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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C      05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C      05000251

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 HARRIS. K. N.      Florida Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION  
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SUBJECT: Forwards Relief Request 6/7 A from code required volumetric  
 & visual exam of RCP casing welds & interior surfaces.

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P.O. Box 14000, Juno Beach, FL 33408-0420

MAY 30 1990

L-90-156  
10 CFR 50.55a(g) (5) (iii)

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Request for Relief  
Inservice Inspection Program

Pursuant to 10 CFR 50.55a(g) (5) (iii), Florida Power & Light Company has determined that conformance with certain code requirements is impractical for Turkey Point Units 3 and 4.

Requests for relief from the code required volumetric and visual examination of reactor coolant pump casing welds and interior surfaces (Attachment 1 and 2), and the basis for such relief, are attached.

Your approval is requested by September 15, 1990 so that we may plan for the upcoming outages, beginning November 1990 for Unit 4 and December, 1990 for Unit 3.

If you should have any questions, please contact us.

Very truly yours,

K. N. Harris  
Vice President  
Turkey Point Plant - Nuclear

KNH/TCG/gp

Attachments

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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ATTACHMENT 1  
TURKEY POINT UNIT 3  
SECOND INSPECTION INTERVAL  
RELIEF REQUEST

RELIEF REQUEST NO. 6/7 A

A. COMPONENT IDENTIFICATION:

- \* CLASS 1
- \* REACTOR COOLANT PUMPS
  - 3P200A LOOP A PUMP
  - 3P200B LOOP B PUMP
  - 3P200C LOOP C PUMP

B. EXAMINATION REQUIREMENTS:

EXAM CATEGORY    ITEM NO.

- |       |   |
|-------|---|
| B-L-1 | B12.10 - VOLUMETRIC EXAMINATION, to include 100% of the pressure retaining welds on one pump in each group of pumps performing similar functions in the system. |
| B-L-2 | B12.20 - VISUAL EXAMINATION of the internal pressure boundary surfaces on one pump in each group of pumps performing similar functions in the system.           |

C. FUNCTION:

Turkey Point Plant Unit No. 3 has three (3) reactor coolant pumps. These pumps function during normal reactor operation to provide forced recirculation through the core.

D. RELIEF REQUESTED:

Relief is requested from the Code volumetric and visual examinations of the Reactor Coolant Pump Casing welds and interior surfaces during the inspection interval.

E. BASIS FOR RELIEF:

Volumetric examination is not feasible due to the coarse grain structure inherent in thick stainless steel castings, that precludes the use of conventional ultrasonic examination techniques.

The pump casing is fabricated from cast stainless steel (ASTM A351, Grade CF8M) material.

Configuration of the pump design requires disassembly of the pump (including internal parts) to perform radiographic examination.

TURKEY POINT UNIT 3  
SECOND INSPECTION INTERVAL  
RELIEF REQUEST

RELIEF REQUEST NO. 6/7 A CONTINUED

Visual examination is not practical since it requires total disassembly of the pump.

Radiographic examination is not possible without the complete disassembly of the pump (see Figure 1). To perform this examination, large expenditures of man-hours and manrem are required with essentially no compensating increase in plant safety. Based on actual data compiled from the radiographic examination of the Turkey Point Unit No. 3 Reactor Coolant Pump casing welds and the visual examination of the internal boundary surface of one pump, in excess of 5900 man-hours and 46 man-rem exposure was expended in the disassembly, examinations and reassembly of the pump.

There is a very low probability, based upon industry experience, to disassemble pump(s) solely for maintenance purposes. There is no requirement by the pump manufacturer (Westinghouse) to disassemble the pump(s) as part of normal maintenance or inspection. Accordingly, Florida Power & Light Company's procedures do not require disassembly of the pump(s) for maintenance or inspection purposes. There are no reported failures within the pump casings with these model pump(s).

Adequate safety margins are inherent in the basic pump design. The structural integrity afforded by the existing pump casing material will not significantly degrade over its lifetime. The Reactor Coolant Pump casing material, cast stainless steel (ASTM A351-CF8m), is widely used in the Nuclear Industry and has performed extremely well.

