JUN 9 1981

DISTRIBUTION:
Docket File 50=389
LPDR
PDR
NSIC
TERA
LB#3 Files
DEisenhut
FMiraglia
VNerses
JLee
RTedesco
SHanauer
RVollmer
TMurley
RMattson
RHartfield, MPA
OELD
OIE (3)
BTurovlin
JConway
RSerbu
ACRS (16)

Docket No.: 50-389

Dr. Robert E. Uhrig, Vice President
Advanced Systems & Technology
Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152

Dear Dr. Uhrig:

SUBJECT: ST. LUCIE PLANT, UNIT 2 FSAR - REQUEST FOR ADDITIONAL INFORMATION (RAI)

From the review of your application for an operating license by the Corrosion Engineering Section (CES) of the Chemical Engineering Branch, Radiation Protection Section (RPS) of the Radiological Assessment Branch and the Quality Assurance Branch (QAB), we find that we need additional information regarding the St. Lucie Plant, Unit 2 FSAR. The specific information required is listed in the Enclosure.

Responses to the enclosed request should be submitted by June 15, 1981 for the RPS and RAB RAIs and by July 1, 1981 for the CES RAIs. If you cannot meet these dates, please inform us within seven days after receipt of this letter of the dates you plan to submit your responses.

Please contact Mr. Nerses (301-492-7468), St. Lucie 2 Project Manager, if you desire any discussion or clarification of the enclosed report.

Sincerely,

Original signed by
Robert L. Tedesco

Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page.

APP3

RECEIVED
JUN 12 1981
U.S. NUCLEAR REGULATORY COMMISSION

OFFICE	DL:LB#3	DL:LB#3	DL:AD/L				
SURNAME	VNerses:jb	FJMiraglia	RLTedesco				
DATE	6/3/81	6/10/81	6/9/81				

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 9 1981

Docket No.: 50-389

Dr. Robert E. Uhrig, Vice President
Advanced Systems & Technology
Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152

Dear Dr. Uhrig:

SUBJECT: ST. LUCIE PLANT, UNIT 2 FSAR - REQUEST FOR ADDITIONAL INFORMATION (RAI)

From the review of your application for an operating license by the Corrosion Engineering Section (CES) of the Chemical Engineering Branch, Radiation Protection Section (RPS) of the Radiological Assessment Branch and the Quality Assurance Branch (QAB), we find that we need additional information regarding the St. Lucie Plant, Unit 2 FSAR. The specific information required is listed in the Enclosure.

Responses to the enclosed request should be submitted by June 15, 1981 for the RPS and QAB RAIs and by July 1, 1981 for the CES RAIs. If you cannot meet these dates, please inform us within seven days after receipt of this letter of the dates you plan to submit your responses.

Please contact Mr. Nerses (301-492-7468), St. Lucie 2 Project Manager, if you desire any discussion or clarification of the enclosed report.

Sincerely,

Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page.

Dr. Robert E. Uhrig, Vice President
Advanced Systems and Technology
Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152

ccs:
Harold F. Reis, Esq.
Lowenstein, Newman, Reis, Axelrad & Toll
1025 Connecticut Avenue, N. W.
Washington, D. C. 20036

Norman A. Coll, Esq.
McCarthy, Steel, Hectory & Davis
14th Floor, First National Bank Building
Miami, Florida 33131

Mr. Martin H. Hodder
1131 N. E. 86th Street
Miami, Florida 33138

Resident Inspector
St. Lucie Nuclear Power Station
c/o U. S. Nuclear Regulatory Commission
7900 South AlA
Jensen Beach, Florida 33457

REQUEST FOR ADDITIONAL INFORMATION, OL-FSAR

St. Lucie 2

260.0 Quality Assurance Branch

260.1 Provide a statement in Section 17.2 that the QA program described in the latest revision of "Topical Quality Assurance Report," FPLTQAR 1-76A, will be followed for the operations phase of St. Lucie 2.

260.2 Correct Figure 17.2-1 to agree with FP&L's current organizational structure.

260.3 Provide a statement in Section 17.2 that the safety-related items covered by the QA program are listed in Table 3.2-1 of the FSAR and supplement Table 3.2-1 accordingly.

260.4 In Table 1.8-1, update the revisions of the regulatory guides relating to QA to be consistent with those committed to in the topical report FPLTQAR 1-76A (new Revision 5 following baseline review of new regulatory guidance).

ENCLOSURE

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT UNIT NO. 2
DOCKET NUMBER 50-389
REQUEST FOR INFORMATION, OL-FSAR
282.0 CHEMICAL ENGINEERING BRANCH
CORROSION ENGINEERING SECTION

282.1 (10.3.5) The information you have provided is insufficient for us to evaluate the secondary water chemistry control program. Provide a summary of operative procedures to be used for the steam generator secondary water chemistry control and monitoring program, addressing the following:

1. Sampling frequency for the critical chemical and other parameters and of control points or limits for these parameters for each mode of operation: normal operation, hot startup, cold startup, hot shutdown, cold wet layup;

2. Procedures used to measure the values of the critical parameters;

3. Location of process sampling points;

4. Procedure for the recording and management of data;

5. Procedures defining corrective actions* for off-control point chemistry conditions detailing time allowed at off-chemistry conditions; and

6. The procedure identifying (a) the authority responsible for the interpretation of the data and (b) the sequence and timing of administrative events required to initiate corrective action.

