragraph (d) below) SwRI had developed modified approaches in procedure to maintain assurance of maximum crack detection sensitivity. Search unit size, frequency and beam angle, as well as procedure, are optimized to take advantage of the known parameters of the type of failure to be detected and investigated in different situations.

(c) While it has been demonstrated that significantly deep through-wall stress-corrosion cracking may give only a low amplitude response, it has been demonstrated by SwRI on multiple plants that the 100% evaluation criteria, augmented by operator investigation at the 20% level, can be applied with satisfactory results:

(1) No component or pipe examined by SwRI has experienced leaking by way of a stress-corrosion crack between the periodic examinations.

(2) At least 48 piping cracks have been found and repaired in the early stages of propagation.

(d) Much experience has shown that the typical mode of failure in stainless steel piping is not in the weld metal, per se, but is "stress-corrosion cracking" in the adjacent heat-affected zone (HAZ) and base metal. A trained UT operator can distinguish the difference between the usual weld-metal geometric indications and the somewhat similar indications due to stress-corrosion cracking by noting their location in the base metal of HAZ. This is true even when their amplitude is in the 20% to 50% range and even though indications in this range originating in the weld metal cannot be identified.

(e) A prime example of the adequacy of the total SwRI examination technique is that Recirculation Bypass lines have been ultrasonically examined in accordance with RO Bulletin 74-10 in six nuclear power plants. Thirteen cracks were found in four plants and the findings were confirmed by other methods, including excavation, in all cases. As noted above, no component or pipe examined by SwRI has experienced leaking by way of stress-corrosion cracking between periodic examinations.

Summary and Conclusions

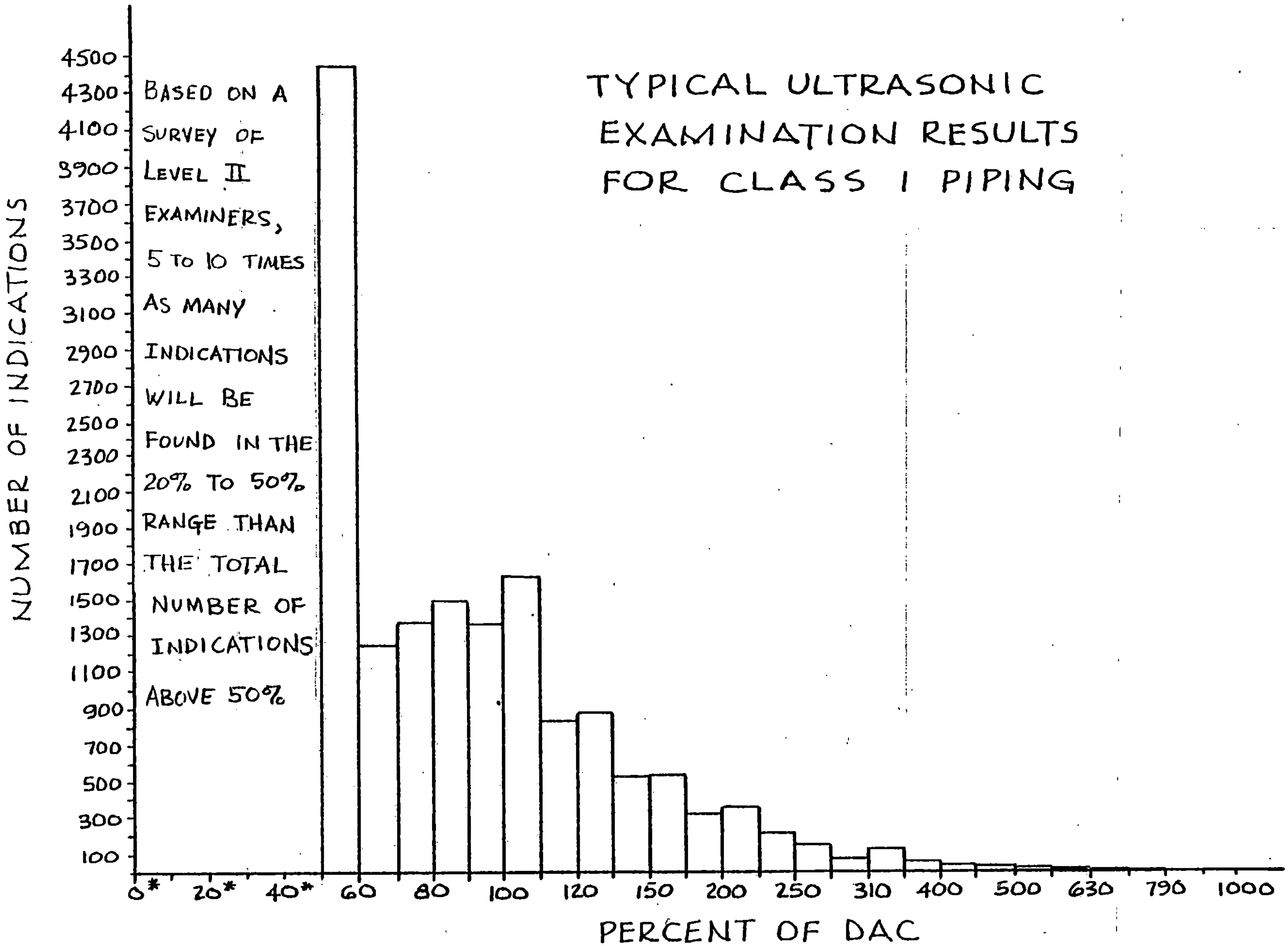
III. For the reasons enumerated above, SwRI recommends to its clients that, in the interests of maintaining maximum nuclear power plant integrity and safety at minimum cost in time and personnel radiation exposure, any effort to institute a blanket 20% DAC recording/evaluation criteria be resisted. Instead, SwRI recommends a commitment to the SwRI recording/evaluation practice which was set out in Paragraph B.1 above and is re-interated below:

(a) All indications 50% of DAC or greater shall be recorded.

(b) All indications 100% of DAC or greater shall be investigated by a Level II or Level III operator to the extent necessary to determine the shape, identity, and location of the reflectors.

(c) Any indication 20% of DAC or greater suspected by the operator to be other than geometric in nature, including all 20% or greater indications originating in the base metal, shall be recorded and investigated by a Level II or Level III examiner to the extent necessary to determine the shape, identity, and location of the reflector.

(d) Any indications investigated and found to be other than geometric in nature shall be reported to the owner for evaluation and disposition.



* NO RECORDED DATA AVAILABLE FOR TABULATION.

ATTACHMENT 3

WELDS EXAMINED DURING THE PRESERVICE INSPECTION OF SALEM 1 WHERE THE COMPLETE EXAMINATION AS PRACTICABLE COULD NOT SATISFY THE NORMAL CODE REQUIREMENTS

(Extracted from the Final Report)

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REACTOR PRESSURE VESSEL (SEE FIG. C-1)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NO REC	IN SIG	GEO IND	OT HER	REMARKS
		CIRCUMFERENTIAL WELDS								
1.2	B	1-RPV-4043 LOWER HEAD DISC TO PEEL SEGMENTS	SEE RMKS	--	001300	X	-	-	-	THIS WELD IS WITHIN THE INSTRUMENTATION TUBE CLUSTER AND WAS NOT EXAMINED.
		VESSEL PENETRATIONS								
1.5	E-1	CONTROL ROD DRIVE TUBES	SEE RMKS	--	003450	X	-	-	-	CONTROL ROD DRIVE TUBES ARE WELDED TO THE UPPER HEAD WITH A PARTIAL PENETRATION WELD AND AN INTEGRALLY WELDED THERMAL SLEEVE. VOLUMETRIC INSPECTION IS NOT POSSIBLE BY CURRENTLY AVAILABLE TECHNIQUES.

REACTOR PRESSURE VESSEL CLOSURE HEAD (SEE FIG. C-2)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
		CIRCUMFERENTIAL WELDS								
1.2	B	1-RPV-6046B DOLLAR PLATE	SEE RMKS	--	004400	X	-	-	-	WELD IS COVERED BY CRD SHROUD ASSEMBLY AND WAS NOT EXAMINED.

CHEM AND VOL CONTROL SYSTEM, LINE NO. 3-CV-1143 (SEE FIG. C-8)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ISIG	GEOM	OTHER	REMARKS
4.4	J-1	3-CV-1143-1 BRANCH CONNECTION TO TEE	VT	900-1/13	012200	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE BRANCH CONNECTION AND TEE CONFIGURATION.
			UT0W	600-3/16	012200	X	-	-	-	
			UT45T	600-3/16	012200	X	-	-	-	************CAL. STD.********** 3-SS-160-.451-30-SAM
4.4	J-1	3-CV-1143-2 TEE TO VALVE	VT	900-1/13	012300	X	-	-	-	NO UT FROM EITHER SIDE DUE TO TEE AND VALVE CONFIGURATION.
			UT0W	600-3/16	012300	X	-	-	-	
			UT45T	600-3/16	012300	X	-	-	-	************CAL. STD.********** 3-SS-160-.451-30-SAM

CHEM AND VOL CONTROL SYSTEM, LINE NO. 3-CV-1141 (SEE FIG. C-9)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	3-CV-1141-13 VALVE TO VALVE	VT	900-1/13	016600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO VALVE CONFIGURATIONS. NO UT45T DUE TO WELD CROWN CONFI- GURATION.
			UTOW	600-3/16	016600	X	-	-	-	***********CAL. STD.********** 3-SS-160-.451-30-SAM

CHEM AND VOL CONTROL SYSTEM, LINE NO, 3-CV-1133 (SEE FIG, C-10)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM, METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I O	G E O M	O T H E R	REMARKS
4,4	J-1	3-CV-1133-14 VALVE TO VALVE	VT	900-1/13	018200	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE VALVE CONFIGURATION,
			UT0W	600-3/16	018200	X	-	+	-	
			UT45T	600-3/16	018200	X	-	-	-	***********CAL. STD.********** 3-58-160-,481-30-8AM

PRESSURE RELIEF SYSTEM, LINE NO. 6-PR-1105 (SEE FIG. C-13)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.1	F	6-PR-1105-1	VT	900-1/13	022200	X	-	-	-	NO UT FROM THE UP- AND DOWN-
		NOZZLE TO SAFE-END	PT	200-1/11	022200	X	-	-	-	STREAM SIDES DUE TO THE NOZZLE
			UT0W	600-3/16	022200	X	-	-	-	AND SAFE-END CONFIGURATION.
			UT45T	600-3/16	022200	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1105-2	VT	900-1/13	022300	X	-	-	-	NO UT FROM THE UP- AND DOWN-
		SAFE-END TO ELBOW	UT0L	600-3/16	022300	X	-	-	-	STREAM SIDES DUE TO THE SAFE-
			UT0W	600-3/16	022300	X	-	-	-	END AND ELBOW CONFIGURATION.
			UT45T	600-3/16	022300	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1105-6	VT	900-1/13	022700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO ELBOW	UT0L	600-3/16	022700	X	-	-	-	THE ELBOW CURVATURE.
			UT0W	600-3/16	022700	X	-	-	-	
			UT45T	600-3/16	022700	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1105-11	VT	900-1/13	023200	X	-	-	-	NO UT FROM THE UP- AND DOWN-
		ELBOW TO FLANGE	UT0L	600-3/16	023200	X	-	-	-	STREAM SIDES DUE TO THE ELBOW
			UT0W	600-3/16	023200	X	-	-	-	CURVATURE AND FLANGE CONFIGU-
			UT45T	600-3/16	023200	X	-	-	-	RATION.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

PRESSURE RELIEF SYSTEM, LINE NO. 6-PR-1104 (SEE FIG. C-14)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N R E C	I S I G	G E O M	O T H E R	REMARKS
4.1	F	6-PR-1104-1 NOZZLE TO SAFE-END	VT	900-1/13	023400	-	-	-	X	VT REVEALED ARC STRIKE, CLEARED BY PSE&G WITH CNF #80
			PT	200-1/11	023400	X	-	-	-	NO UT FROM THE UP- AND DOWN-
			UT0W	600-3/16	023400	X	-	-	-	STREAM SIDES DUE TO THE NOZZLE
			UT45T	600-3/16	023400	X	-	-	-	AND SAFE-END CONFIGURATION. ***********CAL. STD.********** 6-SS-160-.764-25-SAM
4.5	J-1	6-PR-1104-2 SAFE-END TO ELBOW	VT	900-1/13	023500	-	-	-	X	VT REVEALED ARC STRIKES, CLEARED BY PSE&G WITH CNF #79
			UT0L	600-3/16	023500	X	-	-	-	NO UT FROM THE UP- AND DOWN-
			UT0W	600-3/16	023500	X	-	-	-	STREAM SIDES DUE TO SAFE-END
			UT45T	600-3/16	023500	X	-	-	-	CONFIGURATION AND ELBOW CUR- VATURE. ***********CAL. STD.********** 6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1104-3 ELBOW TO ELBOW	VT	900-1/13	023600	-	-	-	X	VT REVEALED ARC STRIKES AND UNDERCUT, CLEARED BY PSE&G
			UT0L	600-3/16	023600	X	-	-	-	WITH CNF #78. NO UT FROM
			UT0W	600-3/16	023600	X	-	-	-	EITHER SIDE DUE TO THE ELBOW
			UT45T	600-3/16	023600	X	-	-	-	CURVATURE. ***********CAL. STD.********** 6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1104-6 ELBOW TO ELBOW	VT	900-1/13	023900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW CURVATURE.
			UT0L	600-3/16	023900	X	-	-	-	
			UT0W	600-3/16	023900	X	-	-	-	
			UT45T	600-3/16	023900	X	-	-	-	***********CAL. STD.********** 6-SS-160-.764-25-SAM
4.5	J-1	6-PR-1104-11 ELBOW TO FLANGE	VT	900-1/13	024400	X	-	-	-	NO UT FROM THE UP- AND DOWN-
			UT0L	600-3/16	024400	X	-	-	-	STREAM SIDES DUE TO THE ELBOW
			UT0W	600-3/16	024400	X	-	-	-	CURVATURE AND FLANGE CONFIGU-
			UT45T	600-3/16	024400	X	-	-	-	RATION. ***********CAL. STD.********** 6-SS-160-.764-25-SAM