Satisfactory inspection results achieved in February 1982 coupled with the same inspections conducted by other utility company's and employing the same manufacturing model pumps, provides additional assurance as to the pumps' casing integrity.

Florida Power & Light Company through the Westinghouse Owners' Group has submitted to the ASME Code, Code case N-481, Titled "Alternate Examination Requirements for Cast Austenitic Pump Casings". This Code case was approved on March 5, 1990.

TURKEY POINT UNIT 3  
SECOND INSPECTION INTERVAL  
RELIEF REQUEST

RELIEF REQUEST NO. 6/7 A CONTINUED

F. ALTERNATIVE EXAMINATIONS:

Perform a VT-2 visual examination of the exterior of all pumps during the Hydrostatic pressure tests required by Table IWB-2500-1, Category B-P.

Perform a VT-1 visual examination of the external surfaces of the weld of one pump casing.

Perform a VT-3 visual examination of the internal surfaces whenever a pump is disassembled for maintenance.

The alternate examination and tests provide assurance of an acceptable level of quality and safety.

G. IMPLEMENTATION SCHEDULE:

At or near the end of the Inspection Interval

Inspection Interval 22 February 1984 to 21 February 1994

Inspection Period 22 February 1991 to 21 February 1994

H. ATTACHMENTS TO RELIEF REQUEST NO. 6/7 A

Fig. No. 1 Reactor Coolant Pump detail

003-V13A Reactor Coolant Pump drawing

003-V20 Reactor Coolant Pump Interior and weld identification & location

The need for this exemption was recognized by FP&L during the First Inspection Interval. FP&L submitted and received NRC approval for this request for relief. FP&L resubmitted this request for relief at the beginning of our Second Inspection Interval and received partial approval as denoted below.

SUBMITTED: 23 February 1984 (under Request 6/7

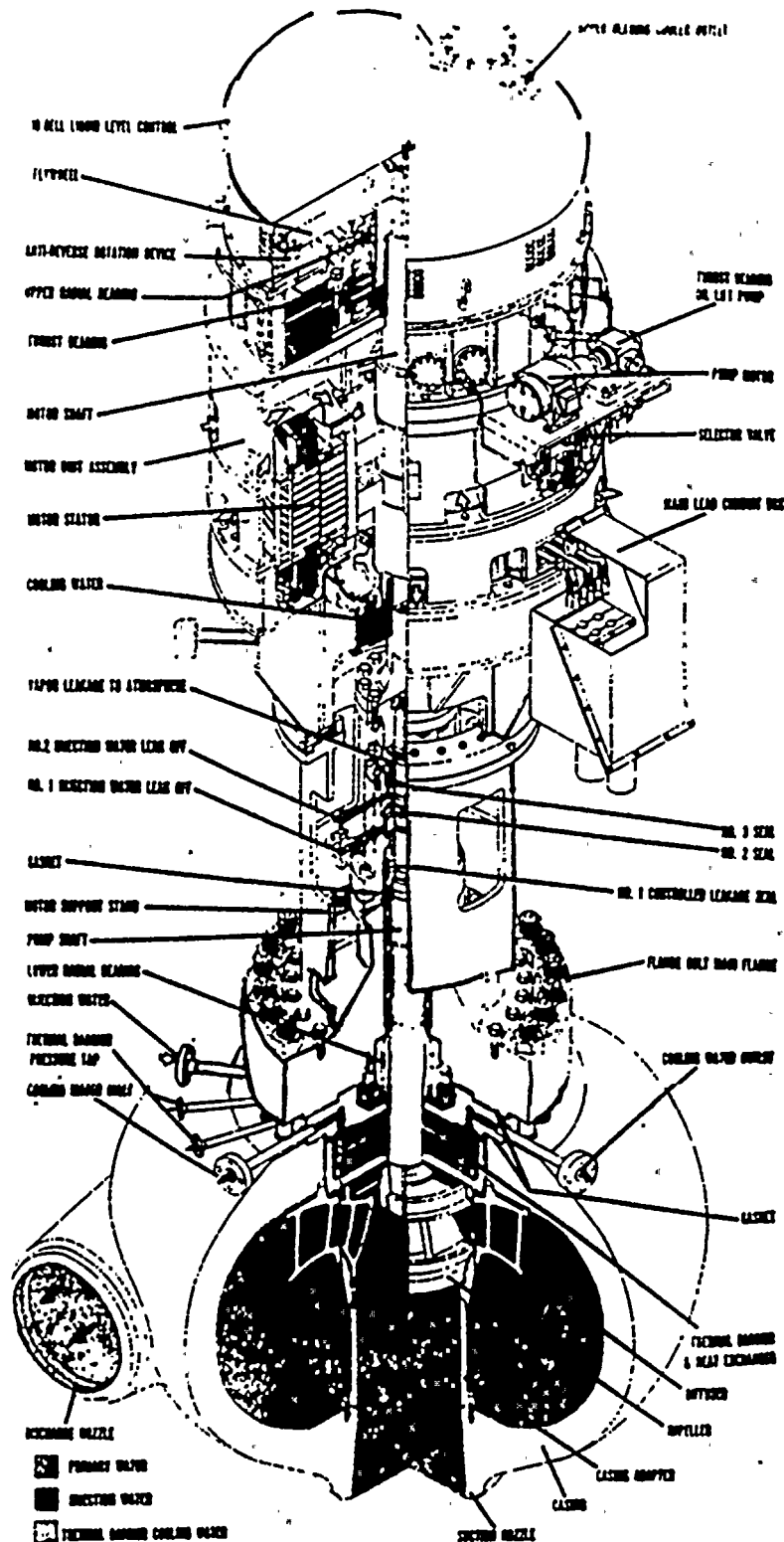
APPROVED: TAC NOS.: 49936 Category B-L-2 only

