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ROBINSON,W.R. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

Lee Droze.

SUBJECT: Forwards request for license amend to clarify pressure testing requirements for isolable & non-isolable diesel fuel oil piping based on guidance provided in ASME Code Section XI.W/one oversize drawing.

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Drawings located in File Center

CATEGORY 1 DOCUMENT

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Carolina Power & Light Company
PO Box 165
New Hill NC 27562

William R. Robinson
Vice President
Harris Nuclear Plant

JAN 31 1997

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

Serial: HNP-97-020

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
DIESEL FUEL OIL SYSTEM PRESSURE TESTING (A.C. SOURCES - OPERATING)
ADDITIONAL INFORMATION

Sir or Madam:

By letter dated January 10, 1997, Carolina Power & Light Company (CP&L) requested a revision to Harris Nuclear Plant's (HNP) Technical Specification (TS) 4.8.1.1.2.h.2. This request proposed clarifications to pressure testing requirements for isolable and non-isolable diesel fuel oil piping based on guidance provided in ASME Code Section XI.

On January 24, 1997 the NRC verbally requested that additional information be provided to define the current pressure testing boundaries and correlate the specific fuel oil piping lines with the appropriate ASME Code subarticle paragraph (item) number that provides acceptable alternative testing guidance.

The attachment to this letter and enclosed drawings provide the requested information. If you have any questions regarding this matter, please contact Ms. D. B. Alexander at (919) 362-3190.

Sincerely,

W R Robinson

W. R. Robinson, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.

Darlene S. Yarborough
Notary (Seal)

My commission expires: 2-6-2000

DARLENE S. YARBOROUGH NOTARY *** PUBLIC HARNETT COUNTY, NC

MV
Attachments / Enclosures

050026

c: Mr. J. B. Brady (NRC - HNP)
Mr. L. A. Reyes (NRC - RII)
Mr. N. B. Le (NRC - PM/NRR)

State Road 1134 New Hill NC Tel 919 362-2502 Fax 919 362-2095

DRAWING LOCATED IN File CENTER

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A047

cc: Ms. D. B. Alexander
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Mr. R. D. Martin
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Mr. G. A. Rolfson
Mr. R. S. Stancil
Mr. M. A. Turkal (BNP)
Mr. T. D. Walt
Nuclear Records
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File: HI/A-2D

Request:
Define the current pressure testing boundaries and correlate the specific fuel oil piping lines with the appropriate ASME Code subarticle paragraph (item) number that provides acceptable alternative testing guidance.

Response:

1. Harris Nuclear Plant Technical Specification 4.8.1.1.2.h.2 currently requires "performing a pressure test of those portions of the diesel fuel oil system designed to Section III, Subsection ND of the ASME Code at a test pressure equal to 110% of the system design pressure" at least once per 10 years. This testing requirement currently applies to the diesel fuel oil system piping and components between the main fuel oil storage tanks and the diesel engines. More specifically, the following portions of the fuel oil system are included:
(Please reference the "red" color-coded portions on the enclosed drawings, CAR-2165-G-063 and CAR-2165-G-133)

   - Fuel Oil Day Tanks 1A-SA and 1B-SB
   - The fuel oil lines from the fuel oil storage tanks to the fuel oil day tanks
   - The fuel oil transfer pumps and suction and discharge piping (Including fuel oil transfer pump instrument and vent lines)
   - The fuel oil supply and return lines between the day tanks and diesel engines
   - The diesel engine relief valves and fuel oil lines (from engines to day tanks)
   - The day tank vent, drain and level instrument lines

2. Based on ASME Code Section XI, Subarticle IWD-5223, the following testing clarifications are proposed:

   Subarticle IWD-5223, Item (b) states that "In the case of atmospheric storage tanks, the hydrostatic head, developed with the tank filled to its design capacity, shall be acceptable as the test pressure." The Fuel Oil Day Tanks 1A-SA and 1B-SB are atmospheric tanks and are therefore addressed by this section and would not require a 110% pressure test. The day tanks are above ground and can be visually inspected for leaks during normal operation.
   (Please reference the "purple" color-coded portions on Attachment 2)

   Subarticle IWD-5223, Item (c) states that "For the purpose of the test, open ended portions of suction or drain lines from a storage tank extending to the first shutoff valve shall be considered as an extension of the storage tank." The fuel oil lines from the atmospheric day tanks to the first shutoff valve and several lines extending from the day tanks are addressed by this section and therefore would not require a 110% pressure test. These lines can also be visually inspected during normal operation.

   *This applies to the following lines:

3FO1¼-249SA-1	3FO1-109SA-1
3FO1½-163SA-1	3FO1-283SA-1&2
3FO3-40SA-1	3FO1-168SA-1&2
3FO2-42SA-1	3FO4-9SA-1&2
3FO1-237SA-1	3FO1¼-247SA-1
3FO2-50SA-1	3FO2-44SA-1 (between isolation valve and day tank)
3FO1-172SA-1	3FO1-241SA-1
3FO1¼-247SA-1	

   (Please reference the "green" color-coded portions on Attachment 2)

Subarticle IWD-5223, Item (e) states that "Open ended vent and drain lines from components extending beyond the last shutoff valve and open ended safety and relief valve discharge lines shall be exempt from the hydrostatic test." The vent, drain and relief valve lines associated with the day tanks are addressed by this section and therefore should be exempted from the 110% hydrostatic test.