PRESSURE RELIEF SYSTEM, LINE NO. 6-PR-1103 (SEE FIG. C-15)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.1	F	6-PR-1103-1	VT	900-1/13	024600	X	-	-	-	NO UT FROM THE UP- AND DOWN-
		NOZZLE TO SAFE-END	PT	200-1/11	024600	X	-	-	-	STREAM SIDES DUE TO THE NOZZLE
			UT0W	600-3/16	024600	X	-	-	-	AND SAFE-END CONFIGURATION.
			UT45T	600-3/16	024600	X	-	-	-	
										***********CAL. STD.**********
										6-SS-XX-1.5-64-SAM
4.4	J-1	6-PR-1103-2	VT	900-1/13	024700	X	-	-	-	NO UT FROM THE UP- AND DOWN-
		SAFE-END TO ELBOW	UT0L	600-3/16	024700	X	-	-	-	STREAM SIDES DUE TO THE SAFE-
			UT0W	600-3/16	024700	X	-	-	-	END CONFIGURATION AND ELBOW
			UT45T	600-3/16	024700	X	-	-	-	CURVATURE.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1103-3	VT	900-1/13	024800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO ELBOW	UT0L	600-3/16	024800	X	-	-	-	THE ELBOW CURVATURE.
			UT0W	600-3/16	024800	X	-	-	-	
			UT45T	600-3/16	024800	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1103-6	VT	900-1/13	025100	-	-	-	X	VT REVEALED ARC STRIKES AND
		ELBOW TO ELBOW	UT0L	600-3/16	025100	X	-	-	-	GOUGES.
			UT0W	600-3/16	025100	X	-	-	-	CLEARED BY PSE&G WITH CNF #73.
			UT45T	600-3/16	025100	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
										THE ELBOW CURVATURE.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-PR-1103-12	VT	900-1/13	025700	X	-	-	-	NO UT FROM THE UP- AND DOWN-
		ELBOW TO FLANGE	UT0L	600-3/16	025700	X	-	-	-	STREAM SIDES DUE TO THE ELBOW
			UT0W	600-3/16	025700	X	-	-	-	CURVATURE AND FLANGE CONFIGU-
			UT45T	600-3/16	025700	X	-	-	-	RATION.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

PRESSURE RELIEF SYSTEM, LINE NO. 4-PR-1100 (SEE FIG. C-16)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
4.1	F	4-PR-1100-1 NOZZLE TO SAFE-END	VT	900-1/13	025900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE NOZZLE AND SAFE-END CONFIGURATION.
			PT	200-1/11	025900	X	-	-	-	
			UT0L	600-3/16	025900	X	-	-	-	
			UT0W	600-3/16	025900	X	-	-	-	
			UT45T	600-3/16	025900	X	-	-	-	***********CAL. STD.*********** 4-SS-160-.553-28-SAM

PRESSURIZING SYSTEM, LINE NO. 4-PS-1131 (SEE FIG. C-19, C-20 & C-21)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.1	F	4-PS-1131-29	VT	900-1/13	033500	-	-	-	X	VT REVEALED LINEAR INDICATION,
		SAFE-END TO NOZZLE	PT	200-1/11	033500	X	-	-	-	CLEARED BY PSE&G WITH CNF #58
			UTOL	600-3/16	033500	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			UTOW	600-3/16	033500	X	-	-	-	SAFE-END AND NOZZLE CONFIGURA-
										TION.
										***********CAL. STD.**********
										4-SS-160-.553-28-SAM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

PRESSURIZING SYSTEM, LINE NO. 4-PS-1111 (SEE FIG. C-22)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSGEOM	GEOM	OTHER	REMARKS
4.4	J-1	4-PS-1111-23 VALVE TO TEE	VT	900-1/13	036500	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE VALVE AND TEE CONFIGURA- TION.
			UT0W	600-3/16	036500	X	-	-	-	***********CAL. STD.**********
			UT45T	600-3/16	036500	X	-	-	-	4-SS-160-.553-28-SAM

REACTOR COOLANT SYSTEM, LINE NO. 31-RC-1140 (SEE FIG. C-23)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ISOIM	GEOM	OTHER	REMARKS
4.1	F	31-RC-1140-2 NOZZLE TO ELBOW	VT	900-1/13	036600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			PT	200-1/11	036600	X	-	-	-	THE ELBOW ACOUSTIC PROPERTIES
			UTOL	600-3/16	036600	X	-	-	-	AND THE NOZZLE CONFIGURATION.
			UTOW	600-3/16	036600	X	-	-	-	
			UT45T	600-3/16	036600	X	-	-	-	
										************CAL. STD.********** 2,312-58-37-SAM
4.4	J-1	31-RC-1140-4LD-I LONGITUDINAL	VT	900-1/13	037600	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-4LD-O LONGITUDINAL	VT	900-1/13	037700	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-5LU-I LONGITUDINAL	VT	900-1/13	038200	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-5LU-O LONGITUDINAL	VT	900-1/13	038300	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-6LD-I LONGITUDINAL	VT	900-1/13	038800	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-6LD-O LONGITUDINAL	VT	900-1/13	038900	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-7LU-I LONGITUDINAL	VT	900-1/13	039000	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-7LU-O LONGITUDINAL	VT	900-1/13	039100	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1140-7 ELBOW TO PUMP	VT	900-1/13	039200	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			UTOW	600-3/16	039200	X	-	-	-	THE ELBOW ACOUSTIC PROPERTIES
			UT45T	600-3/16	039200	X	-	-	-	AND THE PUMP CONFIGURATION.
										************CAL. STD.********** 2,312-58-37-SAM

REACTOR COOLANT SYSTEM, LINE NO. 31-RC-1130 (SEE FIG. C-24)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NO REC	INSIG	GEOM	OTHER	REMARKS
4.1	F	31-RC-1130-2 NOZZLE TO ELBOW	VT	900-1/13	039300	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE NOZZLE CONFIGURATION.
			PT	200-1/11	039300	X	-	-	-	
			UT0W	600-3/16	039300	X	-	-	-	
			UT45T	600-3/16	039300	X	-	-	-	************CAL. STD.********** 2,312-83-37-8AM
4.4	J-1	31-RC-1130-4LD-I LONGITUDINAL	VT	900-1/13	040300	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-4LD-O LONGITUDINAL	VT	900-1/13	040400	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-5LU-I LONGITUDINAL	VT	900-1/13	040900	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-5LU-O LONGITUDINAL	VT	900-1/13	041000	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-6LD-I LONGITUDINAL	VT	900-1/13	041500	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-6LD-O LONGITUDINAL	VT	900-1/13	041600	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-7LU-I LONGITUDINAL	VT	900-1/13	041700	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-7LU-O LONGITUDINAL	VT	900-1/13	041800	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1130-7 ELBOW TO PUMP	VT	900-1/13	041900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE PUMP CONFIGURATION.
			UT0W	600-3/16	041900	X	-	-	-	
			UT45T	600-3/16	041900	X	-	-	-	************CAL. STD.********** 2,312-83-37-8AM

REACTOR COOLANT SYSTEM, LINE NO. 31-RC-1120 (SEE FIG. C-25)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
4.1	F	31-RC-1120-2 NOZZLE TO ELBOW	VT	900-1/13	042000	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE NOZZLE CONFIGURATION.
			PT	200-1/11	042000	X	-	-	-	
			UT0L	600-3/16	042000	X	-	-	-	
			UT0W	600-3/16	042000	X	-	-	-	
			UT45T	600-3/16	042000	X	-	-	-	***********CAL. STD.********** 2,312-SS-37-SAM
4.4	J-1	31-RC-1120-4LD-I LONGITUDINAL	VT	900-1/13	043000	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-4LD-O LONGITUDINAL	VT	900-1/13	043100	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-5LU-I LONGITUDINAL	VT	900-1/13	043600	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-5LU-O LONGITUDINAL	VT	900-1/13	043200	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-6LD-I LONGITUDINAL	VT	900-1/13	044200	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-6LD-O LONGITUDINAL	VT	900-1/13	044300	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-7LU-I LONGITUDINAL	VT	900-1/13	044400	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-7LU-O LONGITUDINAL	VT	900-1/13	044500	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1120-7 ELBOW TO PUMP	VT	900-1/13	044600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE PUMP CONFIGURATION.
			UT0W	600-3/16	044600	X	-	-	-	
			UT45T	600-3/16	044600	X	-	-	-	***********CAL. STD.********** 2,312-SS-37-SAM

REACTOR COOLANT SYSTEM, LINE NO. 31-RC-1110 (SEE FIG. C-26)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
4.1	F	31-RC-1110-2 NOZZLE TO ELBOW	VT PT UT0W UT45T	900-1/13 200-1/11 600-3/16 600-3/16	044700 044700 044700 044700	X X X X	- - - -	- - - -	- - - -	NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE NOZZLE CONFIGURATION. ***********CAL. STD.********** 2.312-SS-37-SAM
4.4	J-1	31-RC-1110-4LD-I LONGITUDINAL	VT	900-1/13	045700	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-4LD-O LONGITUDINAL	VT	900-1/13	045800	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-5LU-I LONGITUDINAL	VT	900-1/13	046300	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-5LU-O LONGITUDINAL	VT	900-1/13	046400	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-6LD-I LONGITUDINAL	VT	900-1/13	046900	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-6LD-O LONGITUDINAL	VT	900-1/13	047000	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-7LU-I LONGITUDINAL	VT	900-1/13	047100	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-7LU-O LONGITUDINAL	VT	900-1/13	047200	X	-	-	-	NO UT DUE TO THE ACOUSTIC PROPERTIES OF THE CASTING.
4.4	J-1	31-RC-1110-7 ELBOW TO PUMP	VT UT0W UT45T	900-1/13 600-3/16 600-3/16	047300 047300 047300	X X X	- - -	- - -	- - -	NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE PUMP CONFIGURATION. ***********CAL. STD.********** 2.312-SS-37-SAM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

REACTOR COOLANT SYSTEM, LINE NO. 29-RC-1140 (SEE FIG. C-27)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NONREC	INSIG	GEOM	OTHER	REMARKS
4.1	F	29-RC-1140-5 ELBOW TO NOZZLE	VT	900-1/13	048900	-	-	-	X	VT REVEALED ARC STRIKE,
			PT	200-1/11	048900	X	-	-	-	CLEARED BY PSE&G WITH CNF #28,
			UT0W	600-3/16	048900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			UT45T	600-3/16	048900	X	-	-	-	THE ELBOW ACOUSTIC PROPERTIES AND THE NOZZLE CONFIGURATION. ************CAL. STD.********** 2,312-33-37-SAM

REACTOR COOLANT SYSTEM, LINE NO. 29-RC-1130 (SEE FIG. C-28)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.1	F	29-RC-1130-5 ELBOW TO NOZZLE	VT	900-1/13	050900	X	-	-	-	PT REVEALED LINEAR INDICATION CLEARED BY PSE&G WITH CNF #144 NO UT FROM EITHER SIDE DUE TO THE ELBOW ACOUSTIC PROPERTIES AND THE NOZZLE CONFIGURATION. ***********CAL. STD.*********** 2.312-SS-37-8AM
			PT	200-1/11	050900	-	-	-	X	
			UT0W	600-3/16	050900	X	-	-	-	
			UT45T	600-3/16	050900	X	-	-	-	

REACTOR COOLANT SYSTEM, LINE NO. 29-RC-1120 (SEE FIG. C-29)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSGEOM	GEOM	OTHER	REMARKS
4.1	F	29-RC-1120-5	VT	900-1/13	052600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO NOZZLE	PT	200-1/11	052600	X	-	-	-	THE ELBOW ACOUSTIC PROPERTIES
			UT0W	600-3/16	052600	X	-	-	-	AND THE NOZZLE CONFIGURATION.
			UT45T	600-3/16	052600	X	-	-	-	
										***********CAL. STD.**********
										2.312-88-37-8AM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

REACTOR COOLANT SYSTEM, LINE NO. 29-RC-1110 (SEE FIG. C-30)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
NONE	NONE	29-RC-1110-2BC-S	VT	900-1/13	053400	X	-	-	-	EXAMINED AT PSE&G REQUEST.
		1 IN. BRANCH CONNECTION	PT	200-1/11	053400	-	-	-	X	PT REVEALED ROUND INDICATION. CLEARED BY PSE&G WITH CNF #152