DENIED: Category B-L-1

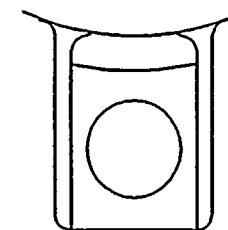
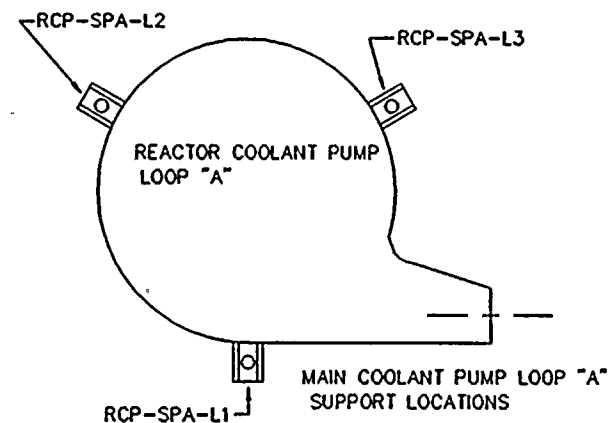
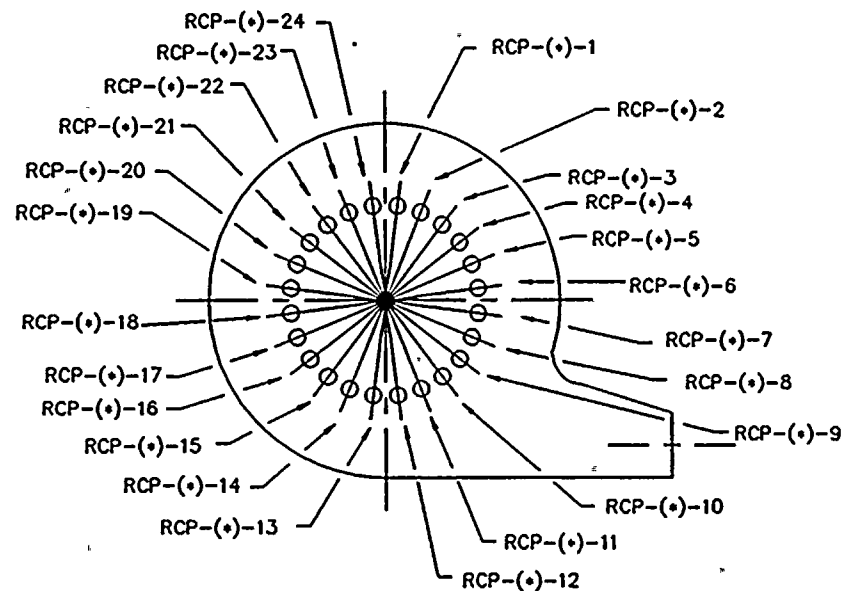
AMENDED: Amendment 6/7A supplements Request for Relief No. 6/7 originally submitted in 1984.

