

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8303240210 DOC. DATE: 83/03/18 NOTARIZED: NO DOCKET #
 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389
 AUTH. NAME AUTHOR AFFILIATION
 UHRIG, R.E. Florida Power & Light Co.
 RECIPIENT NAME RECIPIENT AFFILIATION
 EISENHUT, D.G. Division of Licensing

SUBJECT: Forwards addl info to clarify aspects of auxiliary feedwater pump endurance test rept, per commitment in SER.

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NOTES:

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	NRR/DSI/ASB	1	1	NRR/DSI/CPB 10	1	1
	NRR/DSI/CSB 09	1	1	NRR/DSI/ICSB 16	1	1
	NRR/DSI/METB 12	1	1	NRR/DSI/PSB 19	1	1
	NRR/DSI/RAB 22	1	1	NRR/DSI/RSB 23	1	1
	<u>REG FILE</u> 04	1	1	RGN2	3	3
	RM/DDAMI/MIB	1	0			
EXTERNAL:	ACRS 41	6	6	BNL (AMDTs ONLY)	1	1
	DMB/DSS (AMDTs)	1	1	FEMA-REP DIV 39	1	1
	LPDR 03	1	1	NRC PDR 02	1	1
	NSIC 05	1	1	NTIS	1	1

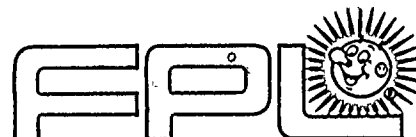
1. The purpose of this document is to provide a clear and concise summary of the information contained in the attached report. This document is intended for use by personnel who require a high-level overview of the findings and conclusions presented in the original report.

2. The report was prepared by the following personnel:

3. The findings of the report are summarized as follows:

4. Summary of Findings

Item No.	Category	Findings	Severity	Recommendations
1	General	Item 1: [Illegible]	Low	[Illegible]
2	General	Item 2: [Illegible]	Low	[Illegible]
3	General	Item 3: [Illegible]	Low	[Illegible]
4	General	Item 4: [Illegible]	Low	[Illegible]
5	General	Item 5: [Illegible]	Low	[Illegible]
6	General	Item 6: [Illegible]	Low	[Illegible]
7	General	Item 7: [Illegible]	Low	[Illegible]
8	General	Item 8: [Illegible]	Low	[Illegible]
9	General	Item 9: [Illegible]	Low	[Illegible]
10	General	Item 10: [Illegible]	Low	[Illegible]
11	General	Item 11: [Illegible]	Low	[Illegible]
12	General	Item 12: [Illegible]	Low	[Illegible]
13	General	Item 13: [Illegible]	Low	[Illegible]
14	General	Item 14: [Illegible]	Low	[Illegible]
15	General	Item 15: [Illegible]	Low	[Illegible]
16	General	Item 16: [Illegible]	Low	[Illegible]
17	General	Item 17: [Illegible]	Low	[Illegible]
18	General	Item 18: [Illegible]	Low	[Illegible]
19	General	Item 19: [Illegible]	Low	[Illegible]
20	General	Item 20: [Illegible]	Low	[Illegible]
21	General	Item 21: [Illegible]	Low	[Illegible]
22	General	Item 22: [Illegible]	Low	[Illegible]
23	General	Item 23: [Illegible]	Low	[Illegible]
24	General	Item 24: [Illegible]	Low	[Illegible]
25	General	Item 25: [Illegible]	Low	[Illegible]
26	General	Item 26: [Illegible]	Low	[Illegible]
27	General	Item 27: [Illegible]	Low	[Illegible]
28	General	Item 28: [Illegible]	Low	[Illegible]
29	General	Item 29: [Illegible]	Low	[Illegible]
30	General	Item 30: [Illegible]	Low	[Illegible]



FLORIDA POWER & LIGHT COMPANY
March 18, 1983
L-83-150

Office of Nuclear Reactor Regulations
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Eisenhut:

Re: ST. LUCIE UNIT NO. 2
DOCKET NO. 50-389
AFW ENDURANCE TEST REPORT
REQUEST FOR ADDITIONAL INFORMATION

In our letter L-83-93, dated February 25, 1983, Florida Power and Light provided the results of the St. Lucie Unit 2 Auxiliary Feedwater Pump Endurance Test Report as outlined and committed to in the safety evaluation report (NUREG-0843) subsection 10.4.9.3 B.2.

