

AEC PDR



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

SEP 21 1973

Docket Nos. 50-280 ✓
and 50-281

Mr. Stanley Ragone
Vice President
Virginia Electric and
Power Company
P. O. Box 26666
Richmond, Virginia 23261

Licenses Nos. DPR-32
and DPR-37

Change No. 13

Dear Mr. Ragone:

We have completed our review of the Virginia Electric and Power Company report entitled "Effects of Piping System Breaks Outside Containment - FSAR Appendix D" and as revised in your letters of July 16, July 27, and August 23, 1973. During our review we had the benefit of meetings with your staff at our offices and at the Surry Power Station where we also observed the layout of the major high energy lines. As a result of our review, we have determined that it is appropriate to add an augmented inservice inspection program for high energy lines outside of containment to the Technical Specifications of Facility Operating Licenses Nos. DPR-32 and DPR-37, as discussed below.

We find your report, as revised by your letters, to be an acceptable analysis of postulated ruptures of high energy lines outside of containment. In your letter of August 23, 1973, you indicate that the facility modifications, which you propose in your report to mitigate the consequences of certain postulated high energy line ruptures will be completed in accordance with the schedule shown in Attachment "B" to your letter of August 23, 1973. We find these modifications acceptable. However, with the exception of Items 1, 2, and 5 of Attachment "B", we find that the schedule for implementing these modifications is not acceptable. We require that modifications related to Item 3, "Auxiliary Feed Water Discharge Cross Connect System," Item 6 "Excess Flow Instrument for Steam Generator Blowdown," and Item 7 "Safety Injection Line" be completed not later than July 1, 1974 instead of waiting until the first refueling of the second unit to complete these modifications. With respect to Item 4, "Auxiliary Feed Water Suction Cross Connect System" your representative orally indicated that delivery of this equipment probably would be made by mid-summer of 1974 and therefore, you could not complete modification of this item until January 1, 1975. We expect that you will make every effort to expedite delivery of this equipment in order to allow installation earlier than indicated in your schedule. Please inform us by letter on or about

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Mr. Stanley Ragone

- 2 -

SEP 21 1973

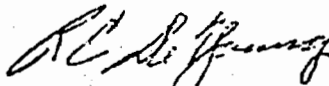
January 1, 1974, April 1, 1974, and July 1, 1974 of the steps taken to expedite delivery of the needed equipment and of the current schedule of equipment delivery and installation. We believe that this equipment should be installed and made operable as soon as practicable.

For certain postulated high energy line break locations in the main steam valve house we have determined that an augmented inservice inspection program should be established in order to provide further assurance of line integrity during the operating life of the facility. The enclosed Technical Specification, Section 4.15, "Augmented Inservice Inspection Program for High Energy Lines Outside of Containment," is being added to the existing Technical Specifications for the Surry Power Station for this purpose.

We have concluded that the changes do not involve significant hazards consideration and there is reasonable assurance that the health and safety of the public will not be endangered by operation of the reactor in the manner proposed.

Accordingly, pursuant to Section 50.59 of 10 CFR Part 50, the Technical Specifications of Facility Operating Licenses Nos. DPR-32 and DPR-37 are hereby changed as set forth in Section 4.15, Change No. 13, a copy of which is enclosed.

Sincerely,



R. C. DeYoung, Assistant Director
for Pressurized Water Reactors
Directorate of Licensing - Regulation

Enclosure:
As stated

cc: George D. Gibson, Esq.
Hunton, Williams, Gay,
and Gibson
P. O. Box 1535
Richmond, Virginia 23210

4.15 AUGMENTED INSERVICE INSPECTION PROGRAM FOR HIGH ENERGY LINES
OUTSIDE OF CONTAINMENT

Applicability

Applies to welds in piping systems or portions of systems located outside of containment where protection from the consequences of postulated ruptures is not provided by a system of pipe whip restraints, jet impingement barriers, protective enclosures and/or other measures designed specifically to cope with such ruptures.

