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MAY 19 1977

Docket No.: 50-302

Florida Power Corporation
ATTN: Mr. J. T. Rodgers, Assistant Vice President
and Nuclear Project Manager
P.O. Box 14042
St. Petersburg, Florida 33733

Gentlemen:

RE: CRYSTAL RIVER UNIT NO. 3

Our review of data received from reactor vessel material surveillance programs indicates that the materials used in reactor vessel fabrication may have a wider variation in sensitivity to radiation damage than originally anticipated. In addition, some reactor vessels incorporate more than one heat of materials, including weld metals in their beltline regions, but all of these heats may not be included in the reactor vessel material surveillance program.

Although our review of these data does not reveal a basis for concern regarding continued reactor vessel integrity over the next several years, the information does indicate the need for a detailed review of the materials employed in reactor vessel construction (in light of this recent data) and a review of the specimens employed in the surveillance program to determine if the present specimens reasonably represent the limiting materials in the reactor vessel beltline region.

In order to perform these reviews we will need the information listed in the enclosure relative to each of your reactor vessel(s) and associated surveillance specimens.

Accordingly, you are requested to supply one signed original and 39 copies of the information listed in the enclosure within 60 days of receipt of this letter. If any portion of the requested information was previously submitted to the NRC in connection with our consideration of the B&W Integrated Surveillance Program, that portion may be furnished by referencing the appropriate earlier submittal.

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This request for generic information was approved by GAO under a blanket clearance number B-180225 (R0072); this clearance expires July 31, 1977.

Sincerely,

Original signed by

John F. Stolz, Chief
Light Water Reactors Branch #1
Division of Project Management

Enclosure:
Request for Information

cc w/enclosure:
See next page

OFFICE ▶	ORB#4:DOR	LWR#1:DPM	C-LWR#1:DPM			
SURNAME ▶	CNelson:dn	Angelo	JStolz			
DATE ▶	5/18/77	5/18/77	5/19/77			

Florida Power Corporation

cc:

Mr. S. A. Brandimore
Vice President and General Counsel
P. O. Box 14042
St. Petersburg, Florida 33733

REQUEST FOR INFORMATION

REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM

1. Provide the estimated maximum fluence ($E>1$ Mev) at the inner surface of the reactor vessel wall as of March 31, 1977.

2. Provide the effective full power years (EFPY) of operation accumulated as of March 31, 1977.

3. Identify the firm or firms that fabricated your reactor vessel.

4. a. Provide a sketch of the reactor vessel showing all materials welds, in the beltline region* and provide an identification number for each material.

   b. Provide the following information for each of the welds in the beltline region:

      (1) Shop control number or procedure qualification number;

      (2) Filler metal and heat number;

      (3) Type of flux and batch number;

      (4) Welding process (sub arc, electroslag, manual metal arc, etc.)

      (5) Post-weld heat treatment;

      (6) Chemical composition (particularly Cu, P and S content);

      (7) Drop weight T_{NDT};

      (8) RT_{NDT};

      (9) Charpy upper shelf energy (unirradiated);

      (10) Tensile properties (unirradiated);

      (11) Firm performing weld if more than one firm participated in welding;

      (12) The maximum end-of-life fluence at the vessel inner wall.

* As defined in 10 CFR 50, Appendix G, Section II.H.

c. Provide the following information for each of the plates or forgings in the beltline region:

(1) Plate or forging serial number;

(2) Plate or forging heat number;

(3) Plate or forging material specification number;

(4) Plate or forging supplier;

(5) Plate or forging heat treatment;

(6) Chemical composition (particularly Cu, P and S content);

(7) Drop weight T_{NDT};

(8) RT_{NDT} (unirradiated);

(9) Charpy upper shelf energy (unirradiated);

(10) Tensile properties (unirradiated);

(11) The maximum end-of-life fluence at the vessel inner wall.

5. a. List the weld, plate and forging materials included in the vessel material surveillance program.

b. For each weld listed in 5.a., provide the information requested in items (1) through (11) of question 4.b.

c. For each plate or forging specimen listed in 5.a, provide the information listed in items (1) through (10) of question 4.c.

d. Provide a copy of the report which describes the surveillance program for your reactor vessel(s), if available.