In subsequent discussions with the staff, Florida Power and Light was requested to provide additional information to clarify certain aspects of the test report.

Attached please find Florida Power and Light's responses to the additional information requested.

Should you have any questions regarding this matter, please do not hesitate to call.

Very truly yours,

Robert E. Uhrig.
Vice President
Advanced Systems and Technology

REU/RJS/PPC/rms

Attachment

cc: J. P. O'Reilly, Region II
Harold F. Reis, Esquire

Boo!

8303240210 830318
PDR ADOCK 05000389
E PDR



AFW ENDURANCE TEST REPORT

ADDITIONAL INFORMATION RESPONSES

- 1) REQUEST: Provide a plot of the humidity in the AFW pump room.
RESPONSE: During the AFW Pump Tests, Florida Power and Light did not record the ambient conditions (i.e., humidity) because all the AFW pumps and motors are environmentally qualified to operate in a 100% humidity environment. The qualification of this equipment has been provided to and found acceptable by the NRC and is documented in Florida Power and Light's "Environmental Qualification Report and Guidebook."

- 2) REQUEST: Provide AFW pump vibration data taken during the test.
RESPONSE: During the AFW endurance test, Florida Power and Light recorded vibration of the pumps in accordance with Florida Power and Light's approved procedures on vibration monitoring.

The recorded data and acceptance criteria for each pump is contained in Attachment 1. The data demonstrates that the vibration levels did not exceed allowable limits established by the vibration severity charts.

- 3) REQUEST: Provide acceptance criteria for temperature of AFW pump bearings.
RESPONSE: AFW pump bearing temperatures design limits are governed by manufacturer's specifications which indicate that at no time is the bearing oil temperature to exceed 160°F. Where the bearing housing temperature was recorded using a contact pyrometer this limit was conservatively reduced to 140° to account for heat transfer through the bearing housing. This was verified by the vendor to be an acceptable approach.

- 4) REQUEST: Provide indication of why temperature plots for pumps 2B and 2C contain discontinuities in the recorded data.
RESPONSE: The discontinuities shown in the plots occurred in one case when an individual tripped across wiring which resulted in thermacouples being dislodged from the sensing location. The readings were therefore inaccurate until this anomaly was recognized. In the second case, equipment had to be changed due to inclement weather and the readings during that time were erroneous. In addition, it should be pointed out that at no time were these pumps shutdown which would reflect a change in the bearing temperatures.

Florida Power & Light Company

Plant PSL Unit 2

Preop. No. 2-0700 95

Startup
VIBRATION DATA SHEET

Date OCT 31 1982

Equipment 2A Aux Feed Pump

VIBRATION EQUIPMENT USED <u>TK90 MSU-162</u>	OPERATING CONDITIONS: RPM <u>3590</u> AMPS <u>26</u> FLOW <u>110</u> PRESSURE <u>1330</u>
ADDITIONAL: <u>48 HOUR ENDURANCE TEST</u>	

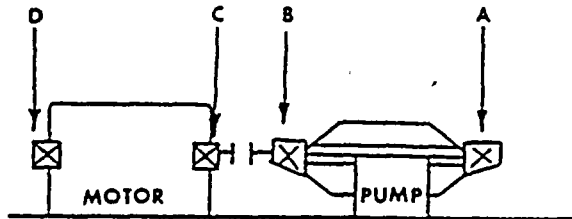
EQUIPMENT SKETCH

LEGEND:

- PICKUP POINT
- ⊠ BEARING
- |— COUPLING

Performed By S. D. FERRELL

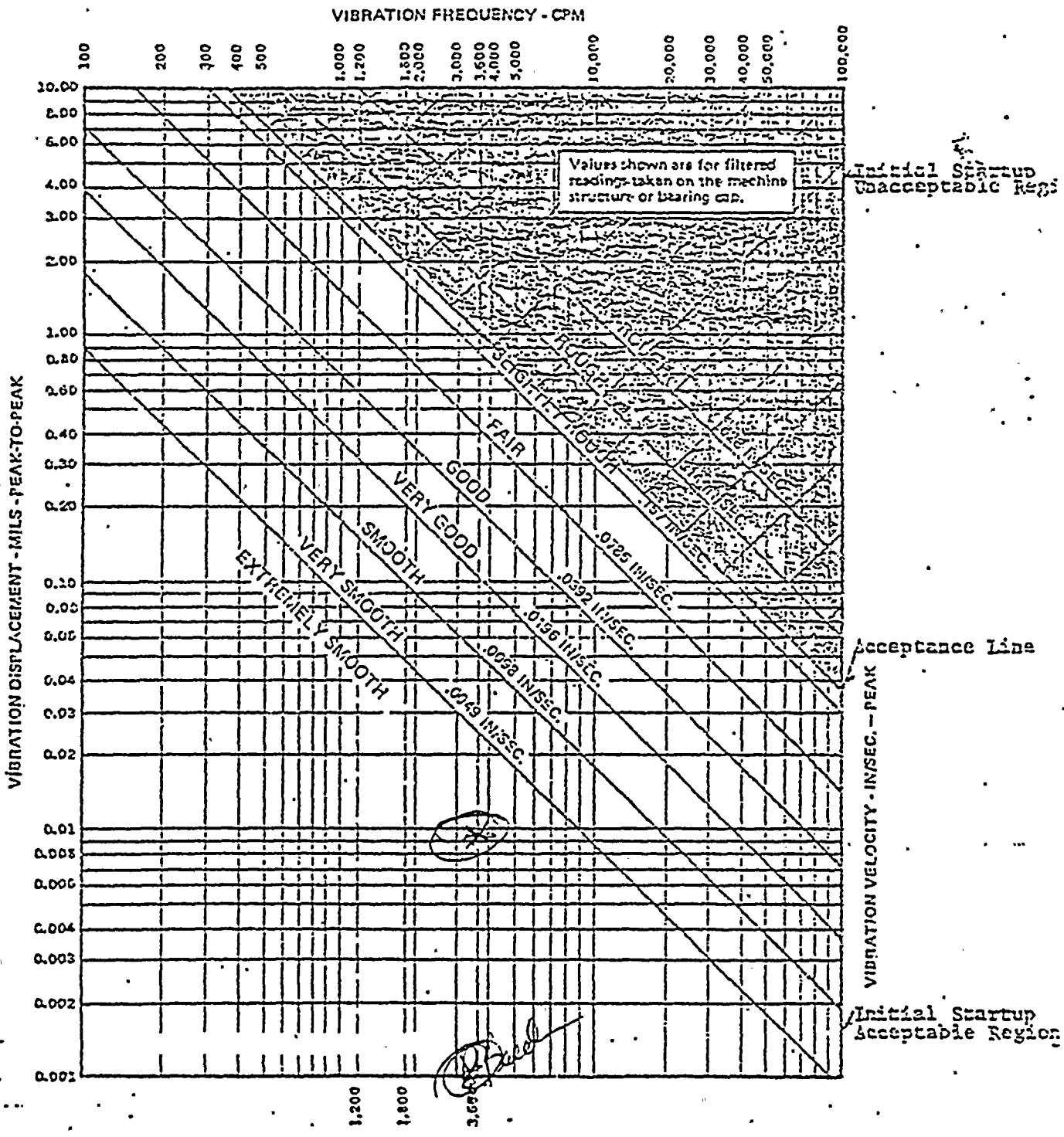
Date 10-31



HORIZONTALLY SPLIT SINGLE
STAGE PUMPS

PICKUP POINT	POS.	FILTER IN		FILTER OUT	
		MILS	CPM	MILS	CPM
A	H	0.01	3590	0.85	46 3590
	V	0.01		0.3	
	A	0.01		0.25	
B	H	0.01		0.2	
	V	0.01		0.275	
	A				
C	H	0.01		0.6	
	V	0.01		0.35	
	A				
D	H	0.01		0.6	
	V	0.01		0.25	
	A		↓	0.65	↓
	H				
	V				
	A				
	H				
	V				
	A				

