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

SUBJECT: Application for amend to license NPF-63, requesting rev to TS
 4.8.1.1.2.h.2 re to test tanks & non-isolable piping at this
 test pressure.

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NOTES: Application for permit renewal filed. 05000400

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

William R. Robinson
Vice President
Harris Nuclear Plant

SERIAL: HNP-96-209
10 CFR 50.90

JAN 10 1997

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

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)

Dear Sir or Madam:

This transmittal supersedes a previous letter dated September 18, 1996, from W. R. Robinson to USNRC, Letter Serial Number HNP-96-143.

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power & Light Company (CP&L) hereby requests a revision to the Technical Specifications (TS) for the Harris Nuclear Plant (HNP). TS 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. However, the TS does not recognize the inability to test tanks and non-isolable piping at this test pressure.

Final Safety Analysis Report (FSAR) Section 9.5.4.1 states that the diesel fuel oil system at the Harris Plant complies, with exceptions, to ANSI N195-1976. N195 Section 7.3 states that "the design arrangement shall provide for inservice inspection and testing in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Rules for In-Service Inspection of Nuclear Power Plant Components."

Section XI of the American Society of Mechanical Engineers (ASME) Code, 1983 Edition with Addenda through Summer 1983 requires testing for those portions of the Emergency Diesel Generator fuel oil system design to Section III, Subsection ND of the Code. Article IWD-5000

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permits exempting certain portions of piping systems from testing at 110% of the system design pressure. Specifically, IWD-5223 permits exemptions for atmospheric storage tanks, open-ended portions of suction and drain lines from a storage tank extending to the first shutoff valve, open-ended portions of discharge lines beyond the last shutoff valve in non-closed systems, open-ended vent and drain lines from components extending beyond the last shutoff valve, and open-ended safety or relief valve discharge lines. IWD-5223 does, however, require alternative examination/testing. For atmospheric storage tanks, the hydrostatic head developed with the tank filled to its design capacity is acceptable as the test pressure. Open-ended portions of suction or drain lines from a storage tank extending to the first shutoff valve may be considered an extension of the storage tank. Confirmation of adequate flow during system operation is acceptable for open-ended portions of discharge lines beyond the last shutoff valve in nonclosed systems. Open-ended vent and drain lines from components extending beyond the last shutoff valve and open-ended safety or relief valve discharge lines are exempt from hydrostatic test.

The proposed amendment clarifies Technical Specification (TS) 4.8.1.1.2 pressure testing requirements for isolable and non-isolable diesel fuel oil piping.

Enclosure 1 provides a detailed description of the proposed changes and the basis for the changes.

Enclosure 2 details, in accordance with 10 CFR 50.91(a), the basis for the Company's determination that the proposed changes do not involve a significant hazards consideration.

Enclosure 3 provides an environmental evaluation demonstrating that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment is required for approval of this amendment request.

Enclosure 4 provides page change instructions for incorporating the proposed revisions.

Enclosure 5 provides the proposed Technical Specification pages.

In accordance with 10 CFR 50.91(b), CP&L is providing the State of North Carolina with a copy of the proposed license amendment.

CP&L requests approval of the proposed amendment by March 1, 1997 to support the next HNP refueling outage, currently scheduled to begin in April 1997. In order to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications, CP&L requests that the proposed amendment, once approved by the NRC, be implemented within 30 days of issuance of the amendment.

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Please refer any questions regarding this submittal to Ms. D. B. Alexander at (919) 362-3190.

Sincerely,

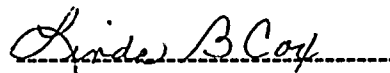


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Enclosures:

1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Technical Specification Pages

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.



Notary (Seal)

My commission expires: 1/25/2001

c: Mr. J. B. Brady, NRC Senior Resident Inspector
Mr. Dayne H. Brown, N.C. DEHNR
Mr. L. A. Reyes, NRC Regional Administrator
Mr. N. B. Le, NRC Project Manager



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bc: Ms. D. B. Alexander
Ms. P. B. Brannan
Mr. H. Chernoff (RNP)
Mr. G. W. Davis
Mr. J. W. Donahue
Ms. S. F. Flynn
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ENCLOSURE 1

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

BASIS FOR CHANGE REQUEST

Background

The Harris Plant Emergency Diesel Generators are designed to provide a reliable source of power to the emergency 6.9KV buses in the event that normal sources of off-site power are not available. There are two independent diesel generator systems capable of supplying the power needed for safe shutdown of the plant.