REACTOR COOLANT SYSTEM, LINE NO. 3-RC-1143 (SEE FIG. C-35)

ASME SECT XI ITEM NO	ASME SECT XI CATGY.	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I D	G E O M	O T H E R	REMARKS
4.4	J-1	3-RC-1143-18	VT	900-1/13	061900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		VALVE TO BRANCH CONNECTION	UT0L	600-3/16	061900	X	-	-	-	THE VALVE AND BRANCH CONNEC-
			UT0W	600-3/16	061900	X	-	-	-	TION CONFIGURATION.
			UT45T	600-3/16	061900	X	-	-	-	
										***********CAL. STD.**********
										3-SS-160-.481-30-SAM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

REACTOR COOLANT SYSTEM, LINE NO. 3-RC-1133 (SEE FIG. C-36)

ASME SECT. XI ITEM NO	ASME SECT. XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.9	J-1	3-RC-1133-18 VALVE TO BRANCH CONNECTION	VT	900-1/13	063800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE VALVE AND BRANCH CONNEC- TION CONFIGURATION. ***********CAL. STD.********** 3-SS-160-.451-30-SAM
			UT0W	600-3/16	063800	X	-	-	-	
			UT45T	600-3/16	063800	X	-	-	-	

REACTOR COOLANT SYSTEM, LINE NO. 3-RC-1123 (SEE FIG. C-37)

ASME SECT XI ITEM NO	ASME SECT XI CATGY.	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	3-RC-1123-18	VT	900-1/13	065700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		VALVE TO BRANCH CONNECTION	UTOW	600-3/16	065700	X	-	-	-	THE VALVE AND BRANCH CONNEC-
			UT45T	600-3/16	065700	X	-	-	-	TION CONFIGURATION.
										***********CAL. STD.**********
										3-SS-160-.451-30-8AM

REACTOR COOLANT SYSTEM, LINE NO. 3-RC-1113 (SEE FIG. C-38)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NO REC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	3-RC-1113-18	VT	900-1/13	067600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		VALVE TO BRANCH CONNECTION	UTOW	600-3/16	067600	X	-	-	-	THE VALVE AND BRANCH CONNEC-
			UT45T	600-3/16	067600	X	-	-	-	TION CONFIGURATION.
										***********CAL. STD.**********
										3-88-160-,451-30-8AM

REACTOR COOLANT SYSTEM, LINE NO. 2-RC-1141 (SEE FIG. C-47)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	2-RC-1141-1	VT	900-1/13	071800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE TEE CONFIGURATION AND TO THE CLOSENESS OF WELD 2-RC-1141-2.
		TEE TO PIPE	UT55T	800-36/5	071800	X	-	-	-	***********CAL. STD.********** 2-83-160-,330-39-SAM

SAFETY INJECTION SYSTEM, LINE NO. 10-SJ-1141 (SEE FIG. C-54)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	10-SJ-1141-14 VALVE TO TEE	VT	400-1/13	096700	-	-	-	X	VT REVEALED ARC STRIKES. CLEARED BY PSE&G WITH CNF #1
			UT0L	600-3/16	096700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			UT0W	600-3/16	096700	X	-	-	-	THE VALVE AND TEE CONFIGURA-
			UT45T	600-3/16	096700	X	-	-	-	TION. ***********CAL. STD.********** 10-SS-160-1,119-22-8AM

SAFETY INJECTION SYSTEM, LINE NO. 10-SJ-1131 (SEE FIG. C-55)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
4.4	J-1	10-SJ-1131-14 TEE TO VALVE	VT	900-1/13	098900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE TEE AND THE VALVE CONFIGU-RATION.
			UT0L	600-3/16	098900	X	-	-	-	
			UT0W	600-3/16	098900	X	-	-	-	
			UT45T	600-3/16	098900	X	-	-	-	***********CAL. STD.********** 10-SS-160-1;119-22-SAM

SAFETY INJECTION SYSTEM, LINE NO. 10-SJ-1121 (SEE FIG. C-56)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
4.4	J-1	10-SJ-1121-15	VT	900-1/13	101000	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		VALVE TO TEE	UT0W	600-3/16	101000	X	-	-	-	THE VALVE AND THE TEE CONFIG-
			UT45T	600-3/16	101000	X	-	-	-	URATION.
										***********CAL. STD.**********
										10-SS-160-1,119-22-SAM

SAFETY INJECTION SYSTEM, LINE NO. 10-SJ-1111 (SEE FIG. C-57)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIGOM	GEOM	OTHER	REMARKS
4.4	J-1	10-SJ-1111-15	VT	900-1/13	103400	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		VALVE TO TEE	UT0W	600-3/16	103400	X	-	-	-	THE VALVE AND THE TEE CONFIG-
			UT45T	600-3/16	103400	X	-	-	-	URATION.
										***********CAL. STD.**********
										10-SS-160-1.119-22-SAM

SAFETY INJECTION SYSTEM, LINE NO. 8-SJ-1162 (SEE FIG. C-58 & C-59)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NORC	IOSIGM	NGEOM	OTHER	REMARKS
4.9	K-1	8-SJ-1162-3PS-1 PIPE TO PENETRATION	VT	900-1/13	104700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO WELD AREA CONFIGURATION. NO UT ON THE WELD DUE TO WELD CROWN CONFIGURATION.
4.9	K-1	8-SJ-1162-3PS-2 PENETRATION TO PIPE	VT UT0W	900-1/13 600-3/16	104800 104800	X X	- -	- -	- -	NO UT FROM EITHER SIDE DUE TO WELD AREA CONFIGURATION. NO UT45T ON THE WELD DUE TO WELD CROWN CONFIGURATION. ***********CAL. STD.********** 8-SS-XX-.860-23-SAM
4.4	J-1	8-SJ-1162-17 TEE TO CAP	VT UT0W UT45T	900-1/13 600-3/16 600-3/16	106200 106200 106200	X X X	- - -	- - -	- - -	NO UT FROM EITHER SIDE DUE TO THE TEE AND CAP CONFIGURATION. ***********CAL. STD.********** 4-SS-XX-.689-27-SAM
4.9	K-1	8-SJ-1162-30PS PIPE TO PENETRATION	VT	900-1/13	107700	X	-	-	-	NO UT DUE TO PENETRATION AND WELD CONFIGURATION AND DUE TO THE WELD CROWN OF 8-SJ-1162-31

SAFETY INJECTION SYSTEM, LINE NO. 8-SJ-1152 (SEE FIG. C-60 & C-61)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.9	K-1	8-SJ-1152-1PL-1	VT	900-1/13	108500	-	-	-	X	VT REVEALED ARC STRIKE.
		PIPE LUG	UTOL	600-3/16	108500	X	-	-	-	CLEARED BY PSE&G WITH CNF #37
			UT45	600-3/16	108500	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
			UT45T	600-3/16	108500	X	-	-	-	DUE TO WELDED HANGER BRACKET.
										NO UTOW DUE TO WELD CONFIGU-
										RATION.
										***********CAL. STD.**********
										8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1152-1PL-2	VT	900-1/13	108600	-	-	-	X	VT REVEALED GOUGE AND ARC
		PIPE LUG	UTOL	600-3/16	108600	X	-	-	-	STRIKE.
			UT45	600-3/16	108600	X	-	-	-	CLEARED BY PSE&G WITH CNF #43
			UT45T	600-3/16	108600	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
										DUE TO WELDED HANGER BRACKET.
										NO UTOW DUE TO WELD AREA CON-
										FIGURATION.
										***********CAL. STD.**********
										8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1152-1PL-3	VT	900-1/13	108700	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
		PIPE LUG	UTOL	600-3/16	108700	X	-	-	-	DUE TO WELDED HANGER BRACKET.
			UT45	600-3/16	108700	X	-	-	-	NO UTOW DUE TO WELD AREA CON-
			UT45T	600-3/16	108700	X	-	-	-	FIGURATION.
										***********CAL. STD.**********
										8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1152-1PL-4	VT	900-1/13	108800	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		PIPE LUG	UTOL	600-3/16	108800	X	-	-	-	DUE TO WELDED HANGER BRACKET.
			UT45	600-3/16	108800	X	-	-	-	NO UTOW DUE TO WELD AREA CON-
			UT45T	600-3/16	108800	X	-	-	-	FIGURATION.
										***********CAL. STD.**********
										8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1152-1PL-5	VT	900-1/13	108900	-	-	-	X	VT REVEALED ARC STRIKE.
		PIPE LUG	UTOL	600-3/16	108900	X	-	-	-	CLEARED BY PSE&G WITH CNF #46
			UT45	600-3/16	108900	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
			UT45T	600-3/16	108900	X	-	-	-	DUE TO WELDED HANGER BRACKET.
										NO UTOW DUE TO WELD AREA CON-
										FIGURATION.
										***********CAL. STD.**********
										8-SS-XX-.860-23-SAM

SAFETY INJECTION SYSTEM, LINE NO. 8-SJ-1152 (SEE FIG. C-60 & C-61)

(CONTD)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ISIG	GEOM	OTHER	REMARKS
4.9	K-1	8-SJ-1152-1PL-6 PIPE LUG	VT	900-1/13	109000	X	-	-	-	NO UT FROM UPSTREAM SIDE DUE
			UT0L	600-3/16	109000	X	-	-	-	DUE TO WELDED HANGER BRACKET.
			UT45	600-3/16	109000	X	-	-	-	NO UT0W DUE TO WELD AREA CON-
			UT45T	600-3/16	109000	X	-	-	-	FIGURATION. ***********CAL. STD.********** 8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1152-4PS-1 PIPE TO PENETRATION	VT	900-1/13	109600	-	-	-	X	VT REVEALED ARC STRIKES, CLEARED BY PSE&G WITH CNF #41. NO UT DUE TO WELD AREA CONFIGURATION.
4.9	K-1	8-SJ-1152-4PS-2 PENETRATION TO PIPE	VT	900-1/13	109700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			UT0W	600-3/16	109700	X	-	-	-	PENETRATION AND PIPE CONFIGU-RATIONS. ***********CAL. STD.********** 8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1152-16PS PENETRATION TO PIPE	VT	900-1/13	111000	X	-	-	-	NO UT45 OR UT45T FROM THE PIPE
			UT0W	600-3/16	111000	X	-	-	-	DUE TO LACK OF ADEQUATE SUR-FACE CAUSED BY THE ADJACENT WELD CROWN. NO UT45T ON THE WELD DUE TO WELD CONFIGURATION ***********CAL. STD.********** 8-SS-XX-.860-23-SAM

SAFETY INJECTION SYSTEM, LINE NO. 8-SJ-1145 (SEE FIG. C-62)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	8-SJ-1145-1 TEE TO VALVE	VT	900-1/13	111600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE TEE AND VALVE CONFIGURA-TION.
			UT0W	600-3/16	111600	X	-	-	-	***********CAL. STD.**********
			UT45T	600-3/16	111600	X	-	-	-	8-SS-XX-.860-23-SAM

SAFETY INJECTION SYSTEM, LINE NO. 8-SJ-1135 (SEE FIG. C-63)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.9	J-1	8-SJ-1135-1 REDUCER TO VALVE	VT	900-1/13	112800	-	-	-	X	VT REVEALED ARC STRIKE. CLEARED BY PSE&G WITH CNF #69
			UT0L	600-3/16	112800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
			UT0W	600-3/16	112800	X	-	-	-	THE REDUCER AND VALVE CONFIGU-
			UT45T	600-3/16	112800	X	-	-	-	RATION. ***********CAL. STD.********** 8-SS-XX-.860-23-SAM
4.9	K-1	8-SJ-1135-2PS-1 PIPE SUPPORT	VT	900-1/13	113000	X	-	-	-	NO UT DUE TO WELD AREA CONFIG-URATION.
4.9	K-1	8-SJ-1135-2PS-2 PIPE SUPPORT	VT	900-1/13	113100	X	-	-	-	NO UT DUE TO WELD AREA CONFIG-URATION.