RE-SUBMITTED:

REASON FOR AMENDMENT: Relief from the ASME Code requirements is still required for this interval.







SUPPORT DETAIL  
FROM ABOVE


#### NOTES

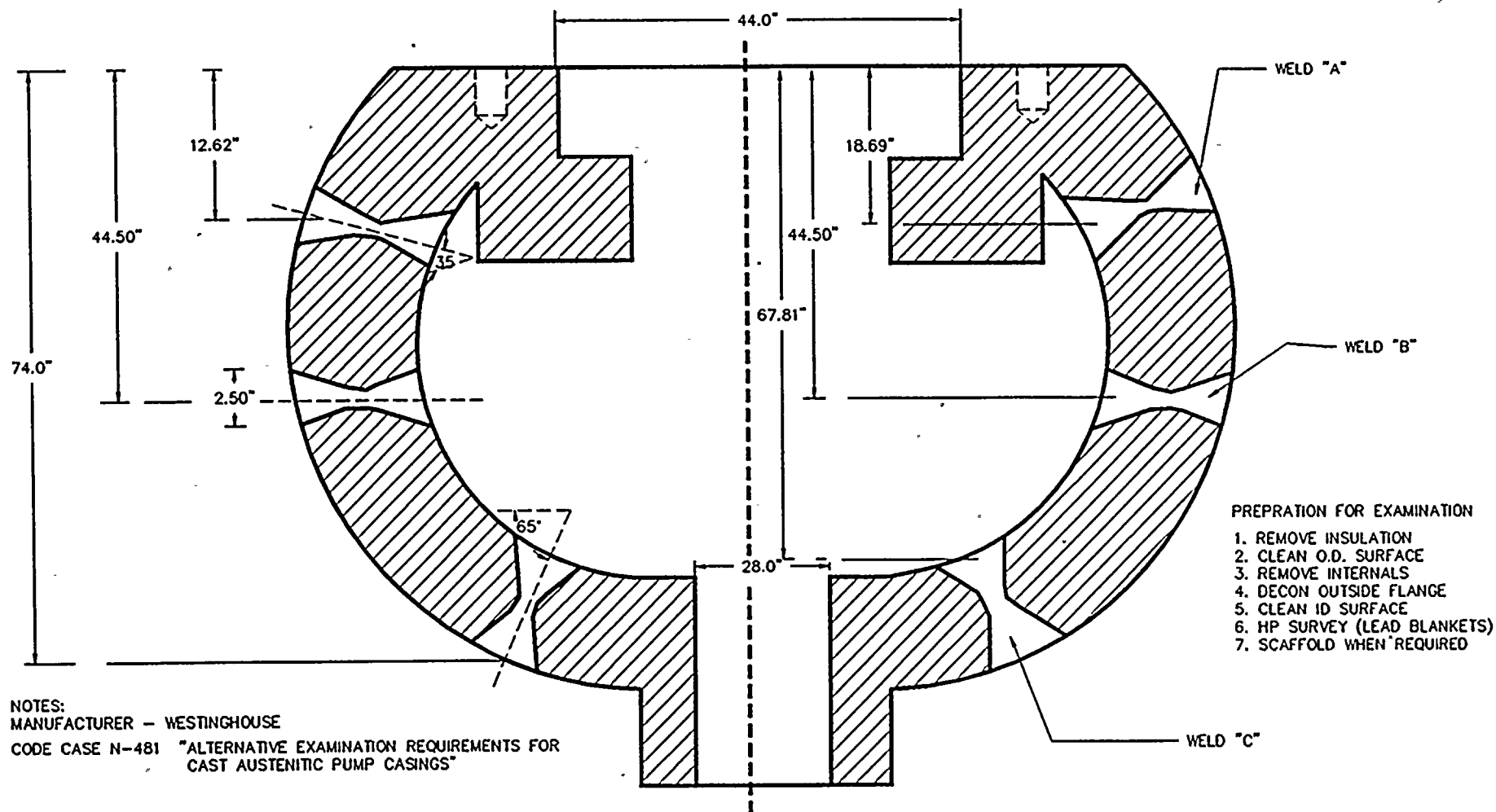
THE IDENTIFICATION OF APPLICABLE STUDS, NUTS, AND LIGAMENTS SHALL BE MADE BY INSERTING THE FOLLOWING DESIGNATIONS IN PLACE OF THE (\*)

