

CRYSTAL RIVER UNIT #3
ANNUAL OPERATING REPORT
JANUARY 1 - DECEMBER 31, 1984

Nuclear Safety and Reliability
Crystal River Unit #3

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REPORT ON ANNUAL PERSONNEL EXPOSURE FOR 1984

REPORT YEAR - 1984

STANDARD FORMAT FOR REPORTING NUMBER OF
PERSONNEL AND MAN-REM BY WORK AND JOB FUNCTION

WORK & JOB FUNCTION	# PERSONNEL (>100 MREM)			TOTAL MAN-REM		
	UTILITY	STATION	CONTRACT	UTILITY	STATION	CONTRACT
Reactor Operations & Surveillance						
Maintenance & Construction	0	1	0	.071	.316	.110
Operations	0	25	0	0.000	6.934	.480
Health Physics & Lab	0	0	0	.084	.263	0.000
Supervisory & Office Staff	0	1	0	.204	.563	.298
Engineering Staff	0	0	0	.243	.036	.221
Routine Plant Maintenance						
Maintenance & Construction	3	33	61	1.103	9.837	14.949
Operations	0	0	0	.015	.377	0.000
Health Physics & Lab	0	12	17	.036	2.921	4.283
Supervisory & Office Staff	0	0	2	0.000	.272	.725
Engineering Staff	0	2	0	.101	.451	.299
Inservice Inspection						
Maintenance & Construction	0	0	0	0.000	.019	.002
Operations	0	0	0	.091	0.000	0.000
Health Physics & Lab	0	0	0	0.000	0.000	0.000
Supervisory & Office Staff	0	0	0	.032	0.000	0.000
Engineering Staff	1	0	0	.225	.132	.054
Special Plant Maintenance						
Maintenance & Construction	0	0	0	.000	.000	.000
Operations	0	0	0	0.000	0.000	0.000
Health Physics & Lab	0	0	0	0.000	0.000	0.000
Supervisory & Office Staff	0	0	0	0.000	0.000	0.000
Engineering Staff	0	0	0	0.000	.000	.000
Waste Processing						
Maintenance & Construction	0	0	0	0.000	.006	.016
Operations	0	1	0	0.000	.524	0.000
Health Physics & Lab	0	3	0	0.000	1.598	0.000
Supervisory & Office Staff	0	0	1	0.000	.035	.669
Engineering Staff	0	0	0	0.000	.002	.004
Refueling						
Maintenance & Construction	0	0	0	0.000	.000	.000
Operations	0	0	0	0.000	0.000	0.000
Health Physics & Lab	0	0	0	0.000	0.000	0.000
Supervisory & Office Staff	0	0	0	0.000	0.000	0.000
Engineering Staff	0	0	0	0.000	.000	.000
Totals						
Maintenance & Construction	3	34	61	1.174	10.177	15.078
Operations	0	26	0	.106	7.835	.480
Health Physics & Lab	1	15	17	.120	4.696	4.283
Supervisory & Office Staff	0	1	3	.236	.870	1.692
Engineering Staff	1	2	0	.568	.619	.580
GRAND TOTALS	5	78	81	2.204	24.283	22.070

WHOLE BODY EXPOSURES FOR CALENDAR YEAR 1984

Licensee Reporting (Name & Address) Florida Power Corporation Crystal River Unit #3 P.O. Box 1228 Crystal River, FL. 32629	NRC License No(s). DPR-72
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If personnel monitoring was not required to be provided to any individual during the year, checking this box will constitute a negative report indicating that such personnel monitoring was not required.

OTHERWISE, COMPLETE THE FOLLOWING TABLE:

Estimated Annual Whole Body Exposure Ranges* (Rems)	Number of Individuals in Each Range
No Measurable Exposure	1142
Measurable Exposure Less Than 0.1	385
0.1 -- 0.25	128
0.25 -- 0.5	26
0.5 -- 0.75	9
0.75 -- 1	1
1 -- 2	0
2 -- 3	0
3 -- 4	0
4 -- 5	0
5 -- 6	0
6 -- 7	0
7 -- 8	0
8 -- 9	0
9 -- 10	0
10 -- 11	0
11 -- 12	0
>12	0

Total number of individuals reported 1691

The above information is submitted for the total number of individuals for whom personnel monitoring was (check one):

- required under 10 CFR 20.202(a) or 10 CFR 34.33(a) during the calendar year.
- provided during the calendar year.