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1142 (SEE FIG. C-64)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
4.4	J-1	6-SJ-1142-1	VT	900-1/13	113800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		REDUCER TO ELBOW	UTOL	600-3/16	113800	X	-	-	-	THE ELBOW CURVATURE AND THE
			UTOW	600-3/16	113800	X	-	-	-	REDUCER CONFIGURATION.
			UT45T	600-3/16	113800	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1142-2	VT	900-1/13	113900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO VALVE	UTOL	600-3/16	113900	X	-	-	-	THE ELBOW CURVATURE AND THE
			UTOW	600-3/16	113900	X	-	-	-	VALVE CONFIGURATION.
			UT45T	600-3/16	113900	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1142-8	VT	900-1/13	114600	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO ELBOW	UTOL	600-3/16	114600	X	-	-	-	THE ELBOW CURVATURE.
			UTOW	600-3/16	114600	X	-	-	-	
			UT45T	600-3/16	114600	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1141 (SEE FIG. C-65)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	6-SJ-1141-1	VT	900-1/13	115300	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		REDUCER TO ELBOW	UTOL	600-3/16	115300	X	-	-	-	THE ELBOW CURVATURE AND THE
			UTOW	600-3/16	115300	X	-	-	-	REDUCER CONFIGURATION.
			UT45T	600-3/16	115300	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1141-2	VT	900-1/13	115400	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO ELBOW	UTOL	600-3/16	115400	X	-	-	-	THE ELBOW CURVATURE.
			UTOW	600-3/16	115400	X	-	-	-	
			UT45T	600-3/16	115400	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1141-13	VT	900-1/13	116500	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		ELBOW TO PIPE	UTOL	600-3/16	116500	X	-	-	-	DUE TO THE ELBOW CURVATURE.
			UTOW	600-3/16	116500	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
			UT45T	600-3/16	116500	X	-	-	-	DUE TO THE WELDED SUPPORT.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1141-15	VT	900-1/13	116700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO VALVE	UTOL	600-3/16	116700	X	-	-	-	THE ELBOW CURVATURE AND THE
			UTOW	600-3/16	116700	X	-	-	-	VALVE CONFIGURATION.
			UT45T	600-3/16	116700	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1141-18	VT	900-1/13	117000	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO BRANCH CONNECTION	UTOL	600-3/16	117000	X	-	-	-	THE ELBOW CURVATURE AND THE
			UTOW	600-3/16	117000	X	-	-	-	BRANCH CONNECTION CONFIGURA-
			UT45T	600-3/16	117000	X	-	-	-	TION.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1132 (SEE FIG. C-66)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ONSIGOM (INSIGNIFICANT)	GEOM	OTHER	REMARKS
4.4	J-1	6-SJ-1132-1 REDUCER TO ELBOW	VT	900-1/13	117100	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW CURVATURE AND THE REDUCER CONFIGURATION.
			UTOL	600-3/16	117100	X	-	-	-	
			UTOW	600-3/16	117100	X	-	-	-	
			UT45T	600-3/16	117100	X	-	-	-	************CAL. STD.********** 6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1132-2 ELBOW TO VALVE	VT	900-1/13	117200	X	-	-	-	NO UT FROM THE UPSTREAM SIDE DUE TO THE ELBOW CURVATURE. NO UT FROM THE DOWNSTREAM SIDE DUE TO THE VALVE CONFIGURATION
			UTOL	600-3/16	117200	X	-	-	-	
			UTOW	600-3/16	117200	X	-	-	-	
			UT45T	600-3/16	117200	X	-	-	-	************CAL. STD.********** 6-SS-160-.764-25-SAM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1131 (SEE FIG. C-67)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I G	O G E O M	O T H E R	REMARKS
4.9	K-1	6-SJ-1131-6PS-1 PIPE SUPPORT	VT	900-1/13	119400	X	-	-	-	NO UT DUE TO OUTER RADIUS OF THE ELBOW. NO UTOW DUE TO THE WELD CROWN CONFIGURATION.
4.9	K-1	6-SJ-1131-6PS-2 PIPE SUPPORT	VT	900-1/13	119450	X	-	-	-	NO UT DUE TO OUTER RADIUS OF THE ELBOW. NO UTOW DUE TO THE WELD CROWN CONFIGURATION.
4.4	J-1	6-SJ-1131-13 ELBOW TO ELBOW	VT	900-1/13	120100	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW CURVATURE.
			UT0L	600-3/16	120100	X	-	-	-	
			UT0W	600-3/16	120100	X	-	-	-	
			UT45T	600-3/16	120100	X	-	-	-	***********CAL. STD.********** 6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1131-18 ELBOW TO VALVE	VT	900-1/13	120600	X	-	-	-	NO UT FROM THE UPSTREAM SIDE DUE TO THE ELBOW CURVATURE.
			UT0L	600-3/16	120600	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE DUE TO VALVE CONFIGURATION.
			UT0W	600-3/16	120600	X	-	-	-	
			UT45T	600-3/16	120600	X	-	-	-	***********CAL. STD.********** 6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1131-21 ELBOW TO BRANCH CONNECTION	VT	900-1/13	120900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE ELBOW AND BRANCH CONNECTION CONFIGURATION.
			UT0L	600-3/16	120900	X	-	-	-	
			UT0W	600-3/16	120900	X	-	-	-	
			UT45T	600-3/16	120900	X	-	-	-	***********CAL. STD.********** 6-SS-160-.764-25-SAM

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1122 (SEE FIG. C-68)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N R E C	O S I O	I N G C	G E O M	O T H E R	REMARKS
4.4	J-1	6-SJ-1122-1	VT	900-1/13	121000	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		REDUCER TO VALVE	UTOL	600-3/16	121000	X	-	-	-	DUE TO REDUCER CONFIGURATION.
			UTOW	600-3/16	121000	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
			UT45T	600-3/16	121000	X	-	-	-	DUE TO VALVE CONFIGURATION.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1122-10	VT	900-1/13	121900	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO ELBOW	UTOL	600-3/16	121900	X	-	-	-	THE ELBOW CURVATURE.
			UTOW	600-3/16	121900	X	-	-	-	
			UT45T	600-3/16	121900	X	-	-	-	
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1121 (SEE FIG. C-69)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	IGOM	GEOM	OTHER	REMARKS
4.4	J-1	6-SJ-1121-1	VT	900-1/13	122200	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		REDUCER TO ELBOW	UTOL	600-3/16	122200	X	-	-	-	DUE TO THE REDUCER CONFIGURA-
			UTOW	600-3/16	122200	X	-	-	-	TION. NO UT FROM THE DOWN-
			UT45T	600-3/16	122200	X	-	-	-	STREAM SIDE DUE TO THE ELBOW
										CURVATURE.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1121-2	VT	900-1/13	122300	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		ELBOW TO VALVE	UTOL	600-3/16	122300	X	-	-	-	DUE TO THE ELBOW CURVATURE.
			UTOW	600-3/16	122300	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
			UT45T	600-3/16	122300	X	-	-	-	DUE TO THE VALVE CONFIGURATION
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
4.4	J-1	6-SJ-1121-5	VT	900-1/13	122600	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		ELBOW TO BRANCH CONNECTION	UTOL	600-3/16	122600	X	-	-	-	DUE TO THE ELBOW CURVATURE.
			UTOW	600-3/16	122600	X	-	-	-	NO UT FROM THE DOWNSTREAM SIDE
			UT45T	600-3/16	122600	X	-	-	-	DUE TO THE BRANCH CONNECTION
										CONFIGURATION.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1112 (SEE FIG. C-70)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.4	J-1	6-SJ-1112-1	VT	900-1/13	122700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		REDUCER TO VALVE	UTOW	600-3/16	122700	X	-	-	-	THE REDUCER AND VALVE CONFIGU-
			UT45T	600-3/16	122700	X	-	-	-	RATION.
										***********CAL. STD.**********
										6-SS-160-.769-2S-SAM

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-1111 (SEE FIG. C-71)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	IOSOM	GEOME	OTHER	REMARKS
4.4	J-1	6-SJ-1111-1	VT	900-1/13	124100	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		REDUCER TO VALVE	UT0L	600-3/16	124100	X	-	-	-	THE REDUCER AND VALVE CONFIGU-
			UT0W	600-3/16	124100	X	-	-	-	RATION.
			UT45T	600-3/16	124100	X	-	-	-	
										***********CAL. STD.***********
										6-SS-160-.764-25-SAM

SAFETY INJECTION SYSTEM, LINE NO. 4-SJ-1194 (SEE FIG. C-73)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ONSIGOM	GEOM	OTHER	REMARKS
4.4	J-1	4-SJ-1194-15	VT	900-1/13	126300	X	-	-	-	LIMITED UT EXAMINATION DUE TO
		PIPE TO ELBOW	UT0L	600-3/16	126300	X	-	-	-	WELDED PIPE SUPPORT.
			UT45	600-3/16	126300	X	-	-	-	
			UT45T	600-3/16	126300	X	-	-	-	
			UT60	600-3/16	126300	-	X	-	-	
										***********CAL. STD.**********
										4-SS-160-.593-28-SAM

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

SAFETY INJECTION SYSTEM, LINE NO. 4-SJ-1182 (SEE FIG. C-74)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NO REC	IN SIG	GEO MON	OTHER	REMARKS
4.4	J-1	4-SJ-1182-29 TEE TO REDUCER	VT	900-1/13	130700	-	-	-	X	VT REVEALED ARC STRIKE, CLEARED BY PSE&G WITH CNF #55.
			UTOW	600-3/16	130700	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE TEE AND REDUCER CONFIGURATION.
			UT45T	600-3/16	130700	X	-	-	-	************CAL. STD.********** 4-SS-160-.553-28-SAM

SAFETY INJECTION SYSTEM, LINE NO. 4-SJ-1172 (SEE FIG. C-75)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
4.9	K-1	4-SJ-1172-19PS-1	VT	900-1/13	132700	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		PIPE TO PENETRATION	UT0L	600-3/16	132700	X	-	-	-	DUE TO WELD 4-SJ-1172-19. NO
			UT0W	600-3/16	132700	X	-	-	-	UT FROM THE DOWNSTREAM SIDE
			UT45T	600-3/16	132700	X	-	-	-	DUE TO THE PENETRATION CONFIG-
										URATION.
										************CAL. STD.**********
										4-SS-XX-.689-27-SAM
4.9	K-1	4-SJ-1172-19PS-2	VT	900-1/13	132800	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		PENETRATION TO PIPE	UT0L	600-3/16	132800	X	-	-	-	DUE TO THE PENETRATION CONFIG-
			UT45	600-3/16	132800	X	-	-	-	URATION. NO UT0W DUE TO THE
			UT45T	600-3/16	132800	X	-	-	-	WELD CONFIGURATION.
			UT60	600-3/16	132800	X	-	-	-	
										************CAL. STD.**********
										4-SS-XX-.689-27-SAM
4.4	J-1	4-SJ-1172-27	VT	900-1/13	133700	X	-	-	-	NO UT DUE TO TEE, CAP, AND
		TEE TO CAP								WELD CONFIGURATION.
4.4	J-1	4-SJ-1172-28	VT	900-1/13	133800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		TEE TO REDUCER	UT0W	600-3/16	133800	X	-	-	-	THE TEE AND REDUCER CONFIGURA-
										TION.
										************CAL. STD.**********
										4-SS-160-.553-28-SAM

DATE: 08/03/77
PAGE: 045

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

SAFETY INJECTION SYSTEM, LINE NO. 3-SJ-1192 (SEE FIG. C-72)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ISOIG	GEOM	OTHER	REMARKS
4.4	J-1	3-SJ-1192-3 REDUCING ELBOW TO TEE	VT	900-1/13	134100	X	-	-	-	NO UT FROM EITHER SIDE DUE TO THE TEE AND ELBOW CONFIGURA- TION.
			UT0L	600-3/16	134100	X	-	-	-	
			UT0W	600-3/16	134100	X	-	-	-	
			UT45T	600-3/16	134100	X	-	-	-	***********CAL. STD.********** 3-SS-160-.481-30-SAM
4.9	K-1	3-SJ-1192-9PS-2 PENETRATION TO PIPE	VT	900-1/13	135000	X	-	-	-	NO UT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION CONFIG- URATION. NO UT0W DUE TO THE WELD CONFIGURATION.
			UT0L	600-3/16	135000	X	-	-	-	
			UT45	600-3/16	135000	X	-	-	-	
			UT45T	600-3/16	135000	X	-	-	-	***********CAL. STD.********** 3-SS-XX-.600-43-SAM

REACTOR COOLANT PUMP NO. 11 (SEE FIG. C-4)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
		BOLTING								
5.4	G-1	11-PMP-BOLTS 1-24	VT	900-1/13	190800	X	-	-	-	VT AND UT PERFORMED WITH BOLTS IN PLACE. NO UT ON BOLTS 1,
			UT60	600-18/8	190800	X	-	-	-	11, AND 15 DUE TO INACCESSI- BILITY OF CENTER HOLE.
										***********CAL. STD.********** 4.5-.75-8-CS-70-8AM
		LIGAMENTS BETWEEN THREADED STUD HOLES								
5.4	G-1	11-PMP-LIG 1-24 LIGAMENTS	VT	900-1/13	190900	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
		INTEGRALLY WELDED VESSEL SUPPORTS								
5.6	K-1	11-PMP-3LG LUG	VT	900-1/13	191800	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 1 COMPONENTS

REACTOR COOLANT PUMP NO. 12 (SEE FIG. C-5)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I O	G E O M	O T H E R	REMARKS
		BOLTING								
5.4	G-1	12-PMP-BOLTS 1-24	VT	900-1/13	191600	X	-	-	-	VT AND UT PERFORMED WITH BOLTS IN PLACE. NO UT ON BOLTS 1, 11, AND 15 DUE TO INACCESSI-BILITY OF CENTER HOLE.
			UT60	600-18/8	191600	X	-	-	-	************CAL. STD.*********** 4.5-.75-8-CS-70-SAM
		LIGAMENTS BETWEEN THREADED STUD HOLES								
5.4	G-1	12-PMP-LIG 1-24 LIGAMENTS	VT	900-1/13	191700	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
		INTEGRALLY WELDED VESSEL SUPPORTS								
5.6	K-1	12-PMP-1LG LUG	VT	900-1/13	191800	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
5.6	K-1	12-PMP-2LG LUG	VT	900-1/13	191900	-	-	-	X	VT REVEALED ARC STRIKE. CLEARED BY PSE&G WITH CNF #228 UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
5.6	K-1	12-PMP-3LG LUG	VT	900-1/13	192000	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.