MAIN COOLANT PUMP LOOP "A" STUDS - (FSA)


MAIN COOLANT PUMP LOOP "A" NUTS - (FNA)

MAIN COOLANT PUMP LOOP "A" LIGAMENTS - (FLA)

REFERENCE DRAWINGS	PRESSURE & TEMPERATURE STATS		MATERIAL SPECS			CODES & PROGRAMS GROUP TURKEY POINT UNIT 3		
			SIZE	SCH TYPE				
	DESIGN PSIG:	TEMP(F):			TITLE: REACTOR COOLANT PUMP 3P200A			
	OPERATING PSIG:	TEMP(F):			DATE: 10-12-89		ZONE: 056	
	HYDROSTATIC PSIG:	TEMP(F):			REVISION 3	APPROVED BY: E. L. ANDERSON	DRAWING NUMBER: 003-V13A	
			UT CALIBRATION BLOCK: UT-18, UT-19					



RELIEF REQUEST 6/7

REFERENCE DRAWINGS	PRESSURE & TEMPERATURE STATS		MATERIAL SPECS			CODES & PROGRAMS GROUP	
			SIZE	SCH		TYPE	TURKEY POINT PLANT UNIT 3
	DESIGN PSIG:	TEMP(F):	CASTING		SA-351, GR. CF8M	TITLE: REACTOR COOLANT PUMP (TYPICAL ALL 3 )	
	OPERATING PSIG:	TEMP(F):				DATE: 16 APRIL 1990	
	HYDROSTATIC PSIG:	TEMP(F):	ZONE: 56,57,58				
			REVISION 0				
			UT CALIBRATION BLOCK: N/A		APPROVED BY: F I ANDERSON	DRAWING NUMBER: 003-V20	

ATTACHMENT 2

TURKEY POINT UNIT 4  
SECOND INSPECTION INTERVAL  
RELIEF REQUEST

RELIEF REQUEST NO. 6/7 A

A. COMPONENT IDENTIFICATION:

- \* CLASS 1
- \* REACTOR COOLANT PUMPS
  - 4P200A LOOP A PUMP
  - 4P200B LOOP B PUMP
  - 4P200C LOOP C PUMP

B. EXAMINATION REQUIREMENTS:

EXAM CATEGORY	ITEM NO.
B-L-1	B12.10 - VOLUMETRIC EXAMINATION, to include 100% of the pressure retaining welds on one pump in each group of pumps performing similar functions in the system.
B-L-2	B12.20 - VISUAL EXAMINATION of the internal pressure boundary surfaces on one pump in each group of pumps performing similar functions in the system.

C. FUNCTION:

Turkey Point Plant Unit No. 4 has three (3) reactor coolant pumps. These pumps function during normal reactor operation to provide forced recirculation through the core.

D. RELIEF REQUESTED:

Relief is requested from the Code volumetric and visual examinations of the Reactor Coolant Pump Casing welds and interior surfaces during the inspection interval.

E. BASIS FOR RELIEF:

Volumetric examination is not feasible due to the coarse grain structure inherent in thick stainless steel castings, that precludes the use of conventional ultrasonic examination techniques.

The pump casing is fabricated from cast stainless steel (ASTM A351, Grade CF8M) material.

Configuration of the pump design requires disassembly of the pump (including internal parts) to perform radiographic examination.

Visual examination is not practical since it requires total disassembly of the pump.