*Individual values exactly equal to the values separating exposure ranges shall be reported in the higher range.

REPORT ON REACTOR VESSEL MATERIAL SURVEILLANCE
CAPSULES AS REQUIRED BY STS 6.9.1.5(b)

Reporting Period

January 1, 1984 to December 31, 1984

Capsules Currently Installed

<u>Holder Tube</u>	<u>Capsules Installed (1)</u>	<u>Closure Assembly Installed</u>
WZ	T-Empty B-Empty	Not Installed
ZY	T-CR3-C B-CR3-A	27-113-2007-60-3
YZ	T-OCI-C B-OCI-B	27-113-2007-60-2
YX	T-OCII-E B-OCIII-D	27-113-2007-60-1
XW	T-CR3-E B-CR3-D	27-113-2007-60-5
WX	T-TMI-IC B-CR3-F	27-113-2007-60-4

The reactor head was not removed during 1984 and therefore no changes have occurred.

Ownership of Capsules

Florida Power Corporation: CR3-C, CR3-A, CR3-E, CR3-D, CR3-F, CR3-L1, CR3-L2

Duke Power Company: OCI-C, OCI-B, OCII-E, OCIII-D

Metropolitan Edison Company: TMI-IC

Irradiation Location

See Holder Tube Listing above.

Note: (1) T = top, B = bottom

REPORT ON PRODUCTION FACILITY CHANGES,
TESTS, AND EXPERIMENTS

<u>MAR 76-11-18</u> Added two security flood lights to the intake structure area.	Completed 01/26/84
<u>MAR 77-01-28</u> Installed a 6" relief/vent line from the GS Rupture Disc to the 18" Atmosphere Drain Tank Vent line.	Completed 08/28/84
<u>MAR 77-06-28</u> Installed an auto fill line (upstream of CIV 69) through a 20 psig regulator to the CI pump suction.	Completed 01/26/84
<u>MAR 77-07-18</u> Added a sample point at WDV 330 upstream of PT 123 on the spent resin discharge line.	Completed 01/26/84
<u>MAR 78-03-15</u> Relocated the following from WD Neutralizer Tank (WDT-1) outlet line to the recirculation line: <ol style="list-style-type: none"> 1. Flow indicator (WD-88-FI) 2. Flow orifice (WD-88-FO) 3. Isolation valves (WDV 266 & 352) 	Completed 10/17/84
<u>MAR 78-05-14</u> Upgraded pump WDP-19B to Model G.D.-10K-152H-15.	Completed 04/02/84
<u>MAR 78-05-14A</u> Made T-MAR #78-05-14 a permanent installation.	Completed 04/22/84
<u>MAR 78-07-10</u> Installed rail sweeps on all overhead cranes.	Completed 05/29/84
<u>MAR 78-07-15</u> Added fire insulation to the air duct in the Cable Spreading Room and in the 480 Volt Switchgear Room.	Completed 05/03/84
<u>MAR 77-08-13</u> Installed oil level indicators on the reversing gear boxes to the Nuclear Service pumps.	Completed 01/27/84
<u>MAR 78-10-64</u> Installed copper tubing from each "POC" detector to the Fire Protection System central location in the Cable Spreading Room.	Completed 09/23/84
<u>MAR 78-11-69A</u> Made T-MAR #78-11-69 a permanent installation.	Completed 08/17/84
<u>MAR 78-12-04-01</u> Replaced the Make-Up Damper (AHD-27) in the Auxiliary Building exhaust system.	Completed 09/25/84

