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 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.  
 AUTH. NAME AUTHORITY AFFILIATION  
 WOODY, C. G. Florida Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 THADANI, A. C. PWR Project Directorate 8

DOCKET #  
05000389

SUBJECT: Forwards justification for reactor pressure vessel  
 surveillance capsule withdrawal sequence of Tech Spec Table  
 4.4-5, "Reactor Vessel Matl Surveillance Program-Withdrawal  
 Schedule."

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DECEMBER 08 1986

L-86-486

Office of Nuclear Reactor Regulation  
Attention: Mr. Ashok C. Thadani, Director  
PWR Project Directorate #8  
Division of PWR Licensing-B  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Thadani:

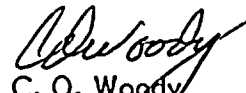
Re: St. Lucie Unit 2  
Docket No. 50-389  
Surveillance Capsule Withdrawal Sequence

By letter dated August 7, 1986 (E. G. Tourigny to C. O. Woody) the staff requested that Florida Power & Light Company (FPL) provide a justification for the St. Lucie Unit 2 reactor pressure vessel surveillance capsule withdrawal schedule or commit to the withdrawal schedule identified in the staff's letter. By letter L-86-435, dated September 4, 1986, FPL committed to propose a Technical Specification Change to the staff by December 1, 1986, if FPL determined that the current withdrawal sequence needed to be revised. By letter dated October 16, 1986 (E. G. Tourigny to C. O. Woody) the staff found this commitment to be acceptable.

The attached information provides FPL's justification that the current surveillance capsule withdrawal sequence of St. Lucie Unit 2 Technical Specification Table 4.4-5, "Reactor Vessel Material Surveillance Program - Withdrawal Schedule", is acceptable. As a result, FPL does not propose to amend the Technical Specification Table 4.4-5 for St. Lucie Unit 2.

Please contact us if you have any questions about this submittal.

Very truly yours,

  
C. O. Woody  
Group Vice President  
Nuclear Energy

COW/EJW/gp

Attachment

cc: Dr. J. Nelson Grace, Region II, USNRC  
Harold F. Reis, Esquire, Newman & Holtzinger

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PDR ADDOCK 05000389  
P PDR

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THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
5800 S. DICKINSON ST.  
CHICAGO, ILL. 60637

DATE: 11/15/68

TO: DR. J. H. GOLD

FROM: DR. R. M. WAYNE

RE: 100 mg. of 1,2-dichloroethane

100 mg. of 1,2-dichloroethane was received from Dr. J. H. Gold on 11/15/68. The sample was analyzed for 1,2-dichloroethane by the method of Dr. R. M. Wayne. The results are as follows: 1,2-dichloroethane, 100 mg. (100% recovery).

The above results are in agreement with the results of Dr. J. H. Gold's analysis. The sample is pure 1,2-dichloroethane.

Very truly yours,  
Dr. R. M. Wayne

cc: Dr. J. H. Gold

Dr. J. H. Gold  
100 mg. of 1,2-dichloroethane

11/15/68

Dr. R. M. Wayne

100 mg. of 1,2-dichloroethane  
11/15/68

## ATTACHMENT

### SURVEILLANCE CAPSULE WITHDRAWAL SEQUENCE

In the Final Safety Analysis Report (FSAR) for St. Lucie Unit 2, Section 5.3.1.6, FPL determined that the materials surveillance program is consistent with the objectives of ASTM E185-82 (Standard Practice for Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels) and 10 CFR 50, Appendix H. The St. Lucie Unit 2 Materials Surveillance Program was intended "... to verify the initial predictions of the surveillance material response to the actual radiation environment..." and "... to determine the conditions under which the vessel can be operated with adequate margins of safety against fracture." FSAR Table 5.3-9, Capsule Assembly Removal Schedule, and Table 5.3-9a, St. Lucie Unit 2 Surveillance Program were reviewed by the staff at the time of licensing and found to be acceptable in Section 5.3.1.3 of the Safety Evaluation Report related to the operation of St. Lucie Plant, Unit 2 (NUREG-0843) (SER). In the SER, the staff stated that its "...technical evaluation has determined that the applicant has met all the requirements of Appendices G and H, 10 CFR 50." This determination included "...that an appropriate material surveillance program exists to monitor radiation damage for the reactor pressure boundary." While the staff did state in the SER that it would re-evaluate the surveillance program after the first surveillance capsule test data was submitted for review, FPL's review of data obtained to date, as discussed later, does not indicate a need for a surveillance program revision.