TURKEY POINT UNIT 4  
SECOND INSPECTION INTERVAL  
RELIEF REQUEST

RELIEF REQUEST NO. 6/7 A CONTINUED

Radiographic examination is not possible without the complete disassembly of the pump (see Figure 1). To perform this examination, large expenditures of man-hours and manrem are required with essentially no compensating increase in plant safety. Based on actual data compiled from the radiographic examination of the Turkey Point Unit No. 3 Reactor Coolant Pump casing welds and the visual examination of the internal boundary surface of one pump, in excess of 5900 man-hours and 46 man-rem exposure was expended in the disassembly, examination, and reassembly of the pump.

There is a very low probability, based upon industry experience, to disassemble pump(s) solely for maintenance purposes. There is no requirement by the pump manufacturer (Westinghouse) to disassemble the pump(s) as part of normal maintenance or inspection. Accordingly, Florida Power & Light Company's procedures do not require disassembly of the pump(s) for maintenance or inspection purposes. There are no reported failures within the pump casings with these model pump(s).

Adequate safety margins are inherent in the basic pump design. The structural integrity afforded by the existing pump casing material will not significantly degrade over its lifetime. The Reactor Coolant Pump casing material, cast stainless steel (ASTM A351-CF8m), is widely used in the Nuclear Industry and has performed extremely well.

Satisfactory inspection results achieved in February 1982 coupled with the same inspections conducted by other utilities and employing the same manufacturing model pumps, provides additional assurance as to the pumps' casing integrity.

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**F. ALTERNATIVE EXAMINATIONS:**

Perform a VT-2 visual examination of the exterior of all pumps during the Hydrostatic pressure tests required by Table IWB-2500-1, Category B-P.

Perform a VT-1 visual examination of the external surfaces of the welds of one pump casing.

Perform a VT-3 visual examination of the internal surfaces whenever a pump is disassembled for maintenance.

TURKEY POINT UNIT 4  
SECOND INSPECTION INTERVAL  
RELIEF REQUEST

RELIEF REQUEST NO. 6/7 A CONTINUED

Perform a VT-3 visual examination of the internal surfaces whenever a pump is disassembled for maintenance.

The alternate examination and tests provide assurance of an acceptable level of quality and safety.

G. IMPLEMENTATION SCHEDULE:

At or near the end of the Inspection Interval

Inspection Interval 15 April 1984 to 14 April 1994

Inspection Period 15 April 1991 to 14 April 1994

H. ATTACHMENTS TO RELIEF REQUEST NO. 6/7 A

Fig. No. 1	Reactor Coolant Pump detail
4-V13A	Reactor Coolant Pump drawing
004-V20	Reactor Coolant Pump Interior and weld identification & location

The need for this exemption was recognized by FP&L during the First Inspection Interval. FP&L submitted and received NRC approval for this request for relief. FP&L resubmitted this request for relief at the beginning of our Second Inspection Interval and received partial approval as denoted below.