REACTOR COOLANT PUMP NO. 13 (SEE FIG. C-6)

ASME SECT XI ITEM NO	ASME SECT XI CATGY.	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	NIGEOM	IONSGEO	OTHER	REMARKS
		BOLTING								
5.4	G-1	13-PMP-BOLTS 1-24	VT UT60	900-1/13 600-18/8	192400 192400	X X	- -	- -	- -	VT AND UT PERFORMED WITH BOLTS IN PLACE. NO UT ON BOLTS 1, 2, AND 15 DUE TO INACCESSI- BILITY OF CENTER HOLE. ************CAL. STD.********** 4.5-.75-8-CS-70-8AM
		LIGAMENTS BETWEEN THREADED STUD HOLES								
5.4	G-1	13-PMP-LIG 1-24 LIGAMENTS	VT	900-1/13	192500	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
		INTEGRALLY WELDED VESSEL SUPPORTS								
5.6	K-1	13-PMP-1LG LUG	VT	900-1/13	192600	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
5.6	K-1	13-PMP-2LG LUG	VT	900-1/13	192700	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
5.6	K-1	13-PMP-3LG LUG	VT	900-1/13	192800	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
		PUMP MOTOR FLYWHEEL								
NONE	NONE	13-PMP-FLW' PUMP MOTOR FLYWHEEL	VT PT UT0L UT45	900-1/13 200-1/11 600-6/6 600-6/6	192900 192900 192900 192900	X X - X	- - X -	- - - -	- - - -	EXAMINATIONS PERFORMED TO SATISFY REQUIREMENTS OF REGULATORY GUIDE 1.14. ************CAL. STD.********** 13-PMP-FLW-TOP

CHEM AND VOL CONTROL SYSTEM, LINE NO, 8-CV-2101 (SEE FIG, D-6, D-7 & D-8)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O B S E C	I N G E I O M	O T H E R	REMARKS
C2.1	C-F	8-CV-2101-2 PIPE TO TEE	UTOL UT55 UT55T	800-36/5 800-36/5 800-36/5	220586 220586 220586	X - - - - X - - X - - -			NO UT FROM TWELVE INCHES TO SEVENTEEN INCHES DUE TO THE PERMANENT PIPE HANGER. ***********CAL. STD.********** 8-SS-40-.330-44-SAM 8-SS-10-.140-24-SAM
C2.1	C-F	8-CV-2101-7 ELBOW TO PIPE	SEE RMKS	--	220594	X - - -			THIS WELD IS BURIED IN THE WALL AND IS INACCESSIBLE.
C2.1	C-F	8-CV-2101-26 PIPE TO ELBOW	SEE RMKS	--	220632	X - - -			THIS WELD IS BETWEEN WALLS AND IS INACCESSIBLE.
C2.1	C-F	8-CV-2101-27 ELBOW TO PIPE	SEE RMKS	--	220634	X - - -			THIS WELD IS BETWEEN WALLS AND IS INACCESSIBLE.
C2.1	C-F	8-CV-2101-39 ELBOW TO PIPE	SEE RMKS	--	220658	X - - -			THIS WELD IS BURIED IN THE WALL AND IS INACCESSIBLE.

REACTOR COOLANT PUMP NO. 14 (SEE FIG. C-7)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NORM.	ISOG.	GEOM.	OTHER	REMARKS
		LIGAMENTS BETWEEN THREADED STUD HOLES								
S.4	G-1	14-PMP-LIG 1-24 LIGAMENTS	VT	900-1/13	193300	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
		INTEGRALLY WELDED VESSEL SUPPORTS								
S.6	K-1	14-PMP-1LG LUG	VT	900-1/13	193400	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
S.6	K-1	14-PMP-2LG LUG	VT	900-1/13	193500	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.
S.6	K-1	14-PMP-3LG LUG	VT	900-1/13	193600	X	-	-	-	UT NOT FEASIBLE DUE TO THE ACOUSTIC PROPERTIES OF THE PUMP.

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 2 COMPONENTS

STEAM GENERATOR FEED, LINE NO. 14-BF-2131 (SEE FIG. D-2)

ASME SECT XI ITEM NO	ASME SECT XI CATGY.	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-G	14-BF-2131-4A PIPE TO PIPE	NOT REQ	--	211320	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.
C2.1	C-G	14-BF-2131-5 PIPE TO ELBOW	NOT REQ	--	211350	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.
C2.1	C-G	14-BF-2131-6 ELBOW TO PIPE	NOT REQ	--	211400	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.
C2.1	C-G	14-BF-2131-7 PIPE TO ELBOW	NOT REQ	--	211450	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.
C2.1	C-G	14-BF-2131-8 ELBOW TO PIPE	NOT REQ	--	211500	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.
C2.1	C-G	14-BF-2131-9 ELBOW TO PIPE	NOT REQ	--	211550	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.
C2.1	C-G	14-BF-2131-10 PIPE TO PIPE	NOT REQ	--	211600	X	-	-	-	A 20 INCH PIPE ENCAPSULATES THE 14 INCH PIPE AND MAKES THIS WELD INACCESSIBLE.

MAIN STEAM SYSTEM, LINE NO. 34-MS-2131 (SEE FIG. D-13)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-G	34-MS-2131-1	UT0W	600-3/16	222400	X	-	-	-	NO UT FROM THE UPSTREAM SIDE
		PIPE TO PIPE	UT45T	600-3/16	222400	X	-	-	-	DUE TO WELDED COLLAR AND NO UT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE TAPE. ***********CAL. STD.*********** PL-1,S-CS-65-SAM

MAIN STEAM SYSTEM, LINE NO. 34-MS-2111 (SEE FIG. D-15)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-G	34-MS-2111-1	UTOW	600-3/16	225800	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		PIPE TO PIPE	UT45T	600-3/16	225800	X	-	-	-	WELDED COLLAR UPSTREAM AND
										PIPE TAPER DOWNSTREAM.
										***********CAL. STD.**********
										PL-1.5-CS-65-SAM

MAIN STEAM SYSTEM, LINE NO. 32-MS-2131 (SEE FIG. D-17)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.4	C-C	32-MS-2131-2PL-1 PIPE LUG	SEE RMKS	--	229000	X	-	-	-	THIS WELD IS ADJACENT TO THE PENETRATION AND IS INACCESSI-BLE.
C2.4	C-C	32-MS-2131-2PL-2 PIPE LUG	MT	300-1/7	229100	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO PIPE LUGS.
C2.4	C-C	32-MS-2131-2PL-3 PIPE LUG	MT	300-1/7	229200	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-4 PIPE LUG	MT	300-1/7	229300	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-5 PIPE LUG	MT	300-1/7	229305	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-6 PIPE LUG	MT	300-1/7	229310	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-7 PIPE LUG	MT	--	229315	X	-	-	-	THIS LUG WELD IS INACCESSIBLE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-8 PIPE LUG	MT	300-1/7	229320	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-9 PIPE LUG	MT	300-1/7	229325	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-10 PIPE LUG	MT	300-1/7	229330	-	-	-	X	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION. MT REVEALED A LINEAR INDICA-TION. CLEARED BY PSE&G WITH CNF #283.

MAIN STEAM SYSTEM, LINE NO. 32-MS-2131 (SEE FIG. D-17)

(CONTD)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOR	ISO	NGE	OTH	REMARKS
C2.4	C-C	32-MS-2131-2PL-11 PIPE LUG	MT	300-1/7	229338	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2131-2PL-12 PIPE LUG	MT	300-1/7	229340	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.3	C-G	32-MS-2131-4/6-MS-2131 6 IN. BRANCH CONNECTION	NOT REQ	--	229600	X	-	-	-	THIS WELD IS ENCAPSULATED IN PIPE AND IS INACCESSIBLE.

MAIN STEAM SYSTEM, LINE NO. 32-MS-2121 (SEE FIG. D-18)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	GEOM	INDIC	OTHER	REMARKS
C2.4	C-C	32-MS-2121-2PL-1 PIPE LUG	SEE RMKS	--	230100	X	-	-	-	NO MT DUE TO INACCESSIBILITY CAUSE BY PENETRATION.
C2.4	C-C	32-MS-2121-2PL-2 PIPE LUG	MT	300-1/7	230200	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-3 PIPE LUG	MT	300-1/7	230300	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-4 PIPE LUG	MT	300-1/7	230400	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-5 PIPE LUG	MT	300-1/7	230405	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-6 PIPE LUG	MT	300-1/7	230410	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-7 PIPE LUG	MT	300-1/7	230415	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-8 PIPE LUG	MT	300-1/7	230420	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.
C2.4	C-C	32-MS-2121-2PL-9 PIPE LUG	MT	300-1/7	230425	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE LUG CONFIGURATION.
C2.4	C-C	32-MS-2121-2PL-10 PIPE LUG	MT	300-1/7	230430	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION. NO MT IN THE COUNTERCLOCKWISE DIREC- TION DUE TO THE PIPE OBSTRUC- TION.
C2.4	C-C	32-MS-2121-2PL-11 PIPE LUG	MT	300-1/7	230435	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION.

MAIN STEAM SYSTEM, LINE NO, 32-MS-2121 (SEE FIG, D-18)

(CONTD)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM, METHOD	SWRI PROCEDURE NO,/REV,	SUMMARY SHEET NUMBER	N O R E C	I N S I G	G E O M	O T H E R	REMARKS
C2,4	C-C	32-MS-2121-2PL-12 PIPE LUG	MT	300-1/7	230440	X	-	-	-	NO MT FROM THE UPSTREAM SIDE DUE TO THE PENETRATION,
C2,4	C-C	32-MS-2121-4PL-1 PIPE LUG	MT	300-1/7	230700	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINTS,
C2,4	C-C	32-MS-2121-4PL-2 PIPE LUG	MT	300-1/7	230800	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT,
C2,4	C-C	32-MS-2121-4PL-3 PIPE LUG	MT	300-1/7	230810	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT,
C2,4	C-C	32-MS-2121-4PL-4 PIPE LUG	MT	300-1/7	230820	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT,
C2,4	C-C	32-MS-2121-4PL-5 PIPE LUG	MT	300-1/7	230830	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT,
C2,4	C-C	32-MS-2121-4PL-6 PIPE LUG	MT	300-1/7	230840	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT,
C2,4	C-C	32-MS-2121-4PL-7 PIPE LUG	MT	300-1/7	230850	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT,

MAIN STEAM SYSTEM, LINE NO. 32-MS-2121 (SEE FIG. D-18)

(CONTD)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIGNIF	GEOMETRIC (GEOM)	OTHER	REMARKS
C2.4	C-C	32-MS-2121-4PL-8 PIPE LUG	MT	300-1/7	230960	X	-	-	-	NO EXAMINATION FROM THE UP-STREAM OR DOWNSTREAM ENDS OF THE LUG DUE TO THE PIPE RE-STRAINT.

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 2 COMPONENTS

MAIN STEAM SYSTEM, LINE NO. 32-MS-2111 (SEE FIG. D-19)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.3	C-G	32-MS-2111-9/6-MS-2111 6 IN. BRANCH CONNECTION	NOT REQ	--	231900	X	-	-	-	THIS WELD IS ENCAPSULATED IN PIPE AND IS INACCESSIBLE.

MAIN STEAM SYSTEM, LINE NO. 30-MS-2141 (SEE FIG. D-16)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.4	C-C	30-MS-2141-4PL-1 PIPE LUG	MT	300-1/7	233200	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-2 PIPE LUG	MT	300-1/7	233300	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-3 PIPE LUG	MT	300-1/7	233400	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-4 PIPE LUG	MT	300-1/7	233500	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-5 PIPE LUG	MT	300-1/7	233510	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-6 PIPE LUG	MT	300-1/7	233520	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-7 PIPE LUG	MT	300-1/7	233530	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.
C2.4	C-C	30-MS-2141-4PL-8 PIPE LUG	MT	300-1/7	233540	X	-	-	-	NO MT FROM THE DOWNSTREAM SIDE DUE TO THE PIPE COLLAR.

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 2 COMPONENTS

RESIDUAL HEAT REMOVAL SYSTEM, LINE NO. 14-RH-2124 (SEE FIG. D-35)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-F	14-RH-2124-5 ELBOW TO PIPE	SEE RMKS	--	263218	X	-	-	-	THIS WELD IS WITHIN THE FLOOR AND IS INACCESSIBLE.

