

**AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL**  
(TEMPORARY FORM)

CONTROL NO: 9877

FILE: \_\_\_\_\_

FROM: <u>Carolina Pwr &amp; Light Co.</u> <u>Raleigh, N.C. 27602</u> <u>Mr. E.E. Utley</u>			DATE OF DOC <u>9-24-74</u>	DATE REC'D <u>9-25-74</u>	LTR <u>X</u>	TWX	RPT	OTHER
TO: <u>K.R. Goller</u>			ORIG <u>3 signed</u>	CC	OTHER	SENT AEC PDR <u>XXX</u> SENT LOCAL PDR <u>XXX</u>		
CLASS	UNCLASS <u>XXX</u>	PROP INFO	INPUT <u>XXX</u>	NO CYS REC'D <u>40</u>		DOCKET NO: <u>50-261</u>		

DESCRIPTION:  
  
Ltr notarized 9-24-74...trans the following.....

PLANT NAME: H.B. Robinson #2

ENCLOSURES:  
  
Amdt to the OL...consist of rev & addl pgs tables & figs to the tech specs....

**ACKNOWLEDGED**  
(40 cys encl rec'd)

**DO NOT REMOVE**

**FOR ACTION/INFORMATION**

9-26-74

JB

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**INTERNAL DISTRIBUTION**

<u>REG FILE</u> <u>AEC-PDR</u> <u>OGC, ROOM P-506A</u> <u>MUNTZING/STAFF</u> <u>CASE</u> <u>GIAMBUSSO</u> <u>BOYD</u> <u>MOORE (L) (BWR)</u> <u>DEYOUNG (L) (PWR)</u> <u>SKOVHOLT (L)</u> <u>GOLLER (L)</u> <u>P. COLLINS</u> <u>DENISE</u> <u>REG OPR</u> <u>FILE &amp; REGION (3)</u> <u>MORRIS</u> <u>STEELE</u>	<u>TECH REVIEW</u> <u>SCHROEDER</u> <u>MACCARY</u> <u>KNIGHT</u> <u>PAWLICKI</u> <u>SHAO</u> <u>STELLO</u> <u>HOUSTON</u> <u>NOVAK</u> <u>ROSS</u> <u>IPPOLITO</u> <u>TEDESCO</u> <u>LONG</u> <u>LAINAS</u> <u>BENAROYA</u> <u>VOLIMER</u>	<u>DENTON</u> <u>GRIMES</u> <u>GAMMILL</u> <u>KASTNER</u> <u>BALLARD</u> <u>SPANGLER</u>  <u>ENVIRO</u> <u>MULLER</u> <u>DICKER</u> <u>KNIGHTON</u> <u>YOUNGBLOOD</u> <u>REGAN</u> <u>PROJECT LDR</u> <u>Dittman</u> <u>HARLESS</u>	<u>LIC ASST</u>  <u>DIGGS (L)</u> <u>GEARIN (L)</u> <u>GOULBOURNE (L)</u> <u>KREUTZER (E)</u> <u>LEE (L)</u> <u>MAIGRET (L)</u> <u>REED (E)</u> <u>SERVICE (L)</u> <u>SHEPPARD (L)</u> <u>SLATER (E)</u> <u>SMITH (L)</u> <u>TEETS (L)</u> <u>WILLIAMS (E)</u> <u>WILSON (L)</u>	<u>A/T IND</u> <u>BRAITMAN</u> <u>SALTZMAN</u> <u>B. HURT</u>  <u>PLANS</u> <u>MCDONALD</u> <u>CHAPMAN</u> <u>DUBE w/input</u> <u>E. COUPE</u> <u>Scheme1</u> <u>D. THOMPSON (2)</u> <u>KLECKER</u> <u>EISENHUT</u>
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**EXTERNAL DISTRIBUTION**

<u>1 - LOCAL PDR Hartsville, S.C.</u>	<u>1 - NATIONAL LABS</u>	<u>1 - PDR-SAN/LA/NY</u>
<u>1 - TIC (ABERNATHY) (1)(2)(10)</u>	<u>1 - ASLBP (E/W Bldg, Rm 529)</u>	<u>1 - BROOKHAVEN NAT LAB</u>
<u>1 - NSIC (BUCHANAN)</u>	<u>1 - W. PENNINGTON, Rm E-201 GT</u>	<u>1 - G. ULRIKSON, ORNL</u>
<u>1 - ASLB</u>	<u>1 - B&amp;M SWINEBROAD, Rm E-201 GT</u>	<u>1 - AGMED (RUTH GUSSMAN)</u>
<u>1 - Newton Anderson</u>	<u>1 - CONSULTANTS</u>	<u>Rm B-127 GT</u>
<u>16 - ACRS HOLDING</u>	<u>NEWMARK/BLUME/AGBABIAN</u>	<u>1 - R. D. MUELLER, Rm E-201 GT</u>