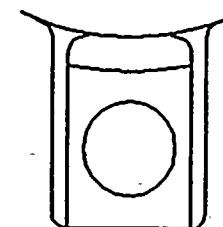
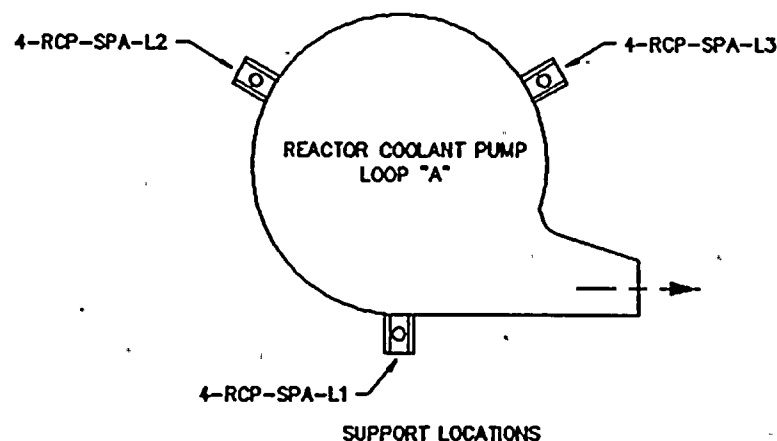
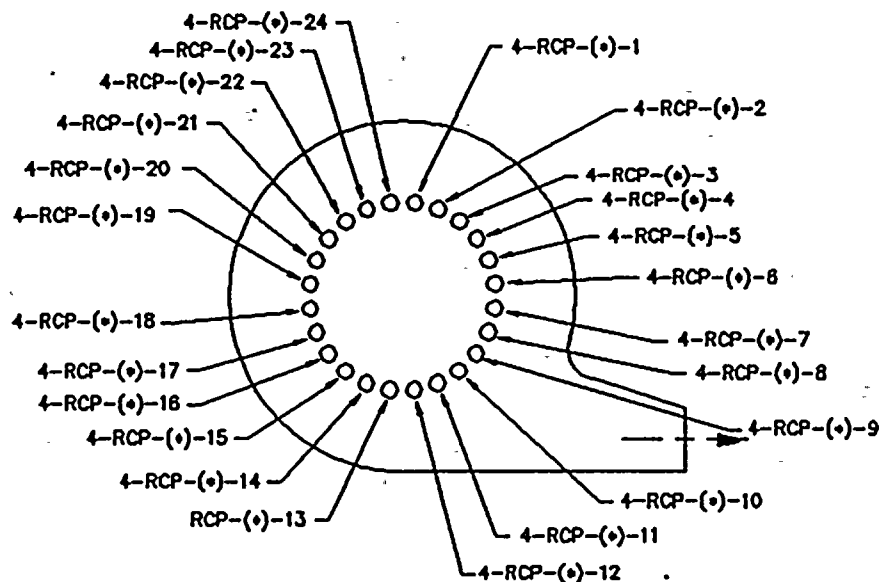
SUBMITTED:	23 February 1984 (under Request 6/7)
APPROVED:	TAC NOS.: 49936 Category B-L-2 only
DENIED:	Category B-L-1
AMENDED:	Amendment 6/7A supplements Request for Relief No. 6/7 originally submitted in 1984.

RE-SUBMITTED:

REASON FOR AMENDMENT:	Relief from the ASME Code requirements is still required for this interval.
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## RELIEF REQUEST NO. 6/7 A CONTINUED