Florida Power & Light Company
St. Lucie Plant Unit 2



Startup Equipment Vibration Chart

Plant PSL Unit 2

Preop. No. 2-0700095

Startup
VIBRATION DATA SHEET

Date 10/29/82

Equipment 2B AFWP

VIBRATION EQUIPMENT USED <u>TR-80 MSU-162</u>	OPERATING CONDITIONS: RPM <u>3590</u> AMPS <u>32</u>
	FLOW <u>100</u> PRESSURE <u>1260</u>
	ADDITIONAL: <u>ENDURANCE TEST</u>

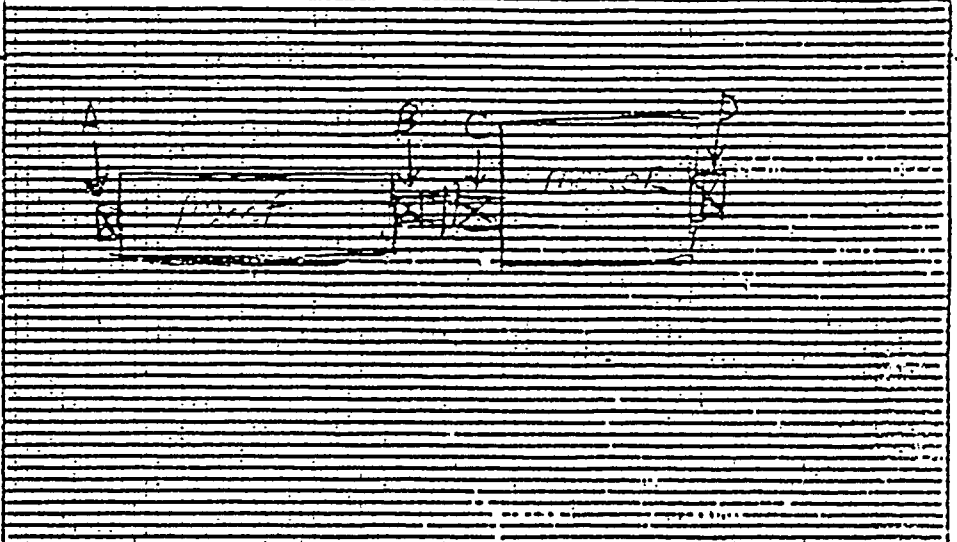
EQUIPMENT SKETCH

LEGEND:

- PICKUP POINT
- ⊗ BEARING
- |— COUPLING

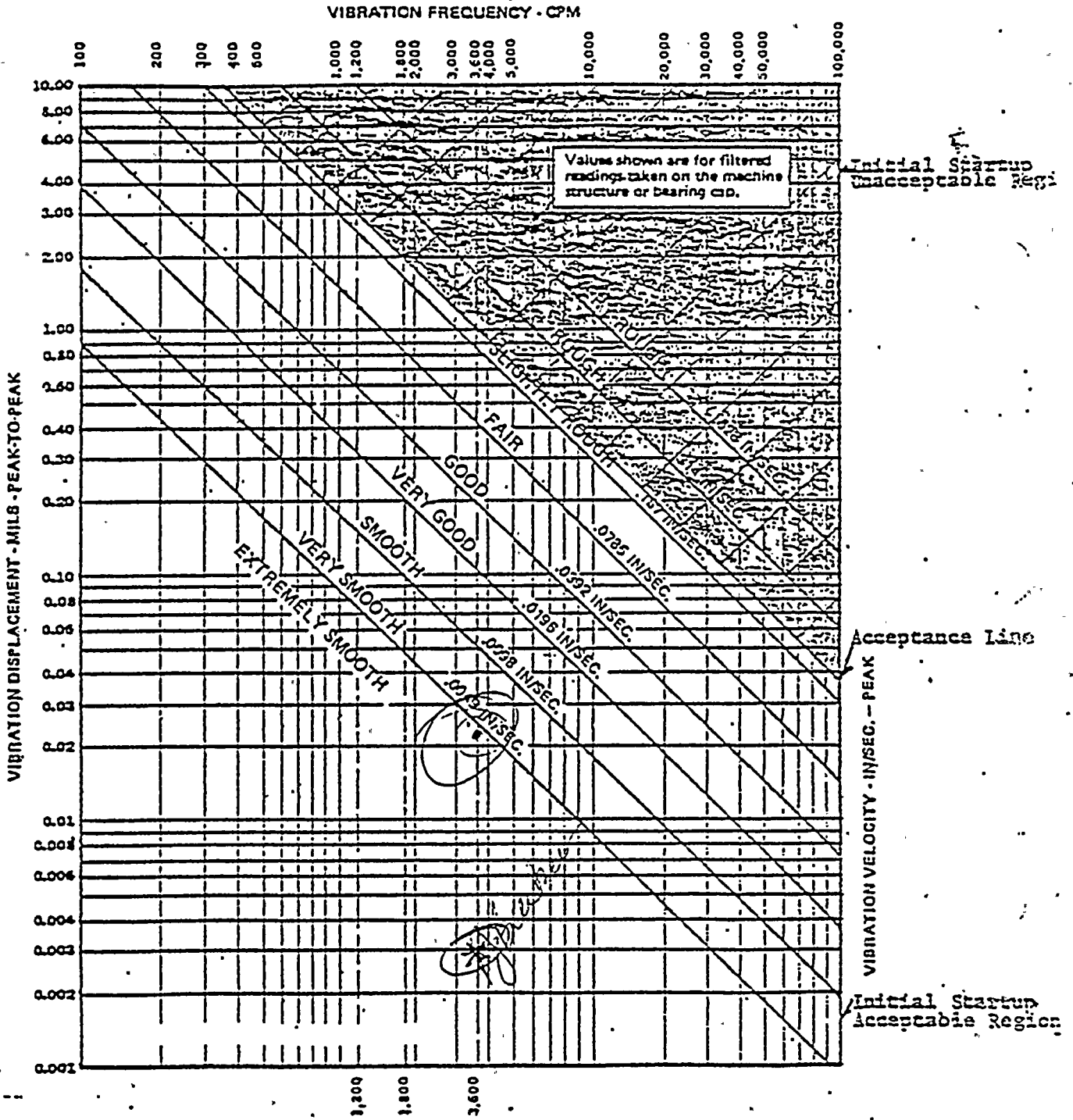
Performed By A. D. Butler

Date 10/29/82

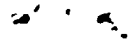


PICKUP POINT	POS.	FILTER IN		FILTER OUT	
		MILS	CPM	MILS	CPM
A	H	0.02	3590	0.25	3590
	V	0.03		0.20	
	A	0.03		0.35	
B	H	0.03		0.25	
	V	0.03		0.40	
	A	0.03		0.45	
C	H	0.03		0.40	
	V	0.02		0.15	
	A	0.03		0.35	
D	H	0.02		0.40	
	V	0.02		0.20	
	A	0.02		0.30	
	H				
	V				
	A				
	H				
	V				
	A				

Florida Power & Light Company
St. Lucie Plant Unit 2



Startup Equipment Vibration Chart



Florida Power & Light Company

Plant PSL Unit 2 Preop. No. _____

Startup
VIBRATION DATA SHEET

Date 11-5-82

Equipment 2C Aux Feed Pump

VIBRATION EQUIPMENT USED <u>TK-80 MSU-162</u>	OPERATING CONDITIONS: RPM <u>3850</u> AMPS <u>N/A #30</u>
	FLOW <u>RECIRC</u> PRESSURE <u>1320</u>
	ADDITIONAL: <u>Aux Feed 48 HOUR ENDURANCE</u>

EQUIPMENT SKETCH

LEGEND:

- PICKUP POINT
- ⊗ BEARING
- |— COUPLING

Performed By S. D. FERRELL

Date 11-5-82

PICKUP POINT	POS.	FILTER IN DISPL.		FILTER OUT DISPL.	
		MILS	CPM	MILS	CPM
A	H	0.2	3800	0.55	3800
	V	0.01		0.05	
	A	0.65		0.5	
B	H	0.2		0.8	
	V	0.01		0.2	
	A				
C	H	0.01		0.2	
	V	0.01		0.05	
	A				
D	H	0.01		0.2	
	V	0.01		0.1	
	A				
	H				
	V				
	A				
	H				
	V				
	A				