*This applies to the following lines:
3FO3-46SA-1
3FO5-56SA-1
3FO1¼-243SA-1

(Please reference the "**pink**" color-coded portions on Attachment 2)

3. A portion of the fuel oil supply and return lines between the diesel engine vendor supplied piping and the day tanks can not be externally pressurized and isolated and will therefore be tested in accordance with the Alternative Rules for 10-year System Hydrostatic Testing for Class 1,2 and 3 Systems (Code Case N-498-1)

*This applies to the following lines:
3FO1½-162SA-1
3FO1¼-245SA-1
3FO2-44SA (between engine and isolation valve)

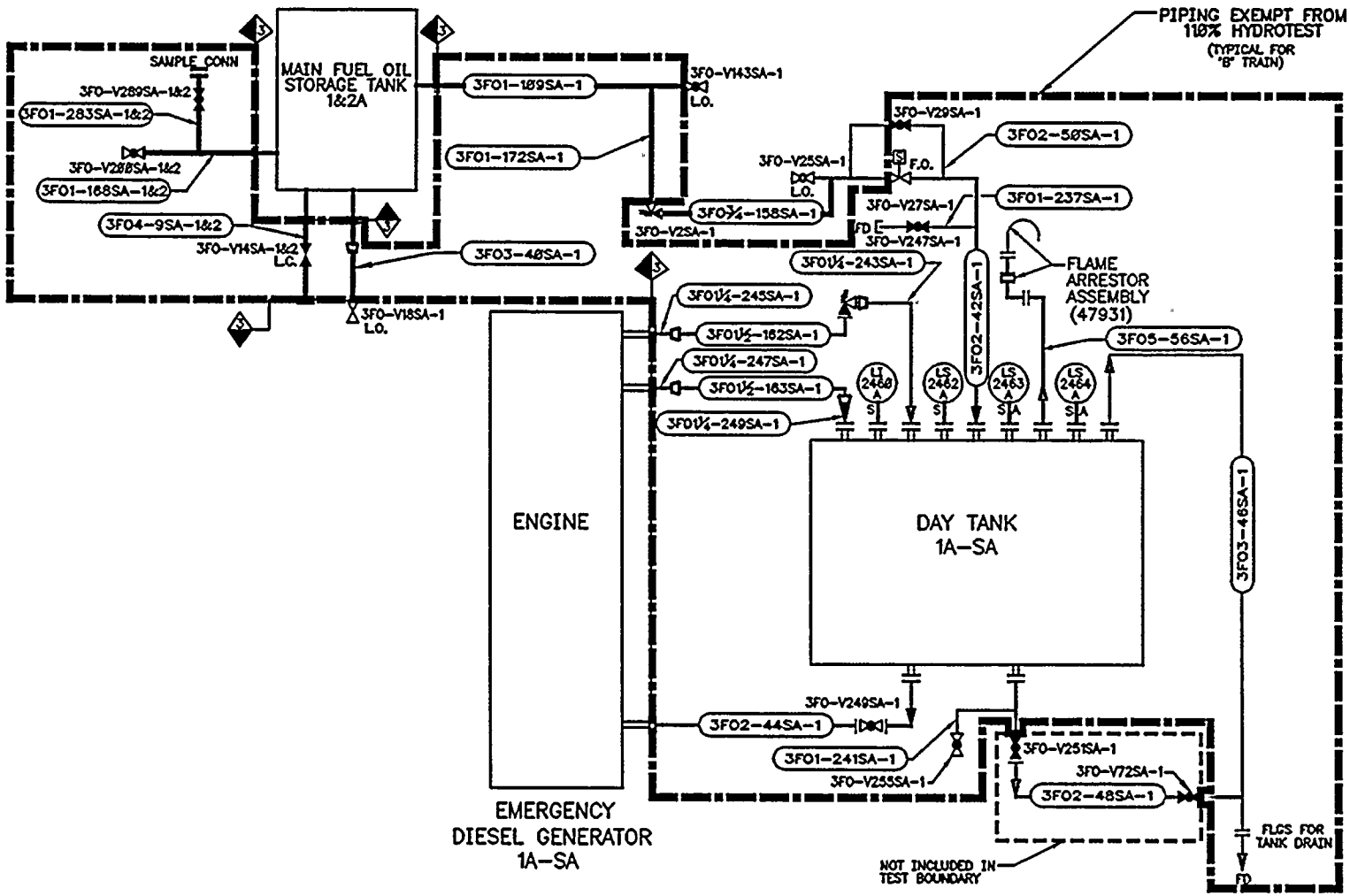
(Please reference the "**blue**" color-coded portions on Attachment 2)

4. Table IWD-2500-1, Item D2.10, Note (1) states that "The system boundary extends up to and including the first normally closed valve or valve capable of automatic closure as required to perform the safety-related system function." Since the day tank floor drain isolation valves (3FO-V251SA-1 and 3FO-V72SA-1) are normally closed, line 3FO2-48SA-1 will not be included in the test boundary.

*This applies to the following line:
3FO2-48SA-1

(Please reference the "**orange**" color-coded portion on Attachment 2)

*Note: These are the "A" train lines only and are typical of the corresponding "B" train lines.



LEGEND

- 110% PRESSURE TEST
- IWD 5223(B)
- IWD 5223(C)
- IWD 5223(E)
- NON-ISOLABLE PIPING; PRESSURE TEST IN ACCORDANCE WITH N-498
- TABLE IWD-2500-1 ITEM D2.10 NOTE 1

DIESEL FUEL OIL SYSTEM SCHEMATIC

PIPING EXEMPT FROM 110% PRESSURE TEST
(TYPICAL)

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