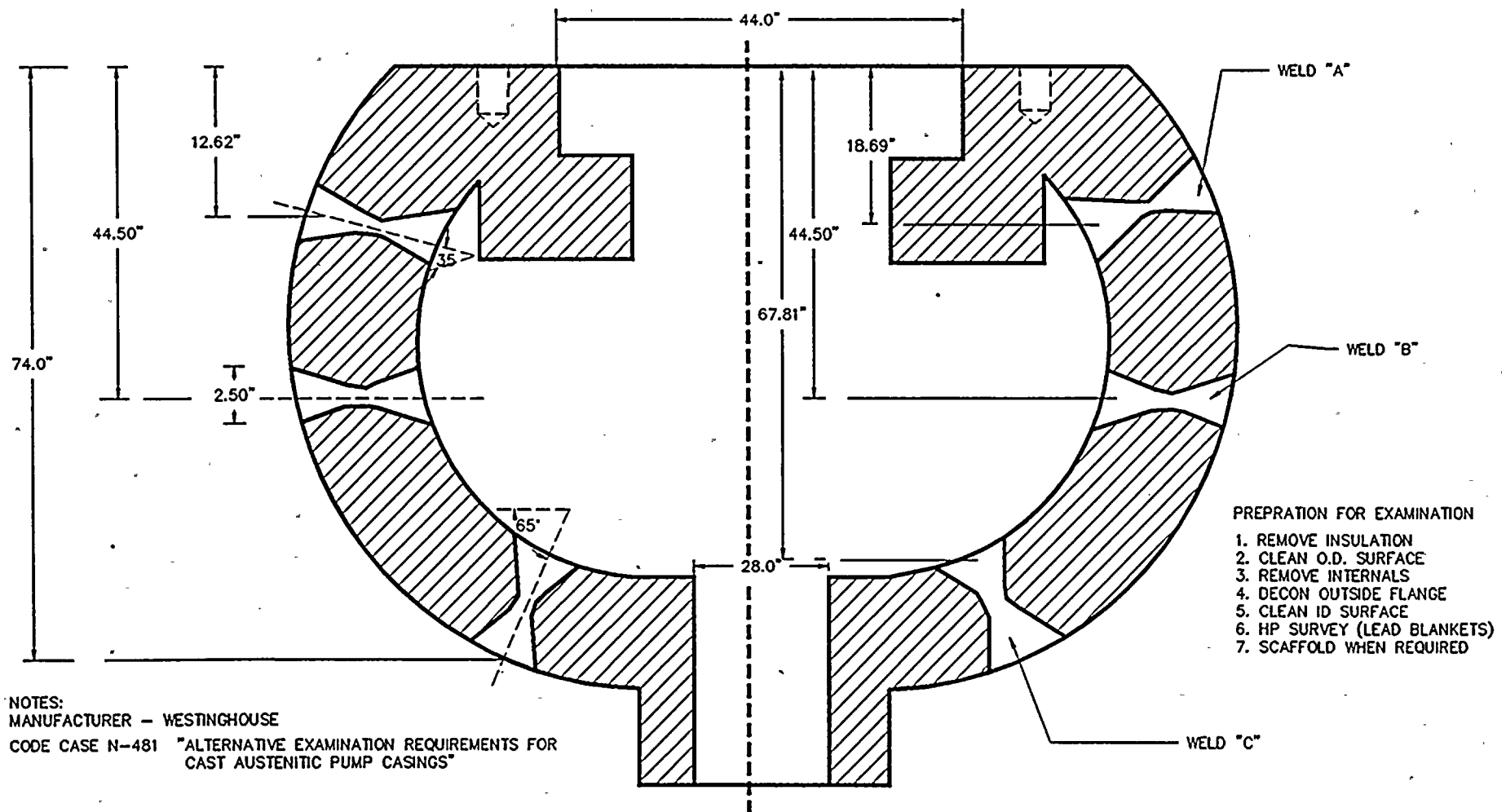
SUPPORT DETAIL  
FROM ABOVE

#### NOTES


THE IDENTIFICATION OF STUDS, NUTS, AND FLANGE SURFACE AREAS SHALL BE MADE BY INSERTING THE FOLLOWING DESIGNATIONS IN PLACE OF THE (\*)

MAIN COOLANT PUMP LOOP "A" STUDS - FSA  
 MAIN COOLANT PUMP LOOP "A" NUTS - FNA  
 MAIN COOLANT PUMP LOOP "A" FLANGE SURFACE - FLA

REFERENCE DRAWINGS	PRESSURE & TEMPERATURE STATS	MATERIAL SPECS		FPL	CODES & PROGRAMS GROUP	
		SIZE	SCH TYPE		TURKEY POINT UNIT 4	
	DESIGN PSIG:	TEMP(F):			TITLE: REACTOR COOLANT PUMP MAIN FLANGE	
	OPERATING PSIG:	TEMP(F):			STUDS, NUTS AND PUMP SUPPORTS (4P200A)	
	HYDROSTATIC PSIG:	TEMP(F):	DATE: 4/26/90		ZONE: 058	
			UT CALIBRATION BLOCK: UT-18, UT-19		REVISION 0	APPROVED BY: R. L. TURNER



RELIEF REQUEST 6/7

REFERENCE DRAWINGS	PRESSURE & TEMPERATURE STATS		MATERIAL SPECS			CODES & PROGRAMS GROUP TURKEY POINT PLANT UNIT 4	
			SIZE	TYPE			
	DESIGN PSIG:	TEMP(F):	CASTING	SA-351, GR. CF8M	TITLE: REACTOR COOLANT PUMP (TYPICAL ALL 3 )		
	OPERATING PSIG:	TEMP(F):			DATE: 17 May 1990		ZONE: 56,57,58
	HYDROSTATIC PSIG:	TEMP(F):	UT CALIBRATION BLOCK: N/A		REVISION 0	APPROVED BY: E. L. ANDERSON	DRAWING NUMBER: 004-V20