2000

1000

1000

1000

1000

1000

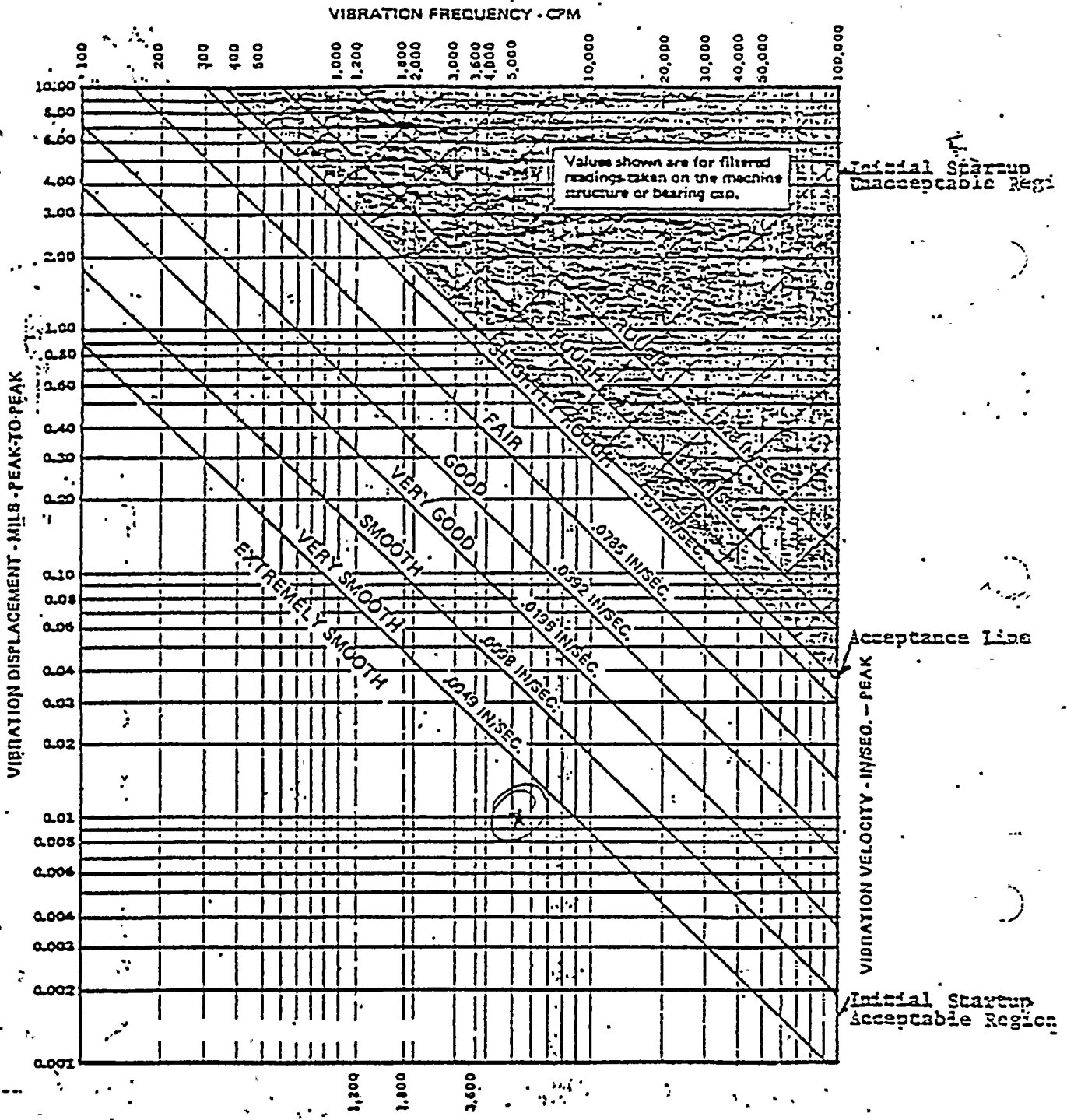
1000

1000

1000

1000

Florida Power & Light Company
St. Lucie Plant Unit 2



Startup Equipment Vibration Chart



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