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 2 COMPONENTS

RESIDUAL HEAT REMOVAL SYSTEM, LINE NO, 14-RH-2114 (SEE FIG, D-36)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-F	14-RH-2114-18 FLANGE TO PUMP	UT0W	600-3/16	263304	X	-	-	-	NO UT FROM EITHER THE UP- OR DOWNSTREAM SIDE DUE TO THE FLANGE AND PUMP CONFIGURATION.
			UT45T	600-3/16	263304	X	-	-	-	***********CAL. STD.********** 14-SS-40-.438-79-SAM

RESIDUAL HEAT REMOVAL SYSTEM, LINE NO. 14-RH-2112 (SEE FIG. D-37)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ISIGO	NGEOM	OTHER	REMARKS
C2.1	C-F	14-RH-2112-18	UT0L	600-3/16	263356	X	-	-	-	ONE UT45 INDICATION DUE TO IN-
		PIPE TO ELBOW	UT45	600-3/16	263356	-	X	X	-	SIDE SURFACE TO CROWN GEOMETRY
			UT45T	600•3/16	263356	X	-	-	-	
			UT60	600-3/16	263356	X	-	-	-	
										***********CAL. STD.**********
										14-38-40-,438-79-8AM

RESIDUAL HEAT REMOVAL SYSTEM, LINE NO, 8-RH-2174 (SEE FIG, D-38)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY.	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NO REC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-F	8-RH-2174-6 FLANGE TO TEE	UT0L	600-3/16	263410	X	-	-	-	NO UT FROM EITHER SIDE DUE TO TEE AND FLANGE CONFIGURATIONS.
			UT0W	600-3/16	263410	X	-	-	-	
			UT45T	600-3/16	263410	X	-	-	-	***********CAL. STD.********** 8-88-80-.484-32-SAM

RESIDUAL HEAT REMOVAL SYSTEM, LINE NO. 8-RH-2126 (SEE FIG. D-41)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-G	8-RH-2126-1	UT0W	600-3/16	263508	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		PUMP TO VALVE	UT45T	600-3/16	263508	X	-	-	-	PUMP AND VALVE CONFIGURATION
										***********CAL. STD.**********
										8-SS-80-,484-32-8AM
C2.1	C-F	8-RH-2126-4	UT0W	600-3/16	263514	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		FLANGE TO VALVE	UT45T	600-3/16	263514	X	-	-	-	THE FLANGE AND VALVE CONFIGU-
										RATION.
										***********CAL. STD.**********
										8-SS-80-,484-32-8AM

RESIDUAL HEAT REMOVAL SYSTEM, LINE NO. 8-RH-2116 (SEE FIG. D-42)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-F	8-RH-2116-4 FLANGE TO VALVE	UTSST UT45T	800-36/5 600-3/16	263620 263620	X X	- -	- -	- -	NO UT FROM EITHER SIDE DUE TO THE FLANGE AND VALVE CONFIGU- RATION. ***********CAL. STD.********** 8-8S-40-.330-44-SAM

SAFETY INJECTION SYSTEM, LINE NO. 12-SJ-2152 (SEE FIG. D-45)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	N O R E C	I N S I D	G E O M	O T H E R	REMARKS
C2.4	C-C	12-SJ-2152-4PS-1 PIPE SUPPORT	SEE RMKS	--	263827	X	-	-	-	THIS WELD IS IN THE WALL AND IS INACCESSIBLE.
C2.4	C-C	12-SJ-2152-4PS-2 PIPE SUPPORT	SEE RMKS	--	263828	X	-	-	-	THIS WELD IS IN THE WALL AND IS INACCESSIBLE.
C2.1	C-F	12-SJ-2152-4A PIPE TO ELBOW	SEE RMKS	--	263829	X	-	-	-	THIS WELD IS IN THE WALL AND IS INACCESSIBLE.
C2.1	C-F	12-SJ-2152-26 PIPE TO ELBOW	SEE RMKS	--	263876	X	-	-	-	THIS WELD IS INACCESSIBLE DUE TO A METAL BOX ENCAPSULATION.

SALEM NUCLEAR GENERATING STATION UNIT-1
SUMMARY OF NONDESTRUCTIVE EXAMINATIONS
CLASS 2 COMPONENTS

SAFETY INJECTION SYSTEM, LINE NO. 8-SJ-2162 (SEE FIG. D-46)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-F	8-SJ-2162-1 TEE TO PIPE	SEE RMKS	--	263922	X	-	-	-	A HANGER IS WELDED OVER THIS WELD. THE WELD WAS NOT EXAM-INED.
C2.1	C-F	8-SJ-2162-3 FLANGE TO PIPE	SEE RMKS	--	263927	X	-	-	-	A HANGER IS WELDED OVER THIS WELD. THE WELD WAS NOT EXAM-INED.

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-2104 (SEE FIG. D-50)

ASME SECT XI ITEM NO.	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	INSIG	GEOM	OTHER	REMARKS
C2.1	C-F	6-SJ-2104-1	UT0W	600-3/16	264200	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		REDUCER TO ELBOW	UT45T	600-3/16	264200	X	-	-	-	THE REDUCER CONFIGURATION AND
										THE ELBOW CURVATURE.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM
C2.1	C-F	6-SJ-2104-4	UT45T	600-3/16	264206	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		SAFE-END TO NOZZLE	UT0W	600-3/16	264206	X	-	-	-	NOZZLE CONFIGURATION AND DUE
										TO WELD 6-SJ-2104-3.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

SAFETY INJECTION SYSTEM, LINE NO. 6-SJ-2103 (SEE FIG. D-SO)

ASME SECT XI ITEM NO	ASME SECT XI CATGY	WELD NUMBER AND/OR EXAMINATION AREA IDENTIFICATION	EXAM. METHOD	SWRI PROCEDURE NO./REV.	SUMMARY SHEET NUMBER	NOREC	ISICG	GEOM	OTHER	REMARKS
C2.1	C-F	6-SJ-2103-3	UT0L	600-3/16	264220	X	-	-	-	NO UT FROM EITHER SIDE DUE TO
		ELBOW TO REDUCER	UT0H	600-3/16	264220	X	-	-	-	TO THE ELBOW CURVATURE AND THE
			UT45T	600-3/16	264220	X	-	-	-	REDUCER CONFIGURATION.
										***********CAL. STD.**********
										6-SS-160-.764-25-SAM

ATTACHMENT 3

DETAILED EXPLANATION OF
EXCEPTIONS TO THE ASME BOILER AND PRESSURE VESSEL CODE SECTION XI
FOR THE SALEM UNIT NO. 1 INSERVICE INSPECTION PROGRAM

Item B1.2 Category B-B

Closure Head Peel Segment-To-Disc Circumferential Weld

Volumetric examination will not be performed on this weld due to inaccessibility. A visual examination for leaks will be performed during pressure tests required by Section XI. This weld is identified as 1-RPV-6046 B in the examination plan.

As indicated in PSE&G Sketch No. 8-9-77 attached, this weld is located within the area covered by the Control Rod Drive Penetrations. This location prevents access to the weld for any type of volumetric or surface examination from either the inside or outside surface of the closure head. To gain access would require removing and re-installing numerous Control Rod Drive penetration tubes.

Bottom Head Peel Segment-To-Disc Circumferential Weld

Volumetric examination will not be performed on this weld due to inaccessibility. A visual examination for leaks will be performed during pressure tests required by Section XI. This weld is identified as 1-RPV-4043 in the examination plan.

As indicated in PSE&G Sketch No. 8-9-77 attached, this weld is located within the area covered by the instrumentation tube penetrations. This location prevents access to the weld for any type of volumetric or surface examination from either the inside or outside surface of the bottom head. To gain access would require removing and re-installing numerous instrumentation tubes.

Item B1.4 Category B-D

Reactor Vessel Inlet Nozzle To Shell Welds

Volumetric examination will not be performed when the Core Barrel is in place due to inaccessibility. The examinations will be performed when the core barrel is removed during the inspection interval. These welds are identified as 27.5-1110-1, 27.5-RPV-1120-1, 27.5-RpV-1130-1 and 27.5-RPV-1140-1 in the examination plan.

As indicated in PSE&G Sketch No. 8-15-77 attached, the Core Barrel covers the weld area when it is in place. Since all weld examinations are performed from the inside surface using an mechanized inspection device, these welds are inaccessible at this time. Examinations cannot be performed from the outside surface due to the area being covered by insulation on the shell of the weld and the configuration of the weld joint on the nozzle side of the weld. The insulation on the shell portion of the reactor vessel is not designed for removability and to remove it would require the cutting away of the insulation support rings from the vessel.

Since the Core Barrel is scheduled to be removed towards the end of the inspection interval to facilitate their examinations, and ASME Code Case N-73 (1647) allows these examinations to be deferred to the end of each inspection interval, it is PSE&G's position that the intent of the Code is being complied with.

Reactor Vessel Outlet Nozzle to Shell Welds

Volumetric examination will be performed with the Core Barrel in place except for the examination of the Reactor Vessel base metal due to inaccessibility. The base metal will be examined when the Core Barrel is removed during the inspection interval. These welds are identified as 29-RPV-1110-1, 29-RPV-1120-1, 29-RPV-1130-1 and 29-RPV-1140-1 in the examination plan.

As indicated in PSE&G Sketch No. 8-16-77 attached, the Core Barrel covers the reactor vessel base metal when it is in place. Since all weld examinations are performed from the inside surface using an automated inspection device, these welds are inaccessible at this time. Examination cannot be performed from the outside surface due to the area being covered by insulation which would require the cutting away of the insulation support rings to remove.

Since the Core Barrel is scheduled to be removed towards the end of the inspection interval, and ASME Code Case N-73 (1647) allows these examinations to be deferred to the end of each inspection interval, it is PSE&G's position that the intent of the code is being complied with.

Item B1.14 Category B-I-1

Reactor Vessel Cladding

Visual examination will not be performed on the Reactor Vessel Shell Cladding when the Core Barrel is in place due to inaccessibility. The examination will be performed when the Core Barrel is removed during the inspection interval. The patches of cladding to be examined are identified as 1-RPV-Patch-1, 1-RPV-Patch-2, 1-RPV-Patch-3, 1-RPV-Patch-4, 1-RPV-Patch-5 and 1-RPV-Patch-6 in the examination plan.

Since this examination can only be performed from the inside surface of the reactor vessel shell, the examination can only be performed when the Core Barrel is removed. The Core Barrel is scheduled to be removed towards the end of the inspection interval.

Item B4.5 Category B-J

Reactor Coolant Loop Piping Longitudinal Welds

Volumetric examinations will not be performed on the longitudinal welds in the reactor Coolant Piping elbows. Surface examinations will be performed as well as a visual examination for leaks required by Section XI. These welds are identified as 31-RC-1110-2, 31-RC-1120-2, 31-RC-1130-2, 31-RC-1140-2, 29-RC-1110-4,'29-RC-1120-5, 29-RC-1130-5 and 29-RC-114-5 in the examination plan.

The Reactor Coolant loop elbows are made of cast stainless steel which cannot be penetrated by ultrasonic examination techniques. Also, acceptable radiographs cannot be obtained by present techniques due to fogging of the film caused by long exposure time coupled with background radiation from the reactor coolant piping. Radiography will be considered as new techniques are developed that would make it possible to examine these welds in the future.

Reactor Coolant Loop Piping Circumferential Welds

Volumetric examination on eight reactor coolant loop piping welds is expected to be restricted during inservice inspection due to inaccessibility. These welds are identified as 31-RC-110-5 and 6, 31-RC-1120-5 and 6, 31-RC-1130-5 and 6, and 31-RC-1140-5 and 6 in the examination plan.

Due to anti-whip restraints that were installed after the preservice examination was completed, portions of these circumferential welds are expected to become inaccessible for inservice examination. The extent of inaccessibility will be determined during the first inservice examination of these welds.

Item B5.6 Category B-L-1

Reactor Coolant Pump Casing Welds

Volumetric examination will not be performed on these welds. A surface examination will be performed as well as a visual examination for leaks required by Section XI. These welds are identified as 11-PMP-1, 12-PMP-1, 13-PMP-1 and 14-PMP-1 in the examination plan.

The Reactor Coolant Pump casings are made of cast stainless steel which can not be penetrated by ultrasonic examination techniques. Also, acceptable radiographs cannot be obtained due to fogging of the film caused by long exposure time coupled with background radiation from the pump casing. Radiography will be considered as new techniques are developed to examine these welds in the future.