Independent fuel oil storage and transfer systems are provided to store, maintain, and supply fuel oil to the diesel generators. The systems each consist of a fuel oil storage tank, a transfer pump, a day tank, and associated piping and valves. The fuel oil storage tanks are horizontal, reinforced concrete tanks with steel liners located underground. Each of the storage tanks has a capacity of 175,000 gallons which is sufficient for continuous operation of each diesel generator for seven days. The centrifugal fuel oil transfer pumps each have a capacity of 40 gpm and are located below grade adjacent to the storage tanks. Upon demand, diesel fuel is pumped from the storage tank, through a simplex strainer, into a day tank. The day tanks are vertical steel tanks located in the diesel generator building situated to provide a positive suction pressure to an engine-driven fuel pump. The volume of each day tank is sufficient for approximately six hours, assuming maximum diesel engine fuel consumption. The fuel oil storage tanks are designed to Section VIII of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. The day tanks, fuel oil transfer pumps, and fuel oil system piping and valves are designed to Section III, Class 3 of the Code.

Final Safety Analysis Report (FSAR) Section 9.5.4.1 states that the diesel fuel oil system at the Harris Plant complies, with [unrelated] exceptions, to ANSI N195-1976. (References to N195 contained herein refer to ANSI N195-1976, "Fuel Oil Systems for Standby Diesel Generators.") N195 Section 7.3 states that "the arrangement shall provide for inservice inspection and testing in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Rules for In-Service Inspection of Nuclear Power Plant Components."

The current Code of record for performing inservice inspection (ISI) and inservice testing (IST) at the Harris Plant is the 1983 Edition of the ASME Code, Section XI, with Addenda through Summer 1983. (References to Section XI herein refer to that particular edition and addenda of ASME Section XI.) Per Section XI, the intent of a pressure test is to detect leakage (Subarticle IWA-5211). Subarticle IWA-2400 defines the inspection intervals for inservice examinations and system pressure tests of Class 3 (Subsection ND) systems as 10 years.

In addition to the Section XI requirements for the Emergency Diesel Generator fuel oil system designed to Section III, Subsection ND, a duplicative requirement for pressure testing the fuel oil piping at the Harris Plant is contained in the plant Technical Specifications. TS 4.8.1.1.2.h.2 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. However, the TS does not recognize the inability to test atmospheric tanks and non-isolable piping at this test pressure.

Basis

Section XI, Article IWD-5000 provides requirements and guidance for performing pressure tests on Class 3 systems. Subarticle IWD-5223, Item (a) requires a test pressure of at least 110% of the design pressure for systems with a design temperature of 200 degrees Fahrenheit or less. The design temperature for fuel oil piping at the Harris Plant is 125 degrees Fahrenheit. IWD-5223 also permits exemption of certain portions of piping systems from testing at 110% of the system design pressure. IWD-5223, Items (b) through (g) permit exemption for atmospheric storage tanks, open-ended portions of suction and drain lines from a storage tank extending to the first shutoff valve, open-ended portions of discharge lines beyond the last shutoff valve in non-closed systems, open-ended vent and drain lines from components extending beyond the last shutoff valve, and open-ended safety or relief valve discharge lines.