<u>MAR 79-03-11</u>	Completed 07/10/84
Replaced the hoists (main and auxiliary), trolley, and bridge brakes on RCCR-1 with continuous electric brakes.	
<u>MAR 79-03-12</u>	Completed 04/13/84
Installed and wired computers, terminals, and printers for the Chem-Rad Data System in the Count Room, Lab Work Area, and the TSC.	
<u>T-MAR 79-03-12-01</u>	Completed 04/03/84
Temporarily installed circuit breakers and wiring to provide 480 V AC power from ES MCC (3A) to the Chem-Rad (ALARA) computer.	
<u>MAR 79-07-07C</u>	Completed 08/23/84
Revised the drawing (CR3-M82-A-O) to include MUV 435, 439, and 443.	
<u>MAR 79-08-10</u>	Completed 05/07/84
Installed two jib cranes, TBCR 3 (3 ton) and TBCR 4 (5 ton), above the Turbine Building operating floor.	
<u>MAR 79-10-16</u>	Completed 06/11/84
Provide electric and control power for the condensate return pump (CDP-2).	
<u>MAR 79-11-77</u>	Completed 09/17/84
Modified the power supplies to the pressurizer heaters such that one group is supplied by ES (A) Bus and the other by ES (B) Bus.	
<u>MAR 79-12-62</u>	Completed 05/10/84
Installed permanent rigging supports into the Decay Heat Pits A and B.	
<u>MAR 80-01-11-01</u>	Completed 05/31/84
Replaced CAV 1, 3 and 126 with Rockwell Hermavalves and Limitorque Corp. operators (type SMB-000).	
<u>MAR 80-01-62-01</u>	Completed 05/07/84
Provided electrical and control power to DHV-39 and DHV-40 motor operators.	
<u>MAR 80-01-68-01</u>	Completed 04/19/84
Provided electrical power and control to the motor operators of MUV-100, 194, and 452.	
<u>MAR 80-03-66A</u>	Completed 07/12/84
Revised MAR #80-03-66 which instructed how to install Recall Cabinets and Field Cable from Terminal Cabinets to all source cabinets.	
<u>MAR 80-03-66B</u>	Completed 07/12/84
Revised MAR #80-03-66A.	

<u>MAR 80-03-66-01</u>	Completed 07/12/84
Added 13 more inputs to the original MAR package.	
<u>MAR 80-04-71</u>	Completed 06/08/84
Installed the Post Accident Sampling System.	
<u>MAR 80-04-71-01</u>	Completed 02/16/84
Installed the piping, tubing, valves, pipe supports, sample coolers, and (liquid and gas) analysis equipment, as well as modified existing R.B. penetration of the Post Accident Sampling System (PASS).	
<u>MAR 80-04-71-04</u>	Completed 01/17/84
Installed an exhaust duct for the Post Accident Sampling Area, elevation 95 foot area.	
Installed exhaust hoods and blowers over the Grab Sample mechanism at elevation 95 ft. and 143 ft.	
<u>MAR 80-04-71-05</u>	Completed 04/18/84
Provided a supporting platform for the Post Accident Sampling System pump.	
<u>MAR 80-04-71-09</u>	Completed 10/10/84
Installed the NUS Chemical Analysis Equipment into PASS.	
<u>MAR 80-04-72-01</u>	Completed 11/15/84
Installed a portion of the Post Accident Hydrogen Purge system.	
<u>MAR 80-04-72-03</u>	Completed 01/30/84
Installed and seismically qualified piping supports for the installation of Post Accident Hydrogen Purge System pipes.	
<u>MAR 80-04-73</u>	Completed 02/28/84
Installed electrical control and indication up to connecting each of the solenoid valves of the R.C. high point vents.	
<u>MAR 80-04-73-02</u>	Completed 03/21/84
Installed piping and valves (RCV 157, 158, 159, 160, 163, 164, 166, and 167), fittings, flow switches (FS-149, 150, and 151), flow orifices (FO-155, 156, and 157) portion of the High Point Vent System.	
<u>T-MAR 80-05-79</u>	Completed 06/15/84
Temporarily allowed the use of Ankorite 1/32" 425 material to make a gasket for DHP-1B casing.	
<u>MAR 80-06-88-01</u>	Completed 05/02/84
Installed 11 pipe hangers for the Auxiliary Steam lines.	
<u>MAR 80-06-92</u>	Completed 05/15/84
Hooked up a portable air compressor to the Station Air System.	

MAR 80-07-61

Completed 02/16/84

Upgraded FHCR-5 in the following ways:

1. Installed handrails on the west side.
2. Installed a protective wire mesh around the resistor boxes.
3. Installed high voltage warning signs.

MAR 80-07-62

Completed 02/16/84

Installed an access ladder to RCCR-1 from the control cab to the R.B. landing.

Installed working platform at the electrical box.

Installed a protective wire mesh around the resistor banks.

MAR 80-07-10A

Completed 04/27/84

Added ductwork to the HVAC system supplying the EDG Control Room between the plenum and wall penetration.