Carolina Power & Light Company

September 24, 1974

Regulatory Docket File

50 - 261

File: NG-3514 (R)

Serial: NG-74-1123

Mr. Karl R. Goller  
Assistant Director for Operating Reactors  
Directorate of Licensing  
Office of Regulation  
U. S. Atomic Energy Commission  
Washington, D. C. 20545

Dear Mr. Goller:

H. B. ROBINSON UNIT NO. 2

LICENSE DPR-23

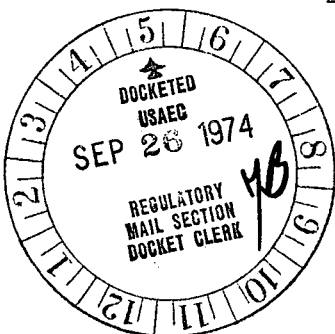
REQUEST FOR LICENSE AMENDMENT - REVISION OF TECHNICAL SPECIFICATIONS



In accordance with the Code of Federal Regulations, Title 10, Part 50.59, and your letter of July 18, 1974, Carolina Power & Light Company hereby submits a proposed revision to the Technical Specifications for its H. B. Robinson Unit No. 2 Plant. The revision establishes Technical Specifications to assure inspection and reporting requirements for a program of inservice inspection of steam generator tubing in accordance with Paragraph D.4 of Regulatory Guide 1.83, Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes.

The proposed revision to the Technical Specifications essentially coincides with the regulatory position of Section C of Regulatory Guide 1.83. In addition, the proposal is in agreement with AEC proposed Technical Specifications for Westinghouse PWR's concerning sample selection and testing, inspection frequencies, and acceptance criteria with the following exceptions:

1. Specification 4.2.5.3.a establishes a definitive range of defects which require plugging, and no definition of "unacceptable" defects or "inoperable" steam generators.
2. Specification 4.2.5.3.d provides for specific and appropriate action prior to resumption of plant service and reporting to the AEC in the event that more than three of the inspected tubes require plugging or if more than 10% of the total tubes inspected have detectable wall penetration (>20%) or significant (>5%) further penetration of tubes with previous defect indications.



September 24, 1974

The steam generators in the Robinson Plant have been the subject of numerous inspections and repairs over the past several years. During refueling outages in 1973 and 1974, essentially 100% of the tubes on the hot leg side have been inspected, with measurable defects being noted on each of the inspections and some tube plugging being required. The results of these inspections and the repairs that were made are found in Routine Semi-Annual Operating Report Nos. 6 and 8. It is the opinion of Carolina Power & Light Company that the last inspection during the 1974 refueling outage constitutes an acceptable baseline inspection as recommended in Paragraph D.2.b and that no additional inspections need be made prior to October, 1975, which is the next extended scheduled outage. The inspections have been concentrated almost exclusively on the hot leg side of the steam generator, which is the characteristic area for tube defects to occur in Westinghouse steam generators. However, the 1974 inspections included approximately 400 tubes which were inspected from the outlet side of one steam generator. No detectable wall penetration was indicated in any of these tubes, verifying that the problems in the Robinson generators are confined to the characteristic areas in the hot leg side.

Carolina Power & Light Company has been concerned with arresting the tube degradation of the Robinson steam generators since the initial development of the problem in 1972 and has worked closely with Westinghouse following development programs and recommended chemistry procedures. We intend to comply with the intent of Regulatory Guide 1.83 to further assure operation of the Robinson Plant in a safe and prudent manner and consider that the attached proposed revisions to the Technical Specifications will achieve this end.

As required by Commission Regulations, this submittal is signed under oath by a duly authorized officer of the Company.

Yours very truly,



E. E. Utley  
Vice-President  
Bulk Power Supply

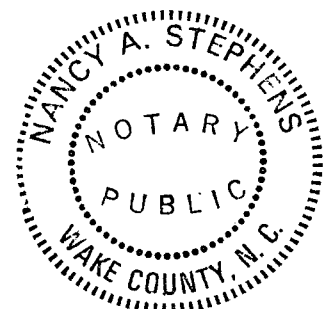
Sworn to and subscribed before me this <sup>24<sup>th</sup></sup> day of September, 1974.

  
Notary Public

My commission expires June 29, 1976

DBW:mvp  
Attachment

cc: Messrs. N. B. Bessac  
W. B. Howell  
J. B. McGirt  
D. V. Menscer  
D. B. Waters



4.2.3 The following definitions shall apply to the inspection methods employed in Table 4.2-1.

- a. UT - Volumetric examination using ultrasonic techniques.
- b. RT - Radiographic examination. Ultrasonic testing is an acceptable alternate for RT.
- c. MT - Examination of the component surface using magnetic particle.
- d. PT - Examination of the component surface using dye penetrant.
- e. V - Visual examination directly by the eye or assisted by remote viewing devices equal to or better than direct observation.