282.2 (10.3.5) Verify that the steam generator secondary water chemistry control program incorporates technical recommendations of the NSSS. Any significant deviations from NSSS recommendations should be noted and justified technically.

282.3 (10.3.5) In addition to the secondary water chemistry monitoring and control program, we require monitoring of the steam condensate at the effluent of the condensate pump. The monitoring of the condensate is for the purpose of detecting condenser leakage.

282.4 (10.3.5) If demineralizers are used, explain how you prevent resin breakthrough into the steam generator.

---

*Branch Technical Position MTEB 5-3 describes the acceptable means for monitoring secondary side water chemistry in PWR steam generators, including corrective actions for off-control point chemistry conditions. However, the staff is amenable to alternatives, particularly to Branch Technical Position B.3.b(9) of MTEB 5-3 (96-hour time limit to repair or plug confirmed condenser tube leaks).

471.0 Positions and Request for Additional Information, OL-FSAR

471.1 (12.1.3) (T13.1-1) Regulatory Guide 1.70, Sections 13.1.2, 12.1, and 12.5.1 outline information regarding radiation protection organizations which should be included in your FSAR specifying the number of persons assigned to positions. Regulatory Guide 8.8, Section C.3.a(1) and C.1.b(1) discuss ALARA co-ordinating and planning functions.

Provide an additional description of your Health Physics organization to include the number and types of professionals and technicians. Include in your description the number of individuals available for radiological engineering support, ALARA coordination responsibilities, and technician supervision.

471.2 (12.1.3) (12.5.1.2) Based on information contained in the draft document (NUREG-0731), "Criteria for Utility Management and Technical Competence" Section II.A.2, it is our position that the organization chain contain a qualified health physicist to provide backup in the event of the absence of the Health Physics Supervisor. The December 1979 revision of ANSI 3.1 specifies that individuals temporarily filling the RPM position should have a B.S. degree in science or engineering, 2 years experience in radiation protection, 1 year of which should be nuclear power plant experience, 6 months of which should be on site. It is our position that such experience be professional experience.

471.3 (12.5.1.2) Provide a commitment that ANSI 18.1 qualified Health Physics Technicians will be available to man each shift by fuel loading as outlined in

Regulatory Guide 8.8, Section C.3.b(1); NUREG-0731, Section II.A.2.d(1)(b), and NUREG-0654, Table B-1.

471.4
(13.1.2.2.1)
(12.5.1.2)

The Health Physics organization at St. Lucie 2 does not meet our positions in Regulatory Guide 8.8, Section C.1.b, or NUREG-0731, Section II.A.1, for providing independence from operational pressures since the HP Supervisor reports to the Operations Superintendent. The recent Health Physics Appraisal noted several areas which needed improvement at St. Lucie 1 which were attributable to a lack of independence from operational pressures for the Health Physics organization.

Our position is that the Health Physics Supervisor report directly to or have direct access to the Plant Manager and be independent from operating pressures. Organizational charts and descriptions should both reflect reporting chains and policies as outlined in Regulatory Guide 1.70, Sections 13.1.1.2 and 13.1.2.1. You should revise your FSAR to show how you intend to meet this position.

471.5
(12.5.2)
(T12.5-2)
(T12.3-2)

Your portable radiation monitoring instrument list (Table 12.5-2) and area radiation monitor list (Table 12.3-2) show no instruments capable of measuring dose rates greater than 1000 R/hr (e.g., 10,000 R/hr). Such instruments are necessary to determine the effects of a TMI-type accident. Regulatory Guide 1.97 (Revision 2) specifies the area radiation monitors in areas requiring access after an accident and portable survey meters should have a range up to 10^4 R/hr. Provide a commitment

in your FSAR to have portable radiation monitoring instruments and specify locations of area radiation monitors in accessible post-accident areas. These monitors should be capable of measuring dose rates up to 10^4 R/hr at St. Lucie 2.

471.6 (12.5.3.9) Section 12.5.3.9 of the FSAR states, "Sealed sources that are exempt quantities do not require special handling procedures for radiation protection purposes." Since the radionuclides and activities listed in Appendix C are associated with allowable sewer release limits authorized in 10 CFR 20.300, and not intended as de minimus quantities, you should revise your FSAR and procedures to require that all licensed sources be subject to material controls.

471.7 (12.5.2) (12.5.3.8) Provide information on the quantity and types of respirators provided for St. Lucie 2 in accordance with the guidelines of Regulatory Guide 1.70, Section 12.5.2.

471.8 (12.5.3) (12.5.2.3(a)) The use of hand and food and portal monitors and limited "frisking" does not provide a check for personnel contamination that is ALARA. Experience at other facilities has shown that a whole body frisk required upon exit from each contaminated area and the controlled area is more efficient in detecting contamination than partial frisks or hand/foot and portal monitors, especially with the low sensitivity of monitoring devices noted in the St. Lucie 1 Health Physics Appraisal. Provide a commitment to a policy of requiring whole body frisking for contaminated area/controlled area exit.