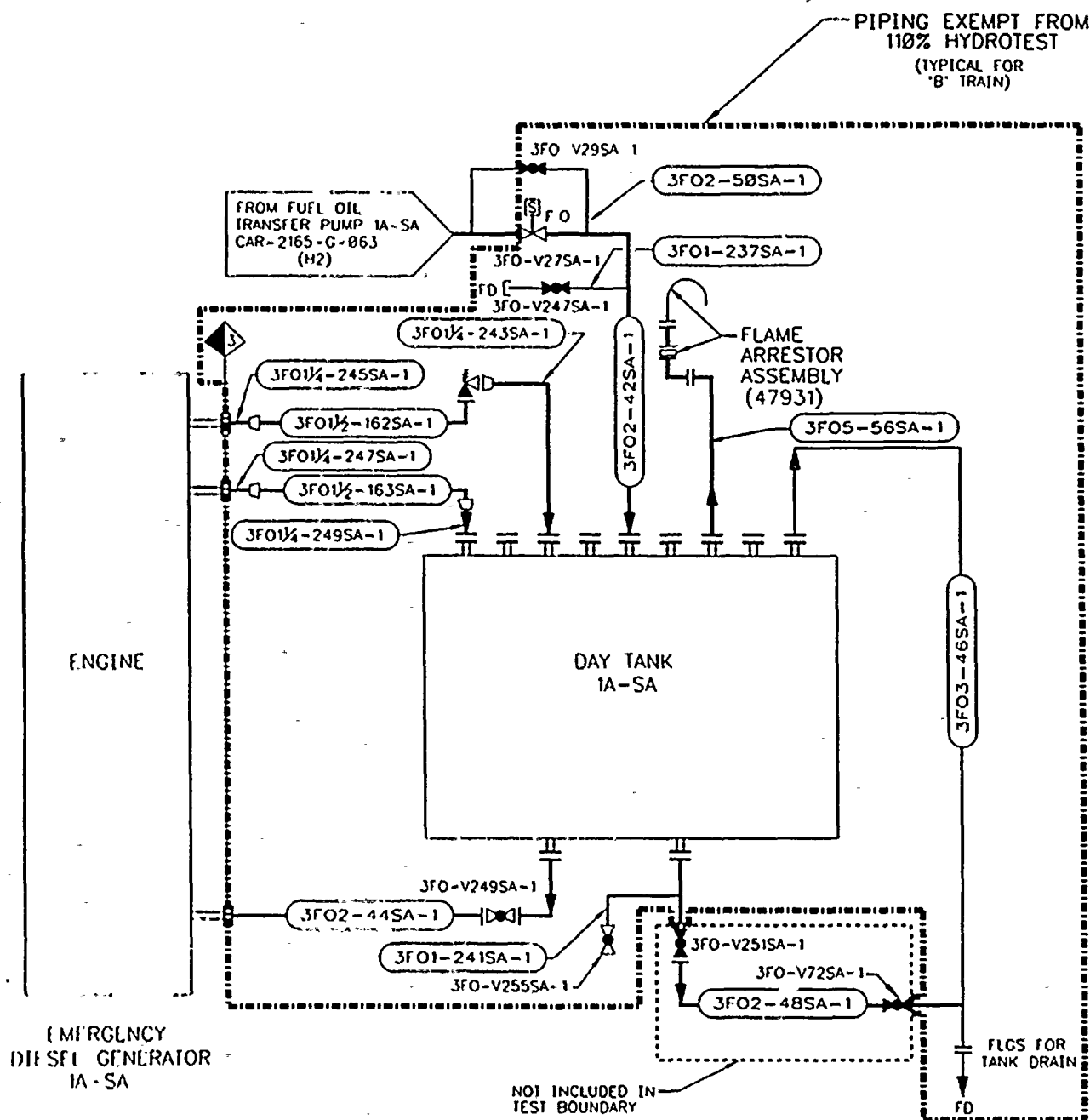
Conclusions

In accordance with existing commitments, CP&L will continue to perform inservice inspection and testing of the diesel fuel oil system in accordance with the ASME Boiler and Pressure Vessel Code, Section XI. Based on Section XI, IWD-5223 exemptions discussed above, pressure testing at 110% of the system design pressure will only be required on the isolable portions of:

- fuel oil transfer pump discharge piping to the day tank, and
- fuel oil supply line from the day tank to the diesel vendor-supplied piping, and
- fuel oil return piping from diesel vendor-supplied piping to the day tank regulator valve.

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The exemptions allowed by ASME Code Section XI will be invoked for the atmospheric day tank and non-isolable piping as identified in the attached schematic.



DIESEL FUEL OIL SYSTEM SCHEMATIC

PIPING EXEMPT FROM 110% PRESSURE TEST
(TYPICAL)

ENCLOSURE 2

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

10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this proposed license amendment request and determined that its adoption would not involve a significant hazards determination. The bases for this determination are as follows:

Proposed Change

The Harris Plant Emergency Diesel Generators are designed to provide a reliable source of power to the emergency 6.9KV buses in the event that normal sources of off-site power are not available. The diesel generators are capable of supplying the power needed for the safe shutdown of the plant. The fuel oil storage and transfer system is provided to store, maintain, and supply fuel oil to the diesel generators. The system consists of two separate, independent fuel oil systems, each consisting of a fuel oil storage tank, a transfer pump, a day tank, and associated piping and valves.

Final Safety Analysis Report (FSAR) Section 9.5.4.1 states that the diesel fuel oil system at the Harris Plant complies, with [unrelated] exceptions, to ANSI N195-1976. N195 Section 7.3 states that "the arrangement shall provide for inservice inspection and testing in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Rules for In-Service Inspection of Nuclear Power Plant Components."

