

Florida Power

CORPORATION

September 2, 1988
3F0988-02

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

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
NRC Bulletin 88-05: Nonconforming
Materials Supplied by Piping Supplies, Inc.
at Folsom, New Jersey and West Jersey
Manufacturing Company at Williamstown, New Jersey

Dear Sir:

Florida Power Corporation (FPC) hereby provides the following information in response to the subject IE Bulletin. The Bulletin requires that all Piping Supplies, Inc. (PSI) and West Jersey Manufacturing Co. (WJM) supplied material be identified and that a determination be made as to its suitability for the intended or actual applications.

FPC's record search indicated that the subject material was located in the storerooms and also installed in the Nuclear Service and Decay Heat Seawater (RW) System. The storeroom material is in a "hold cage" until further notice from the NRC. An EQUOTIP portable hardness tester was used to establish the ultimate strength of the installed material. The EQUOTIP hardness number obtained was then expressed in terms of a Brinell Hardness Number using the EQUOTIP conversion tables. The lowest hardness value obtained to date is 115HB without the EPRI temperature correction factor. This hardness value did not fall within the acceptable range for ASTM A-105 material.

An analysis to justify continued operations was performed because of the substandard material, but did not require a report under 10 CFR 50.72. However, notification to the NRC Operations Center was made within 48 hours on the dates of July 13th and July 27th per Supplement 1 to Bulletin 88-05. The analysis demonstrated that the subject materials are suitable for the intended service.

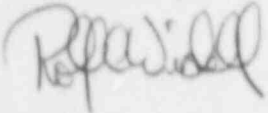
8809140163 880902
PDR ADOCK 05000302
G PNU

IE 11
11

September 2, 1988
3F0988-02
Page 2

Enclosed are material worksheets which list the PSI and WJM supplied materials that are found not to be in conformance with the applicable code requirements or procurement specifications.

Sincerely,



Rolf C. Widell, Director
Nuclear Operations Site Support

RCW/GMF/sdr

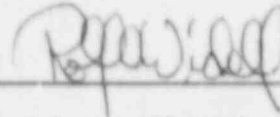
Enclosures

xc: Regional Administrator, Region II
Senior Resident Inspector

STATE OF FLORIDA

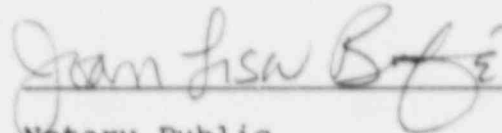
COUNTY OF CITRUS

Rolf C. Widell states that he is the Director, Nuclear Operations Site Support for Florida Power Corporation; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information, and belief.



Rolf C. Widell, Director
Nuclear Operations Site Support

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 2nd day of September, 1988.



Notary Public

Notary Public, State of Florida at Large,

My Commission Expires: June 21, 1991

NRC 88-05
MATERIALS WORKSHEET

Plan	CRYSI	Unit	3
Line Item	1		
Heat-Lot	CFY	ASME Class	3
Commodity	FLG	Diameter	2:00
Schedule	40	Rating	150
Type	SW	Spec	105
Grade	N/A	Source	PSI
Vendor	(WJM or PSI) P	CMTR Date	9/30/87
NCA-3800	(Y/N) Y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
Quantity	1	Quantity In Stock	0
Installed-Access	1	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item 1		Specimen ID (Required) 1
	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		84,725
Yield Strength		53,890
Percent Elongation		35.0
Percent Reduction In Area		67.8
Hardness (BHN)	HB166	Not Specified
Carbon		.25
Manganese		1.35
Silicon		.27
Phosphorous		.010
Sulfur		.039
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS 1. Test temp 85 - 105 F
2. Temp. correction applied

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	2		
Heat-Lot	6027949	ASME Class	3
Commodity	FLG	Diameter	24:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	7/9/87
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
Quantity	2	Quantity In Stock	0
Installed-Access	2	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item 2

Specimen ID (Required) 2

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		77,000
Yield Strength		46,700
Percent Elongation		34.0
Percent Reduction In Area		59.0
Hardness (BHN)	HB142/HB144	N/A
Carbon		.27
Manganese		.86
Silicon		.20
Phosphorous		.011
Sulfur		.014
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS 1. Test temp 85 - 101 F
 2. Temp correction applied

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	
Line Item	3		
Heat-Lot	CFY	ASME Class	3
Commodity	FLG	Diameter	2:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTB Date	10/13/87
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier Dubose