T-MAR 80-07-76

Completed 09/17/84

Temporarily installed Helicoils in MSV 43 operator.

MAR 80-07-76A

Completed 09/17/84

Made T-MAR #80-07-76 a permanent installation.

T-MAR 80-07-91A

Completed 05/03/84

Temporarily re-furmanited the strainer cap upstream of GSV-7.

MAR 80-08-06

Completed 10/04/84

Removed AH-357, 355, 358, 356, 367, 365, 368, 366-3V from the Vital Bus and powered them from central transformers of the respective Air Supply Fan, AHF-22A, B, C and D starters.

MAR 80-08-08

Completed 07/25/84

Installed plastic inserts into receptacles supplied by Vital Bus 3C. Engineering approval is needed before using.

MAR 80-10-61B

Completed 03/05/84

Installed permanent piping to the Allis Chalmers Type C50 pumps, WDP-6A and 6B.

MAR 80-10-66-16

Completed 02/03/84

Moved the Electric Shop from the Control Building, elevation 124', to the Turbine Building, elevation 119', in order to make way for the EFIC room.

MAR 80-11-28-01

Completed 02/29/84

Installed two 15 KW electric heaters (DLHE-3 and 4) instead of water cooled standby L.O. heaters to EGDG 1A and 1B.

MAR 80-11-46-01

Completed 11/02/84

Removed the beam at elevation 144'-10" between columns BL-301 and BL-302, and replaced it with a new number attaching to BL-301 in a north/south direction.

<u>MAR 80-11-74</u> Replaced 40 Engineering Safeguard relays with Crydom Series 1 solid state relays (Cat. #A2410).	Completed 07/13/84
<u>MAR 80-12-05</u> Replaced the Data Amplifiers (HP2470A) with Bay Labs Inc. (Model #3109).	Completed 08/13/84
<u>MAR 81-02-72-04</u> Provided additional cooling to room 111 in the Technical Support Center (TSC).	Completed 04/18/84
<u>T-MAR 81-02-83</u> Temporarily replaced the top cover for CWS-1, 2, 3, and 4 with one made out of stainless steel.	Completed 10/16/84
<u>MAR 81-03-06-01</u> Provided permanent lead shielding around the R.V. Head Storage Stand (Tag #RCX-2) to reduce radiation levels in the area.	Completed 05/01/84
<u>T-MAR 81-03-69</u> Temporarily added an alarm to monitor for a steam leak in the Auxiliary Building, elevation 95', between ASV-14 and ASV-20.	Completed 07/10/84
<u>T-MAR 81-03-80</u> Temporarily allowed RMG-9 (Personnel Entry Hatch to R.B.) to monitor radiation.	Completed 09/12/84
<u>MAR 81-03-86A</u> Added Engineering instructions and termination information to original MAR, which installed bi-metal alarm thermometer and thermowell in weld rod oven door.	Completed 01/06/84
<u>T-MAR 81-03-91</u> Temporarily relocated DW-10-FR (Waste Disposal Recorder) to behind the R.W. Panel to monitor Miscellaneous Waste Storage Tank Level (WD-49-LI).	Completed 04/05/84
<u>MAR 81-04-02</u> Replaced field cable circuits (LPR-1, LPR-3) with high temperature 1000°F cable.	Completed 09/25/84
<u>T-MAR 81-04-63</u> Documented the presence of furmanite installed by T-MARs 80-08-73D, 80-08-73E, and 80-08-73F which were closed out.	Completed 09/05/84
<u>MAR 81-04-66-01</u> Upgraded the Reactor Building's and Auxiliary Building's Noble Gas Effluent Monitoring Systems.	Completed 05/10/84
<u>T-MAR 81-05-05</u> Installed a jumper between terminal points 5 and 8 on terminal strip (TBA, Terminal Box, AH-77) for AHF6A/6B.	Completed 05/21/84