For Surry Units 1 and 2, this specification applies to welds in the main steam and main feedwater lines in the main steam valve house of each unit.

Objective

To provide assurance of the continued integrity of the piping systems over their service lifetime.

Specifications

- A. For the 20 welds identified in TS Figure 4.15:
 1. At the first refueling outage period a volumetric examination shall be performed with 100 percent inspection of welds in accordance with the requirement of ASME Section XI Code, 'Inservice Inspection of Nuclear Power Plant Components, to

establish system integrity and baseline data.

2. The inservice inspection at each weld shall be performed in accordance with the requirements of ASME Section XI Code, Inservice Inspection of Nuclear Power Plant Components, with the following schedule: (The inspection intervals identified below sequentially follow the baseline examination of TS 4.15.A.1 above):

First 10 Year
Inspection Program Intervals

- | | |
|-----------------------------------------------------|------------------------------------------|
| a. First 3-1/3 years (or nearest refueling outage) | 100% volumetric inspection of all welds |
| b. Second 3-1/3 years (or nearest refueling outage) | 100% volumetric inspection of all welds |
| c. Third 3-1/3 years (or nearest refueling outage) | 100% volumetric inspection of all welds. |

Successive Inspection Intervals

- | | |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Every 10 years thereafter (or nearest refueling outage) | Volumetric inspection of 1/3 of the welds at the expiration of each 1/3 of the inspection interval with a cumulative 100% coverage of all welds |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|

Note - The welds selected during each inspection period shall be distributed among the total number to be examined to provide a representative sampling of the conditions of the welds.

3. Examinations that reveal unacceptable structural defects in a weld during an inspection under TS 4.15.A.2 shall be extended to require an additional inspection of another 1/3 of the welds. If further unacceptable defects are detected in the second sampling, the remainder of the welds shall be inspected.

4. In the event repairs of any welds are required following any examination during successive inspection intervals, the inspection schedule for the repaired welds will revert back to the first 10 year inspection program.
- B. For all welds other than those identified in TS Figure 4.15:
1. Welds in the main steam lines including the safety valve headers and in the feedwater lines in the main steam valve house shall be examined in accordance with the requirements of subsection ISC 100 through 600 of the 1972 Winter Addenda of the ASME Section XI Code.
- C. For all welds in the main steam valve house:
1. A visual inspection of the surface of the insulation at all weld locations shall be performed on a weekly basis for detection of leaks. Any detected leaks shall be investigated and evaluated. If the leakage is caused by a through-wall flaw, either the plant shall be shutdown, or the leaking piping isolated. Repairs shall be performed prior to return of this line to service.
 2. Repairs, reexamination and piping pressure tests shall be conducted in accordance with the rules of ASME Section XI Code.