Supplier Dubose

Quantity 8

Quantity In Stock 4

Installed-Access 0

Installed--Not Access 0

TEST DATA WORKSHEET

Test Results For Line Item 3

Specimen ID (Required) 3

	<u>Test Data</u>	<u>CMTB Data</u>
Tensile Strength		84,725
Yield Strength		53,890
Percent Elongation		35.0
Percent Reduction In Area		67.8
Hardness (BHN)		Not Specified
Carbon		.25
Manganese		1.35
Silicon		.27
Phosphorous		.010
Sulfur		.039
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS: 1. No testing conducted
2. 4 items unaccounted for

NRC 88-05

MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	4		
Heat-Lot	CFY	ASME Class	N/A
Commodity	FLG	Diameter	2:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	10/6/87
NCA-3800 (Y/N)	y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
Quantity	15	Quantity In Stock	0
Installed-Access	15	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item 4

Specimen ID (Required) 4

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		84,725
Yield Strength		53,890
Percent Elongation		35.0
Percent Reduction In Area		67.8
Hardness (BHN)	HB 119/138	Not Specified
Carbon		.25
Manganese		1.35
Silicon		.27
Phosphorous		.010
Sulfur		.039
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS: 1. Test temp. 85 - 108 F
 2. Temp. correction applied

NRC 88-05

MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	5		
Heat-Lot	CPC	ASME Class	2
Commodity	FLG	Diameter	6:00
Schedule	N/A	Rating	150
Type	BL	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	7/24/87
NCA-3800 (Y/N)	y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
----------	--------	----------	--------

Quantity	1	Quantity In Stock	1
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item 5

Specimen ID (Required) 5

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		76,596
Yield Strength		39,313
Percent Elongation		25.0
Percent Reduction In Area		57.0
Hardness (BHN)		N/A
Carbon		.29
Manganese		.76
Silicon		.23
Phosphorous		.017
Sulfur		.030
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS No testing conducted

NRC 88-05

MATERIALS WORKSHEET

Plant	CRYST	Unit	
Line Item	6		
Heat-Lot	CFY	ASME Class	2
Commodity	FLG	Diameter	2:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	10/13/87
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
Quantity	8	Quantity In Stock	8
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item	6	Specimen ID (Required)	6
		<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength			84,725
Yield Strength			53,890
Percent Elongation			35.0
Percent Reduction In Area			67.8
Hardness (BHN)			Not Specified
Carbon			.25
Manganese			1.35
Silicon			.27
Phosphorous			.010
Sulfur			.039
Chromium			N/A
Nickel			N/A
Molybdenum			N/A
Heat Treatment			N/A

REMARKS - No testing conducted

NRC 88-05
MATERIALS WORKSHEET

Plant CRYST	Unit 3
Line Item 7	
Heat-Lot COL	ASME Class 3
Commodity FLG	Diameter 2:00
Schedule N/A	Rating 150
Type BL	Spec 105
Grade N/A	Source PSI
Vendor (WJM or PSI) P	CMTR Date 11/4/87
NCA-3800 (Y/N) Y	

Secondary Supply Chain

Supplier Dubose	Supplier Dubose
Quantity 3	Quantity In Stock 0
Installed-Access 2	Installed--Not Access 0

TEST DATA WORKSHEET

Test Results For Line Item 7 Specimen ID (Required) 7

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		95,680
Yield Strength		64,123
Percent Elongation		26.0
Percent Reduction In Area		51.0
Hardness (BHN)	HB 140/HB 129	None Specified
Carbon		.29
Manganese		.76
Silicon		.027
Phosphorous		.033
Sulfur		.034
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

- REMARKS
1. Test temp. 107 F
 2. Temp. correction applied
 3. Only installed items tested (2 items)
 4. One (1) used in Non-Related application
(Test Fixture) not available for test

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	8		
Heat-Lot	AAY-40	ASME Class	2
Commodity	FLG	Diameter	1:00
Schedule	40	Rating	150
Type	SW	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	11/30/87
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
----------	--------	----------	--------

Quantity	4	Quantity In Stock	4
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item	8	Specimen ID (Required)	8
----------------------------	---	------------------------	---

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		81,235
Yield Strength		52,499
Percent Elongation		24.0
Percent Reduction In Area		43.0
Hardness (BHN)		N/A
Carbon		.28
Manganese		.78
Silicon		.23
Phosphorous		.018
Sulfur		.029
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS 1. No testing conducted