We have reviewed our fluence projections in light of the recent information from Capsule No. 1 (83<sup>o</sup>). Fluence measurements and predictions still contain a large degree of uncertainty. Recent FPL submittals addressing vessel fluence have reported two different EOL fluences:  $3.64 \times 10^{19}$  N/cm<sup>2</sup> ( $E \geq 1$  MeV) and  $4.79 \times 10^{19}$  N/cm<sup>2</sup> ( $E \geq 1$  MeV). The differences in the two reported values of EOL fluence reported in the 83<sup>o</sup> capsule report and the Pressurized Thermal Shock (PTS) submittal, respectively, are caused by the different number of fuel cycles upon which each estimate was based and the degree of conservatism included in

The first part of the document discusses the importance of maintaining accurate records and the role of the auditor in this process. It emphasizes that the auditor's primary responsibility is to ensure that the financial statements are presented fairly and in accordance with the applicable accounting standards. This involves a thorough examination of the accounting records and supporting documentation to identify any errors or irregularities that may affect the financial results.

The document further outlines the auditor's duties, including the need to maintain independence and objectivity throughout the audit process. It stresses that the auditor must not be influenced by any external pressures or interests that could compromise their judgment. Additionally, the auditor is required to communicate the results of the audit to the appropriate stakeholders, such as the board of directors and the shareholders, in a clear and concise manner.

The second part of the document discusses the various types of audits and the scope of each. It distinguishes between financial statement audits, operational audits, and compliance audits. Financial statement audits focus on the accuracy and fairness of the financial statements, while operational audits evaluate the efficiency and effectiveness of the organization's internal controls and processes. Compliance audits, on the other hand, ensure that the organization is adhering to relevant laws, regulations, and contractual obligations.

The document concludes by highlighting the importance of the auditor's role in providing assurance to the stakeholders and promoting transparency in the organization's financial reporting. It states that the auditor's findings and recommendations are crucial for the organization to improve its financial performance and maintain the trust of its stakeholders.

The auditor's role is also defined by the terms of the audit engagement letter, which sets out the objectives, scope, and limitations of the audit. This document is a key component of the audit process and provides a clear understanding of what the auditor is expected to do and what the results of the audit will be used for. The engagement letter also outlines the responsibilities of the management and the board of directors in providing access to the necessary information and resources for the audit to be conducted effectively.

In addition, the document discusses the importance of the auditor's communication with the management and the board of directors throughout the audit process. This includes the preparation of audit reports that provide a detailed overview of the audit findings and recommendations. The auditor should also be available to discuss the results of the audit and answer any questions that may arise.

The document concludes by stating that the auditor's role is a critical one in ensuring the integrity and reliability of the organization's financial reporting. It is a role that requires a high level of professional judgment, objectivity, and integrity. The auditor must always act in the best interests of the stakeholders and maintain the highest standards of professional conduct.

each submittal. Each individual fuel load, summed on a cycle by cycle basis, will yield a different EOL fluence if projected to EOL at any time, depending on the amount of new fuel and its location with respect to the critical material. The  $3.64 \times 10^{19}$  N/cm<sup>2</sup> value in the capsule report was based on the first cycle of operation using measured activity for the dosimetry in the capsule. The  $4.79 \times 10^{19}$  N/cm<sup>2</sup> value in our PTS submittal was based on cycles 1 and 2 and projected to EOL. The  $4.79 \times 10^{19}$  N/cm<sup>2</sup> number was submitted for PTS considerations because it reflected a more recent and more conservative fluence projection while still showing a large PTS margin.

The capsule removal schedule was included as Table 4.4-5, Reactor Vessel Material Surveillance Program - Withdrawal Schedule, of the St. Lucie Unit 2 Technical Specifications. It should be noted that this withdrawal schedule also includes three standby capsules which allow for capsule removal and examination at times in addition to those called out in the removal schedule.

Surveillance capsule data from Capsule No. 1 (83°) indicated fluence and material properties as predicted at the time of licensing. The measured data from this capsule showed a maximum of 35°F shift in RT<sub>NDT</sub> at  $1.6 \times 10^{18}$  N/cm<sup>2</sup>. This projection to an end of life (EOL) fluence of  $3.64 \times 10^{19}$  N/cm<sup>2</sup> based on both measurements and calculations is equivalent to a 200°F shift in RT<sub>NDT</sub>. Therefore, it is our opinion that the curve in the Technical Specifications Bases Figure B3/4 4-1 is still a bounding, conservative indication of material behavior.

The first part of the document is a letter from the Secretary of the State to the President, dated 18th March 1820. It contains a report on the state of the country and the progress of the government. The letter is signed by the Secretary and is addressed to the President.

The second part of the document is a report from the Secretary of the State to the President, dated 18th March 1820. It contains a report on the state of the country and the progress of the government. The report is signed by the Secretary and is addressed to the President.

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