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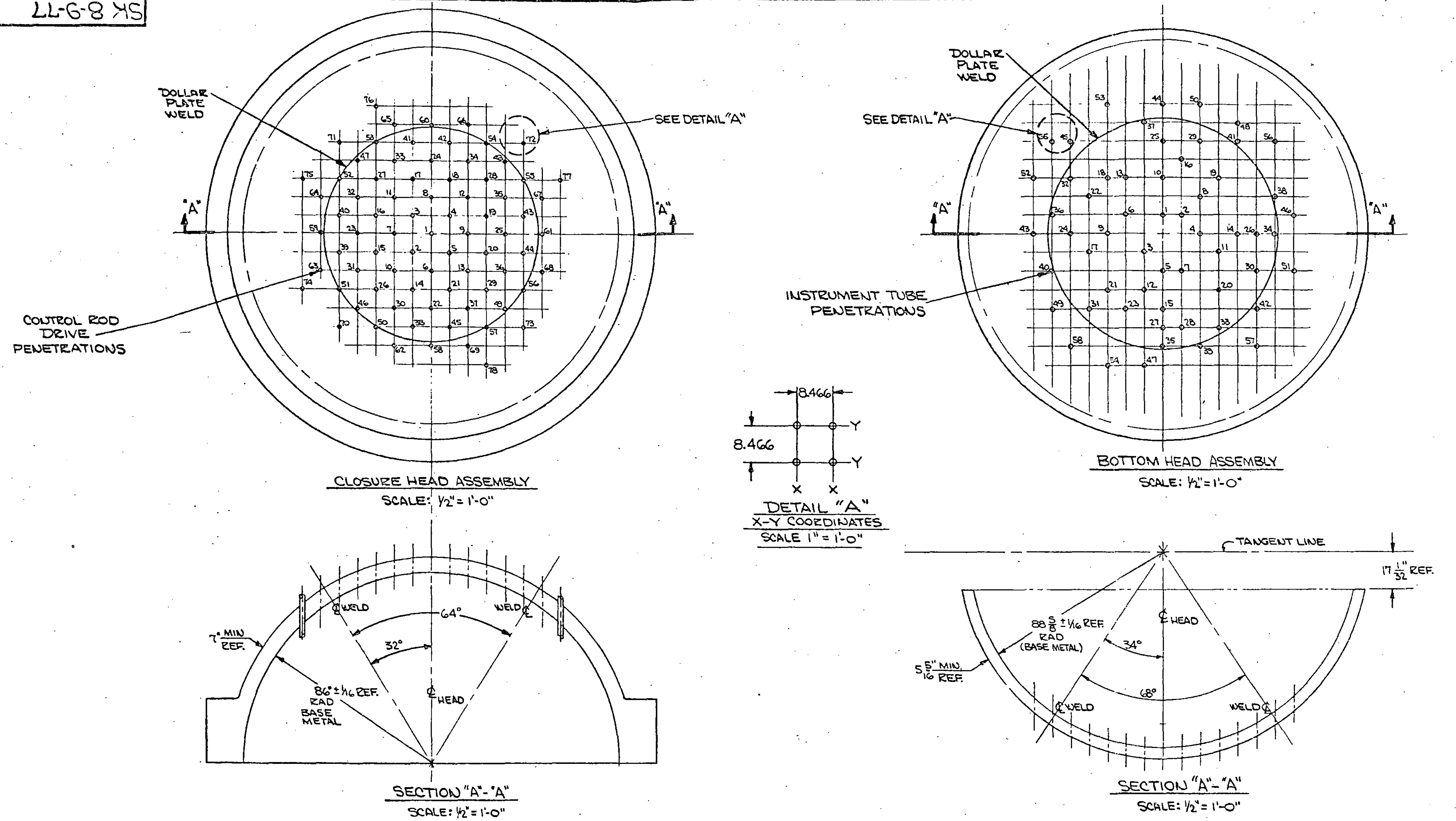
SK 8-9-77



REFERENCE DRAWINGS

"X"-"Y" COORDINATES ________ 500B919 (SHTS. 1 THRU 5) (W)

CLOSURE HEAD ASS'Y. ________ 233-046-5 FOR (W)

BOTTOM HEAD ASS'Y. ________ 233-043-4 FOR (W)

No.	Date	Description	Drwn	Chkd	Eng	Apd

REVISION

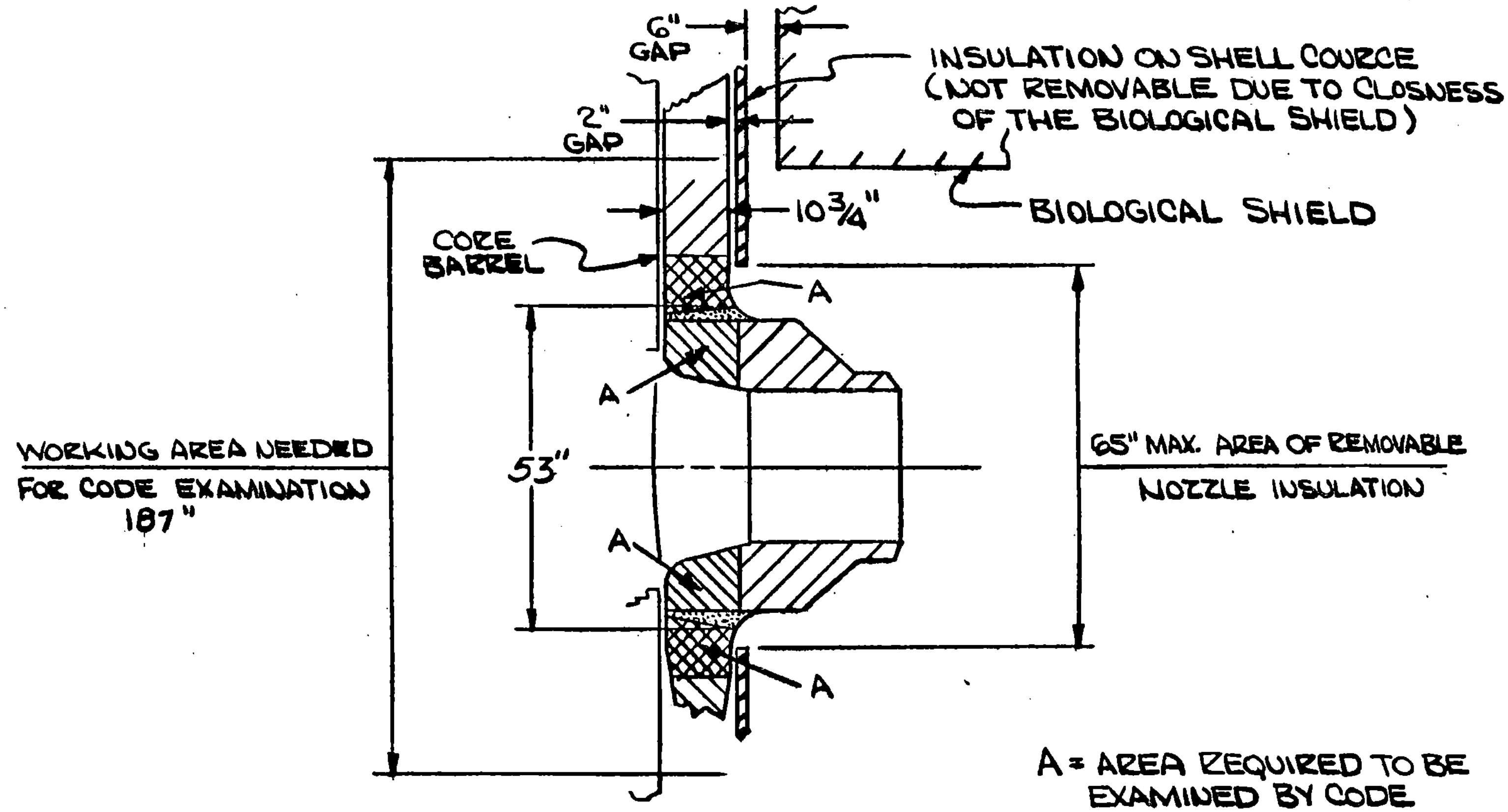
GENERAL NOTES
USE PRINTS OF LATEST REVISION ONLY
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO. ________
THIS DRAWING SUPERSEDES ________
THIS DRAWING IS SHEET NO. ___ OF ___ SHEETS

DOLLAR PLATE WELD LOCATION
RPV CLOSURE HEAD AND
BOTTOM HEAD
NO. 1 UNIT SALEM NUC. GENERATING STA.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ENGINEERING DEPARTMENT
NEWARK, N. J.

DRAWN J. RYAN CHECKED ____ SCALE AS SHOWN
DATE ____ EXAMINED ____
AUTH. A-6299-1 APPROVED [signature]

SK 8-9-77



No.	Date	Description	Dwn.	Ckd.	Exd.	Apd.

REVISION

GENERAL NOTES

USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO. ________
THIS DRAWING SUPERSEDES ________
THIS DRAWING IS SHEET NO. ____ OF ____ SHEETS.

INLET NOZZLE CONFIGURATION
NO. 1 UNIT
SALEM NUCLEAR GEN. STATION

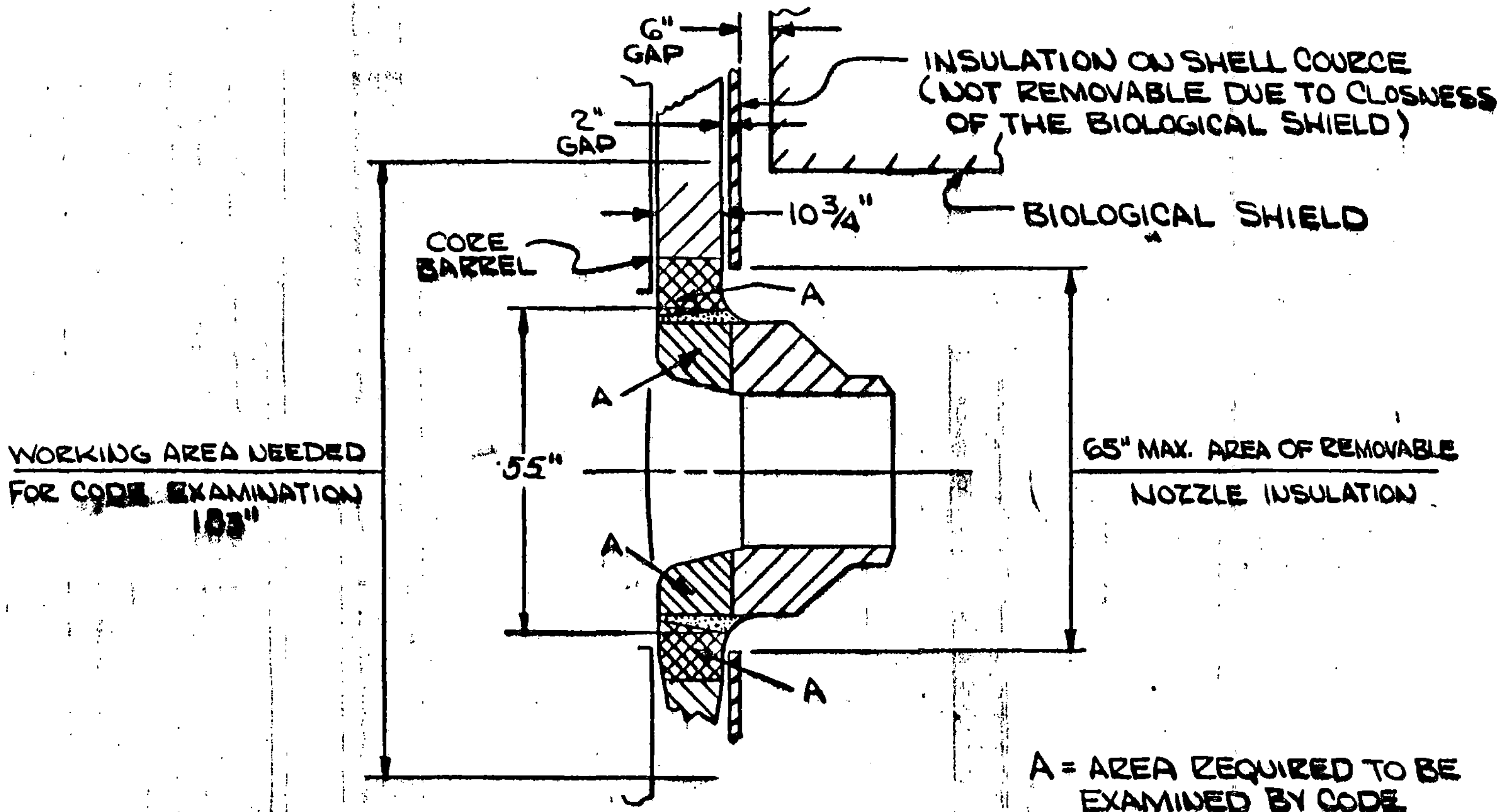
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ENGINEERING DEPARTMENT
NEWARK, N. J.

DRAWN J.R. CHECKED ______ SCALE N.T.S.
DATE ______ EXAMINED ______
AUTH. ______ APPROVED L.H. Fake

SK-8-15-77

5	CONTR. CK. ... MECH. CK. ... ELEC. CK. ... STRU. CK.	4	CONTR. CK. ... MECH. CK. ... ELEC. CK. ... STRU. CK.	3	CONTR. CK. ... MECH. CK. ... ELEC. CK. ... STRU. CK.	2	CONTR. CK. ... MECH. CK. ... ELEC. CK. ... STRU. CK.	1	CONTR. CK. ... MECH. CK. ... ELEC. CK. ... STRU. CK.	0	CONTR. CK. ... MECH. CK. ... ELEC. CK. ... STRU. CK.

SK-8-16-77



No.	Date	Description	Dwn.	Chd.	Exd.	Apd.

REVISION

GENERAL NOTES

USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO. ________
THIS DRAWING SUPERSEDES ________
THIS DRAWING IS SHEET NO. ____ OF ____ SHEETS.

OUTLET NOZZLE CONFIGURATION
NO. 1 UNIT
SALEM NUCLEAR GEN. STATION

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ENGINEERING DEPARTMENT
NEWARK, N. J.

DRAWN J.B. CHECKED ______ SCALE N.T.S.
DATE ______ EXAMINED ______
AUTH. ______ APPROVED [signature]

SK-8-16-77

ATTACHMENT 4

Inservice Testing of Category A, B, (and C) Valves

The following category C check valves cannot be full or part stroke exercised during normal plant operation for the following reasons:

Safety Injection System
11-14 SJ 17 Safety Injection Charging Line Cold Leg Check Valves

a. For operational modes 1 and 2, testing would require pumping 2,000 ppm borated water into the RCS. This would render the reactor subcritical and would also violate Tech. Spec. LCO 3.5.4.1.

b. For operational modes 3 and 4, testing would ultimately require significant RCS dilution and boric acid recovery operation. It would also present a possible RCS over pressurization and would violate Tech. Spec. LCO 3.5.4.1 and certain operating procedures.

11-12 SJ 34 Safety Injection Pump Discharge Check Valves

a. For operational modes 1, 2 and 3, the RCS pressure is greater than the Safety Injection Pump shut-off head.

b. For operational mode 4, testing of these check valves could result in a possible RCS overpresurization and also contradict operating procedures.