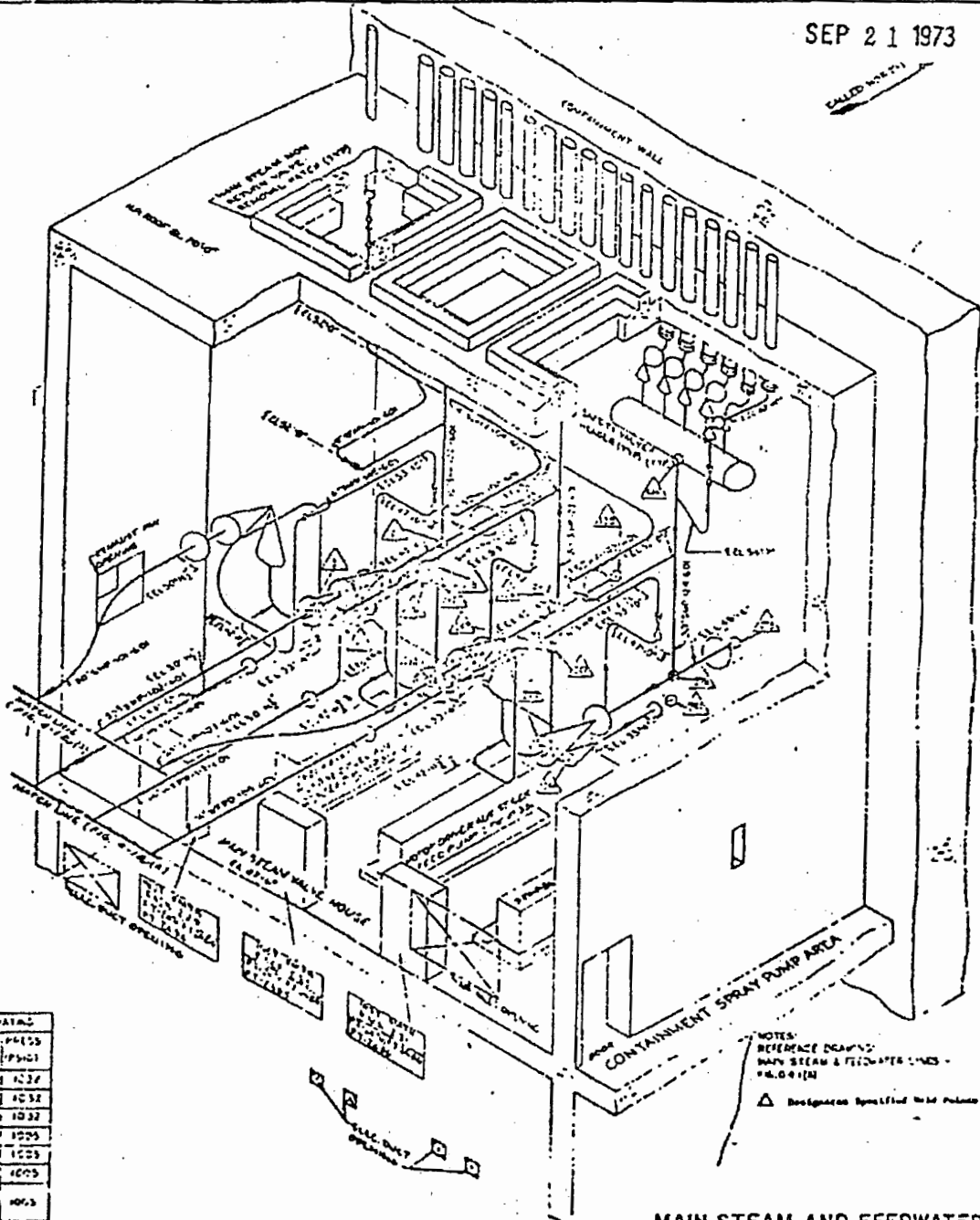
CHANGE NO. 13

TS 4.15-4
SEP 21 1973

Basis

Under normal plant operating conditions, the piping materials operate under ductile conditions and within the stress limits considerably below the ultimate strength properties of the materials. Flaws which could grow under such conditions are generally associated with cyclic loads that fatigue the metal, and lead to leakage cracks. The inservice examination and the frequency of inspection will provide a means for timely detection even before the flaw penetrates the wall of the piping.

SEP 21 1973



S.A.	Specified Weld Polarity	OPERATING	
		TEMP. (°F)	PSI
3.60	241, 244, 247 & 249	450	1230
3.60	104 & 107	450	1030
3.80	5 & 6	450	1030
3.60	275, 276 & 277	540	1000
3.60	125, 126 & 127	440	1000
3.60	1, 2, 3	540	1000
3.60	40 (TRIP & 3 SAFETY VALVE HEATERS)	540	1000

NOTES:
 REFERENCE DRAWING:
 MAIN STEAM & FEEDWATER LINES -
 P.S. 00100
 Δ Designation Specified Weld Polarity

MAIN STEAM AND FEEDWATER LINES - UNIT 2
 SURRY POWER STATION
 UNITS 1 AND 2