Section XI of the American Society of Mechanical Engineers (ASME) Code, 1983 Edition with Addenda through Summer 1983, Article IWD-5000 permits exempting certain portions of piping systems from testing at 110% of the system design pressure. Specifically, IWD-5223 permits

exemptions for atmospheric storage tanks, open-ended portions of suction and drain lines from a storage tank extending to the first shutoff valve, open-ended portions of discharge lines beyond the last shutoff valve in non-closed systems, open-ended vent and drain lines from components extending beyond the last shutoff valve, and open-ended safety or relief valve discharge lines.

This amendment request clarifies the requirements of Technical Specification (TS) 4.8.1.1.2.h.2 which 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 pressure" at least once per 10 years. The system pressure test is to be performed at a pressure of 110% of the design pressure at least once per 10 years and only on those sections of piping that are isolable. ASME Code Section XI exemptions will be invoked for the atmospheric day tank and non-isolable piping.

Basis

This change clarification does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Applying ASME Code, Section XI alternative examination/testing will not affect any initiators of any previously evaluated accidents or change the manner in which the emergency diesel generators or any other systems operate. The diesel fuel oil system supports the emergency diesel generators which serve an accident mitigating function. Where portions of piping are non-isolable or where atmospheric tanks are involved, the Section XI ASME alternatives to 110% pressure testing continue to ensure the integrity of the fuel oil system without any impact on analyzed accident scenarios or their consequences. Therefore, the proposed amendment does not result in an increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed alternative testing and surveillance will not involve any physical alterations or additions to plant equipment or alter the manner in which any safety-related system performs its function. Using ASME Section XI guidance for testing continues to provide assurance that the fuel oil supply system will perform its intended function. Therefore,

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the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed amendment does not involve a significant reduction in the margin of safety.

There are no changes being made to the safety limits or safety settings that would adversely impact plant safety. Further, there is no impact on the margin of safety as defined in the Technical Specifications. Utilizing ASME Section XI as guidance for determining those sections of piping that should be pressure-tested or tested at atmospheric pressure will ensure proper operation of the diesel generator fuel oil supply system. Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

ENCLOSURE 3

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

ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (3) result in a significant increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows:

Proposed Change

The Harris Plant Emergency Diesel Generators are designed to provide a reliable source of power to the emergency 6.9KV buses in the event that normal sources of off-site power are not available. The diesel generators are capable of supplying the power needed for the safe shutdown of the plant. The fuel oil storage and transfer system is provided to store, maintain, and supply fuel oil to the diesel generators. The system consist of two separate, independent fuel oil systems, each consisting of a fuel oil storage tank, a transfer pump, a day tank, and associated piping and valves.

Final Safety Analysis Report (FSAR) Section 9.5.4.1 states that the diesel fuel oil system at the Harris Plant complies, with [unrelated] exceptions, to ANSI N195-1976. N195 Section 7.3 states that "the arrangement shall provide for inservice inspection and testing in accordance with ASME Boiler and Pressure Vessel Code, Section XI, Rules for In-Service Inspection of Nuclear Power Plant Components."

Section XI of the American Society of Mechanical Engineers (ASME) Code, 1983 Edition with Addenda through Summer 1983, Article IWD-5000 permits exempting certain portions of piping systems from testing at 110% of the system design pressure. Specifically, IWD-5223, permits exemptions for atmospheric storage tanks, open-ended portions of suction and drain lines from a storage tank extending to the first shutoff valve, open-ended portions of discharge lines beyond the last shutoff valve in non-closed systems, open-ended vent and drain lines from components extending beyond the last shutoff valve, and open-ended safety or relief valve discharge lines.

This amendment request clarifies the requirements of Technical Specification (TS) 4.8.1.1.2.h.2 which 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 pressure" at least once per 10 years. The system pressure test is to be performed at a pressure of 110% of the design pressure, at least once per 10 years and only on those sections of piping that are isolable. ASME Code Section XI exemptions will be invoked for the atmospheric day tank and non-isolable piping.

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in Enclosure 2, the proposed amendment does not involve a significant hazards consideration.
2. The proposed amendment does not result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed change does not involve any new equipment or require existing systems to perform a different type of function than they are currently designed to perform. The change does not introduce any new effluents or increase the quantities of existing effluents. As such, the change can not affect the types or amounts of any effluents that may be released offsite.

3. The proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure.

The proposed change does not result in any physical plant changes or new surveillances which would require additional personnel entry into radiation controlled areas.

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Therefore, the amendment has no affect on either individual or cumulative occupational radiation exposure.

ENCLOSURE 4
SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
DIESEL FUEL OIL SYSTEM PRESSURE TESTING

PAGE CHANGE INSTRUCTIONS

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