471.9 (12.5.2) Your instrument inventory list contains no alpha detecting and measuring instruments as described in Regulatory Guide 8.8, Sections C.4.a(2) and C.4.b(3). Your FSAR should be revised to provide sufficient alpha monitoring instruments to support an alpha monitoring program which complies with 10 CFR 20.201.

471.10 (pl.9A-15) (III.D.3.3) Describe the St. Lucie 2 in-plant iodine sampling for both routine and post-accident conditions.

471.11 (12.5.2.3(d)) Provide additional detail in your FSAR as outlined in Section 12.5.3 of Regulatory Guide 1.70 concerning how your program for internal radiation exposure assessment (whole body counting and bioassay programs) meets the criteria of Regulatory Guide 8.2 6,"Application of Bioassay of Fission and Activation Products", Regulatory Guide 8.9, "Acceptable Concepts, Models, Equations and Assumptions for a Bioassay Program", or equivalent alternatives.

471.12 (12.5.2) Verify that your portable radiation detecting instrument calibration program meets Regulatory Guide 8.25, or describe an equivalent alternative.

471.13 (12.1) Provide a description of how your health physics program is audited for function and compliance as outlined in Regulatory Guide 1.70, Sections 13.4.1.2.3 and Regulatory Guide 8.8, Sections C.1.b(1),(b),(c). Include CNRB functions and on-site, offsite, and independent audits and reviews.

471.14 (12.3.1.4) (Fig. 12.3-3) Your FSAR diagram (Figure 12.3-3) does not clearly indicate the location of the shield walls from the FSAR descriptions in Section 12.3.1.4 for neutron streaming shielding. Provide clarification of the location of the shield walls.

471.15 (12.5.3) (12.5.2.3(b)) Expand your description of your exposure tracking and exposure reduction program to include the elements of Regulatory Guide 1.70, Section 12.1.3 and 12.5.3 Regulatory Guide 8.8, Sections C.3.a.(8)(j), C.3.b(2), and C.3.c(2)(5 Include rem-tracking, SRPD use, and post-maintenance evaluations of predicted and actual exposure in your descriptions, and how these results are used to make changes in future work. Since most routine doses are below the minimum sensitivity of the 0-500 mr self-reading pocket dosimeters (~20 mr), outline how you will trace doses by job using such dosimeters rather than the commonly used 0-200 mr dosimeters. Verify the annual exposure reviews are performed by plant management and that these are used to identify groups with the highest exposure.

471.16 (12.5.2) (T12.5-3) The FSAR indicates 0.12 percent failed fuel was assumed for reactor coolant source terms in Section 12.2.2 (p. 12.3-6). Sections 12.3.1.3 (p. 12.3-2) and 12.3.2.3 (p. 12.3-8) indicate 1% failed fuel used for source terms. Clarify the discrepancy.

471.17 (12.3.4) (T11.5-1) Provide additional information regarding the sensitivity of airborne radioactivity monitors in accordance with Section 12.3 of Regulatory Guide 1.70. Verify that the airborne radioactivity monitors described

in Section 12.3.4 of the FSAR are capable of detecting 10 MPC-hours of particulate and iodine radioactivity in compartments which may be occupied and may contain airborne radioactivity (the acceptance criteria in Standard Review Plan Section 12.3).

471.18 (1.9) Information for TMI Lessons Learned review is needed in the following NUREG-0737 areas: I.B.1.2 Health Physics Organization; II.B.2 Post Accident Shielding and Vital Area Access; II.B.3 ALARA for Post-Accident Sampling; II.F.1 High Range In-Containment Radiation Monitors; and III.D.3.3 Post-Accident Iodine Sampling and Analysis.

471.19 (12.3.4.1) Provide a commitment that the fuel storage area criticality monitors will meet the guidance of Regulatory Guide 8.12, "Criticality Accident Alarm Systems," or specify an equivalent alternative.

471.20 (12.3.1.5) The administrative controls for access to the spent fuel transfer tube are described in your FSAR are not explicit enough. Provide additional detailed information as outlined in Regulatory Guide 1.70 (Sections 12.3.1, and 12.3.2) as to how your fuel transfer tube shielding and administrative and operational controls meet the following branch positions.

Control of Access to Spent Fuel Transfer Tube Areas

All accessible portions of the spent fuel transfer tube and/or canal must be shielded during fuel transfer. Use of removable shielding for this purpose is acceptable. This shielding shall be such that the

resultant contact radiation levels shall be no greater than 100 rads per hour. All accessible portions of the spent fuel transfer tube shall be clearly marked with a sign stating that potentially lethal radiation fields are possible during fuel transfer. If removable shielding is used for the fuel transfer tubes, it must also be explicitly marked as above. If other than permanent shielding is used, local audible and visible alarming radiation monitors must be installed to alert personnel if temporary fuel transfer tube shielding is removed during fuel transfer operations.