4.2.4 Examinations which reveal unacceptable structural defects in a category shall be extended to include an additional number (or areas) of system components or piping in the same category approximately equal to that initially examined. In the event further unacceptable structural defects are revealed, all remaining system components or piping in the category shall be examined to the extent specified in that examination category.

#### 4.2.5 Inservice Inspection of Steam Generator Tubes

4.2.5.1 Sample Selection and Testing - Each steam generator shall be inspected during shutdown as follows:

- a. During each inservice inspection (at frequencies specified in Specification 4.2.5.2), a representative sample of at least 3 percent of the total number of steam generator tubes shall be eddy current inspected. Inspections subsequent to the first two inservice inspections of the steam generator tubes shall routinely concentrate on the hot-leg side of the steam generator.

The tubes selected for each inservice inspection shall include:

1. All tubes (except plugged tubes) in which wall penetrations

if >20 percent were revealed during previous inspections.

2. Tubes in those areas (including the cold-leg side) where design and experience have indicated potential problems.

- b. As a minimum, an additional 3 percent of the steam generator tubes shall be eddy current inspected if more than 10 percent (all tubes previously identified as having wall penetrations >20 percent and exhibiting further wall penetrations of >5 percent shall be included in this 10 percent) of the tubes inspected per Specification 4.2.5.1.a have wall penetrations of >20 percent or if one or more of the inspected tubes require plugging as defined in Specification 4.2.5.3.a. At least 75 percent of these additional tubes selected for eddy current inspection shall be from tubes in those areas of the tube sheet array where tubes with defects were found.
- c. As a minimum, an additional 3 percent of the steam generator tubes shall be eddy current inspected if more than 10 percent of the tubes inspected per Specification 4.2.5.1.b have wall penetrations of >20 percent or if one or more of the inspected tubes require plugging as defined in Specification 4.2.5.3.a. These additional tubes selected for eddy current inspection shall be from tubes in those areas of the tube sheet array where tubes with defects were found.

4.2.5.2 Inspection Frequencies - The inservice inspections of steam generator tubes in Specification 4.2.5.1 shall be performed at the following frequencies:

- a. At intervals of not less than 12 or more than 20 calendar months. If two consecutive inservice inspections of steam generator tubes show no additional tubes with wall penetrations

>20 percent and no significant (>5 percent) further penetration of tubes with previous defect indications, the inspection frequency for hot-leg tubes may be extended to at least once per 40 months. If two consecutive inservice inspections of the cold-leg tubes of the steam generator show no additional tubes with wall penetrations >20 percent and no significant (>5 percent) further penetration of tubes with previous defect indications, the inspection frequency for cold-leg tubes may be extended to at least once per 10 years.

b. During the shutdown subsequent to any of the following conditions:

1. Primary-to-secondary leakage in excess of 1 gallon per minute.
2. A seismic occurrence greater than the Operating Basis Earthquake.
3. A loss-of-coolant accident requiring actuation of the engineered safeguards.
4. A steam line or feedwater line break requiring a reactor shutdown.

#### 4.2.5.3 Acceptance Criteria

- a. Any tubes with an eddy current indication of 50% or greater wall penetration shall be plugged before the steam generator is returned to service.
- b. If in the inspections performed under Specification 4.2.5.1, less than 10% of the total tubes inspected have detectable wall penetration (>20%) or significant (>5%) further penetration of tubes with previous defect indications and no tubes require plugging per Specification 4.2.5.3, a plant operation may be resumed and the inspection results shall be reported in the semi-annual operating reports covering the periods of operation

in which these inspections were completed.

- c. If in the inspections performed under Specification 4.2.5.1 less than 10% of the total tubes inspected have detectable wall penetration (>20%) or significant (>5%) further penetration of tubes with previous defect indications and no more than 3 tubes require plugging per Specification 4.2.5.3.a, plant operation may be resumed after corrective action given in Specification 4.2.5.3.a has been taken. The results of these inspections and corrective actions shall be reported in the semi-annual operating reports covering the periods of operation in which these inspections were completed.
- d. If in the inspections performed under Specification 4.2.5.1, more than 10% of the total tubes inspected have detectable wall penetrations (>20%) or significant (>5%) further penetration of tubes with previous defect indications, or more than 3 of the tubes inspected require plugging, the situation will be assessed by the licensee and appropriate action will be taken prior to plant operation and the event shall be reported to the Commission as an abnormal occurrence.

#### Basis

The inspection program, where practical, is in compliance with Section XI of the ASME Code for Inservice Inspection of Nuclear Reactor Coolant Systems dated January, 1970. Though examinations in certain areas are desirable, it should be recognized that equipment and techniques to perform the inspection are still in development. In all areas scheduled for volumetric examination, a detailed pre-service mapping will be conducted using techniques anticipated to be used for post-operation examinations. The areas indicated for inspec-