11-14 SJ 43 Residual Heat Removal Discharge Check Valves to Cold Leg

a. For operational modes 1, 2, 3 and 4, the RCS pressure is greater than the shut-off head of the RHR pumps.

11-14 SJ 55 Accumulator Discharge Check Valves

a. For operational modes 1, 2, and 3, the RCS pressure is greater than accumulator pressure.

b. For operational modes 4 and 5, testing would require significant RCS dilution and boric acid recovery. There is also the possibility of RCS overpressure and a contradiction of operating procedures.

11-14 SJ 56 Safety Injection and Residual Heat Removal Discharge to Cold Legs

a. For operational modes 1, 2, and 3, the RCS pressure is greater than the pumps shut-off head.

b. For operational mode 4, there is the possibility of RCS over-pressurization and a contradiction of operating procedures.

1 SJ 70 Refueling Water Storage Tank to Residual Heat Removal Pump Check Valve

a. For operational modes 1, 2 and 3, this system is normally not in service and therefore requires testing immediately prior to returning to service (ASME Code Section XI Par IWV 3410 Part (f).

11-14 SJ 139 Safety Injection Pumps Discharge to Hot Legs

a. For operational modes 1, 2 and 3, testing is not possible since RCS pressure is greater than pump shut-off head.

b. For operational model 4 and 5 there is the possibility of RCS over-pressurization and testing would violate operating procedures.

11-14 SJ 144 Safety Injection to Cold Legs

a. For operational modes 1, 2, and 3 testing is not possible since RCS pressure is greater than pump shut-off head.

b. For operational model 4 there is the possibility of RCS over-pressurization and testing would violate operating procedures.

1 SJ 150 Boron Injection Tank Discharge Check Valve to Cold Legs

a. For operational modes 1 and 2, testing of this valve would render the reactor subcritical and would also violate Tech. Spec. LCO 3.5.4.1.

b. For operational modes 3 and 4, testing would ultimately require significant RCS dilution and boric acid recovery and would present a possible RCS over-pressurization.

11-14 SJ 156 Safety Injection to Hot Leg

a. For operational modes 1, 2 and 3, the RCS pressure is greater than pump shut-off head.

b. For operational modes 4 and 5, there is the possibility of RCS over-pressurization and this procedure contradicts operating procedures.

COMPONENT COOLING SYSTEM

1CC 137 Component Cooling Check Valve from R.C.P. Lube Oil Coolers

a. For operational modes 1-4, component cooling cannot be isolated when any Reactor Coolant Pump is operating.

1 CC 317 No. 11 Charging Pump - Mechanical Seal Heat Exchange Inlet
1 CC 320 No. 12 Charging Pump - Mechanical Seal Heat Exchange Inlet

a. For operational modes 1-3, Tech. Spec. requirement 3.5.2 requires both pumps be operable. Isolating these valves for test places these pumps in an inoperable condition.

RESIDUAL HEAT REMOVAL

11-12 RH 8 Residual Heat Removal Pumps Discharge Check Valve

a. This system is normally out of service and requires testing immediately before returning to service (ASME Code Section XI Par IWV 3410 part (f).

13.14 RH 27 Residual Heat Removal Pump Discharge to 13 and 14 Hot Leg

a. See 11-12 RH 8.

AUXILIARY FEEDWATER SYSTEM

11-13 AF 8 Auxiliary Feed Pump Discharge Check Valve to Steam Generators

a. These check valves can be tested in any operational mode except model 1. The flow required in mode 1 is to great for Auxiliary Feed Pumps to maintain SG levels.

11-14 AF 23 Auxiliary Feed Check Valve at Steam Generators

Same conditions as 11-13 AF 8

CONTINMENT SPRAY SYSTEM

11-12 CS 4 Containment Spray Pump Discharge Check Valve

a. Check valves cannot be tested in modes 1-4 since Tech. Spec. 3.6.2.1 requires a specific valve line up. A test would require a deviation from that line up.

b. The test would require a discharge to the reactor cavity. The cavity is dry until mode 6.

11-12 CS 21 Eductor Suction Check Valves

See 11-12 CS 4 Requirements.

11-12 CS 48 Containment Spray Header Check Valves

See 11-12 CS 4 Requirements.

CHEMICAL AND VOLUME CONTROL SYSTEMS
11-13 BR 152 Discharge from Volume Control Relief Tank to 11-13 Holding Tank

a. Test requires removal of VCT relief valve for temporary source connection. This test will be done duing mode 6.

1 CV 23 Let Down to Mixed Bed Demineralizer

a. This valve is located in a concrete vault to protect personnel from the radiological hazard. This valve will be tested in operational mode 6.

1 CV 36 Demineralizer Return to Volume Control Tank

a. See 1 CV 23 Requirements.

1 CV 42 Volume Control Tank Discharge Check Valve

a. To test requires closing valves 1 CV 40 and 1CV 41. Alternate source of water is from Refueling Water Storage Tank through valves 1 SJ 1 or 1 SJ 2. This is 2,000 ppm boated water which would render reactor sub-critical. Testing will be done in mode 6.

1 CV 74 Charging Safety Injection Pump Discharge to Regenerate Heat Exchanger

a. Tested in mode 6 because of the normally high radiation level.

b. Flow through valve required during normal operation.

11-14 CV 99 Seal Flow Check Valve to Reactor Coolant Pumps

a. Flow cannot be isolated during operational modes 1-4. These valves will be tested during modes 5 or 6.

1 CV 176 Boric Acid Transfer Pumps Discharge Check Valve to Rapid Borate System

a. Testing in operational modes other than mode 6 would cause a loss in reactor power due to high borate injection.

1 CV 196 Chemical Tank Outlet Check Valve

a. Tested in operational modes 4-6 at which mode chemicals are added. Use of primary water would cause a reactivity change by dilution.

1 CV 198 Mixed Bed Demineralizer Check Valve to Hold up Tank

a. Tested is mode 6 because of normally high radiation levels.

SERVICE WATER SYSTEM

11-13 SW 5 Turbine Generator Service Water Heater Check Valves

a. Testing requires the isolation of one header to reduce pressure. This places the plant in a degrader mode of operation. Tested in mode 6.
(Note: These valves added as category (1) valves to original list).

12-14 SW 5 Nuclear Area Service Water Header Check Valves

A. Testing requires the isolation of one hader to reduce pressure. This violates Tech. Spec. 3.7.4.1. Testing will be done in Mode 6.

11-12 SW 77 Containment Fan Coil Unit Discharge Check Valve

a. Testing can be done in any mode of operation. Category (1) will be deleted from these valves.

11-12 SW 79 Service Water Overboard Discharge Check Valves

a. To test these valves will require shutting down a major portion of the service water system. Testing will be done in operational mode 6.

Category C Valves

The Category C check valves identified below will be full-stroke exercised not more often than once every three months during normal plant opeation in accordance with Article IWV-3520 of Section XI of the ASME code, with the exception of those valves marked (1). These valves cannot be exercised during normal plant operation and will be full-stroke exercised during Mode 5 or 6 operation, not more often than once every nine months. Those valves marked (2) will be exercised during Mode 5 or 6 operation when relief valve 1CV241 has been removed for testing.

The Category C safety/relief valved identified below will be bench tested with suitable hydraulic or pneumatic equipment in accordance with Article IWV-3510 of Section XI of the ASME Code. Those valves marked (3) will be tested in place with hydraulic or pneumatic assist equipment. Test frequencies will be determined in accordance with Table WV-3510-1.

Safety Injection System

Check Valves		Safety/Relief Valves
1SJ3		1SJ10
11SJ17	(1)	11SJ29
12SJ17	(1)	12SJ29
13SJ17	(1)	14SJ29
14SJ17	(1)	14SJ29
1SJ31		1SJ32
11SJ34	(1)	11SJ39
12SJ34	(1)	12SJ39
11SJ43	(1)	11SJ 48
12SJ43	(1)	12SJ48
13SJ43		
14SJ43		
11SJ55		
12SJ55		
13SJ55		
14SJ55		
11SJ56		
12SJ56		
13SJ56		
14SJ56	(1)	
1SJ70	(1)	
1SJ107		
11SJ139	(1)	

Safety Injection System

Check Valves

12SJ139 (1)
13SJ139 (1)
14SJ139 (1)
11SJ144 (1)
12SJ144 (1)
13SJ144 (1)
14SJ144 (1)
1SJ150 (1)
11SJ156 (1)
12SJ156 (1)
13SJ156 (1)
14SJ156 (1)

Safety/Relief Valves

Component Cooling System

Check Valves

11CC1
12CC1
13CC1
1CC109
1CC137 (1)
1CC317 (1)
1CC320 (1)

Safety/Relief Valves

11CC14
12CC14
1CC34
1CC40
1CC51
1CC58
1CC63
1CC68
1CC75
1CC81
1CC112
11CC129
12CC129
13CC129
14CC129
1CC135
1CC138
1CC147
1CC156
1CC162
1CC165
1CC170
1CC193
1CC212

Chilled Water System

Check Valves		Safety/Relief Valves
11CH13		
12CH13		
1CH61		

Residual Heat Removal System

Check Valves		Safety/Relief Valves
1RH8	(1)	1RH3
12RH8	(1)	
13RH27	(1)	
14RH27	(1)	

Auxiliary Feedwater System

Check Valves		Safety/Relief Valves
11AF4		1AF99
12AF4		1AF128
13AF4		
11AF8	(1)	
12AF8	(1)	
13AF8	(1)	
11AF23		
12AF23		
13AF23		
14AF23		

Containment Spray System

Check Valves		Safety/Relief Valves
11CS4	(1)	11CS5
12CS4	(1)	12CS5
11CS21	(1)	1CS26
12CS21	(1)	
11CS48	(1)	
12CS48	(1)	

Main Steam System

Check Valves

Safety/Relief Valves

11MS11 (3)
12MS11 (3)
13MS11 (3)
14MS11 (3)
11MS12 (3)
12MS12 (3)
13MS12 (3)
14MS12 (3)
11MS13 (3)
12MS13 (3)
12MS13 (3)
13MS13 (3)
14MS13 (3)
11MS14 (3)
12MS14 (3)
13MS14 (3)
14MS14 (3)
11MS15 (3)
12MS15 (3)
13MS15 (3)
14MS15 (3)

Reactor Coolant System

Check Valves

1PR25

Safety/Relief Valves

1PR3
1PR4
1PR5

Chemical and Volume Control System

Check Valves

1BR99
11BR152 (2)
12BR152 (2)
13BR152 (2)
1CV23 (1)
1CV36 (1)
1CV42 (1)
1CV47
1CV52
1CV63

Safety/Relief Valves

11BR81
12BR81
13BR81
1CV6
1CV43
1CV115
1CV124
1CV141
1CV241
1CB253

ATTACHMENT 4
(CONTINUED)

Check Valves

Check Valves

1CV74 (1)
11CV99 (1)
12CV99 (1)
13CV99 (1)
14CV99 (1)
1CV135
1CV137
1CV147
11CV154
12CV154
1CV173
1CV176 (1)
1CV180
1CV183
1CV189
1CV196 (1)
1CV198 (1)
1CV275

Safety/Relief Valves

Service Water System

Check Valves

11SW2
12SW2
13SW2
14SW2
15SW2
16SW2
11SW5 (1)
12SW5 (1)
13SW5 (1)
14SW5 (1)
11SW13
12SW13
13SW13
14SW13
15SW13
16SW13
11SW34
12SW34
11SW36
12SW36
11SW38
12SW38
11SW44
12SW44

Safety Relief Valves

1SW109
11SW242
12SW242
13SW242
14SW242
15SW242

Check Valves

Safety/Relief Valves

Check Valves

13SW44 (1)
11SW47
12SW47
11SW51
12SW51
11SW53
12SW53
11SW77
12SW77
11SW79 (1)
12SW79 (1)
11SW99
12SW99
13SW99

Nitrogen Supply System

Check Valves

1NT26

Safety/Relief Valves

1NT15

Primary Water System

Check Valves

1WR81

Safety/Relief Valves

1WR123

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P77 79 09/15 & 20/23

Attachment 5

Revision 1 of the Following Diagrams

		System
1.	241825-A-1568-1	Reactor Coolant
2.	241826-A-1568-1	Steam Generator Feed & Condensate
3.	241827-A-1568-1	Main Reheat and Turbine By - Pass Steam
4.	241829-A-1568-1	Fire Protection
5.	241830-A-1568-1	Steam Generator Drains & Blowdown
6.	241831-A-1568-1	Chemical & Volume Control Operation
7.	241832-A-1568-1	Chemical & Volume Control Boric Acid Recovery
8.	241833-A-1568-1	Chemical & Volume Control Primary Water Recovery
9.	241834-A-1568-1	Component Cooling
10.	241835-A-1568-1	Residual Heat Removal
11.	241836-A-1568-1	Spent Fuel Cooling
12.	241837-A-1568-1	Safety Injection
13.	241838-A-1568-1	Containment Spray
14.	241839-A-1568-1	Auxilary Feedwater
15.	241840-A-1568-1	Waste Disposal liquid
16.	241841-A-1568-1	Service Water Nuclear Area
17.	241843-A-1568-1	Demineralized Water Restricted Areas