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	9		
Heat-Lot	CND	ASME Class	N/A
Commodity	FLG	Diameter	6:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	10/13/87
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
----------	--------	----------	--------

Quantity	1	Quantity In Stock	1
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item	9	Specimen ID (Required)	9
----------------------------	---	------------------------	---

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		78,444
Yield Strength		46,365
Percent Elongation		30.0
Percent Reduction In Area		47.0
Hardness (BHN)		N/A
Carbon		.28
Manganese		.75
Silicon		.23
Phosphorous		.015
Sulfur		.011
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS 1. No tests conducted

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	10		
Heat-Lot	CND	ASME Class	N/A
Commodity	FLG	Diameter	4:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	PSI
Vendor (WJM or PSI)	P	CMTR Date	10/13/87
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Dubose	Supplier	Dubose
----------	--------	----------	--------

Quantity	1	Quantity In Stock	1
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item	10	Specimen ID (Required)	io
----------------------------	----	------------------------	----

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		78,444
Yield Strength		46,365
Percent Elongation		30.0
Percent Reduction In Area		47.0
Hardness (BHN)		N/A
Carbon		.28
Manganese		.75
Silicon		.23
Phosphorous		.015
Sulfur		.011
Chromium		N/A
Nickel		N/A
Molybdenum		N/A
Heat Treatment		N/A

REMARKS 1. No tests conducted

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	11		
Heat-Lot	4871	ASME Class	2
Commodity	FLG	Diameter	4:00
Schedule	N/A	Rating	900
Type	BL	Spec	105
Grade	N/A	Source	WJM
Vendcr (WJM or PSI)	W	CMTR Date	5/17/83
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Guyon Alloys	Supplier	Guyon Alloys
Quantity	2	Quantity In Stock	2
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item 11

Specimen ID (Required) 11

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		74,953
Yield Strength		44,943
Percent Elongation		27.4
Percent Reduction In Area		56.5
Hardness (BHN)		N/A
Carbon		.20
Manganese		.90
Silicon		.18
Phosphorous		.021
Sulfur		.028
Chromium		N/A
Nickel		N/A
Molybdenum		N/A

Heat Treatment Normalized to 1650 F for 1 hr per inch

REMARKS 1. No tests conducted

NRC 88-05
MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	12		
Heat-Lot	A66	ASME Class	2
Commodity	FLG	Diameter	6:00
Schedule	N/A	Rating	600
Type	BL	Spec	105
Grade	N/A	Source	WJM
Vendor (WJM or PSI)	W	CMTR Date	5/17/83
NCA-3800 (Y/N)	Y		

Secondary Supply Chain

Supplier	Guyon Alloys	Supplier	Guyon Alloys
Quantity	2	Quantity In Stock	2
Installed-Access	0	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item 12

Specimen ID (Required) 12

	<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength		81,354
Yield Strength		51,344
Percent Elongation		27.8
Percent Reduction In Area		61.8
Hardness (BHN)		N/A
Carbon		.26
Manganese		.89
Silicon		.026
Phosphorous		.013
Sulfur		.011
Chromium		N/A
Nickel		N/A
Molybdenum		N/A

Heat Treatment Normalized to 1650 F and held one hr per inch

REMARKS 1. No tests conducted

NRC 88-05

MATERIALS WORKSHEET

Plant	CRYST	Unit	3
Line Item	13		
Heat-Lot	45786	ASME Class	2
Commodity	FLG	Diameter	20:00
Schedule	N/A	Rating	150
Type	SO	Spec	105
Grade	N/A	Source	WJM
Vendor	(WJM or PSI) W	CMTR Date	11/18/80
NCA-3800	(Y/N) Y		

Secondary Supply Chain

Supplier	ITT Grinnell	Supplier	ITT Grinnell
Quantity	4	Quantity In Stock	0
Installed-Access	4	Installed--Not Access	0

TEST DATA WORKSHEET

Test Results For Line Item	13	Specimen ID (Required)	13
		<u>Test Data</u>	<u>CMTR Data</u>
Tensile Strength			75,242
Yield Strength			43,524
Percent Elongation			27
Percent Reduction In Area			59
Hardness (BHN)	HB 130, HB 137 HB 133, HB 145		Not Specified
Carbon			.22
Manganese			1.04
Silicon			.023
Phosphorous			.016
Sulfur			.018
Chromium			N/A
Nickel			N/A
Molybdenum			N/A
Heat Treatment			N/A

REMARKS 1. Test temp 95 - 99 F
2. Temp correction applied