<u>MAR 81-05-12</u>	Completed 10/16/84
Added a PAX/PA phone in the area of RMA-6.	
<u>MAR 81-06-12-01</u>	Completed 08/20/84
Changed the lube oil level indication for EFP 1, 2 and EFTB-1 by installing a sight glass.	
<u>MAR 81-06-36</u>	Completed 07/16/84
Installed a light between the fire door and the security door at the entrance to the Cable Spreading Room.	
<u>MAR 81-06-38-05</u>	Completed 10/22/84
Removed the Deltec dedicated UPS from the Recall Data acquisition cabinets in the EFIC room.	
<u>MAR 81-07-04-01</u>	Completed 09/24/84
Installed a walkway at the Intake Structure Trash Rocks.	
<u>T-MAR 81-08-18</u>	Completed 07/23/84
Temporarily installed a flow indicator with a wider scale to read system flow over a wider range of operating conditions.	
<u>MAR 81-08-18A</u>	Completed 06/05/84
Installed a Barton 0-200" H ₂ O differential flow meter in place of the Dietrich 0-5 PPH to better measure Nuclear Services Close Cycle Cooling System Pump.	
<u>MAR 81-08-21-01</u>	Completed 08/16/84
Upgraded and reorganized the Control Room telephone system.	
<u>T MAR 81-09-07</u>	Completed 04/04/84
Temporarily set up a storage trailer on the berm southeast of the Hot Shop and a laundry trailer northeast of the Hot Shop.	
<u>MAR 81-10-17</u>	Completed 06/15/84
Changed to Cambridge Hi-Flow (Model #855-8-95) filters for AHFL-2A, 2B, 2C, and 2D, which are in the Auxiliary Building.	
<u>MAR 81-11-18</u>	Completed 10/05/84
Core drilled a 6" diameter hole in the ceiling of the Makeup Prefilter Room, Auxiliary Building, Elevation 130'.	
<u>MAR 81-11-28</u>	Completed 09/27/84
Drilled and tapped a 5/16" (diameter) x 1/2" (deep) hole in the AHV-1A and 1D actuators to be able to key the shafts.	
<u>MAR 81-11-39-01</u>	Completed 09/19/84
Changed all (96) locking assemblies of the Core Support Assembly to the reactor internals with Inconel Special Studs (MK-431), Inconel Compression Nuts (MK-427), and Locking Cups (MK-436).	

<u>T-MAR 81-12-01</u> Changed the thermocouples in RC-18B-TE4, 5 and 6.	Completed 06/14/84
<u>T-MAR 81-12-12</u> Temporarily seal welded the threaded plugs in the bottom of FWV-37 and 38.	Completed 04/03/84
<u>MAR 82-01-19</u> Hardwired 115V AC power to the Foxboro power supplier for the pressure transmitters; RC-003A-PT3, RC-003-PT4, and RC-003B-PT3.	Completed 08/22/84
<u>MAR 82-01-22</u> Replaced the Primary Lab fume hood exhaust duct work with duct work made from PVC material.	Completed 03/29/84
<u>MAR 82-01-25</u> Performed the following changes: <ol style="list-style-type: none"> 1. Manufactured and installed a strainer for the oil discharge check valve (SDV-100). 2. Installed and adjusted a new spring in relief valves (SDV-96 and 97). 3. Installed a new higher range pressure gauge (SD-27-PI/PS). 	Completed 09/26/84
<u>MAR 82-01-28</u> Installed a permanent ladder in the new Fuel Storage Pit.	Completed 05/08/84
<u>T-MAR 82-01-31</u> Temporarily injected furmanite into the man-way cover of MSR "D" cold reheat line.	Completed 04/02/84
<u>T-MAR 82-01-35</u> Changed the method of measuring Make Up Tank Level; it went from a dry reference leg to a wet reference leg.	Completed 07/11/84
<u>MAR 82-02-05-01</u> Modified the RCP mechanical seals in the following ways: <ol style="list-style-type: none"> 1. Installed slotted carbide rotating face seal ring on all 3 stages. 2. Installed improved "U" cup design. 	Completed 05/01/84
<u>T-MAR 82-02-11</u> Temporarily installed instruments to monitor MUV-43 flow vibration as make up water enters the Reactor Coolant System.	Completed 04/06/84
<u>T-MAR 82-04-03-02</u> Temporarily provided two stake marks (180° apart) from the hinge pin to its nut on CFV-1.	Completed 07/11/84
<u>T-MAR 82-04-10-02</u> Temporarily installed Saligoud continuous monitoring system to record RCP motors' response to system transients.	Completed 06/06/84

<u>T-MAR 82-04-14-02</u>	Completed 04/03/84
Installed a TSO computer terminal in the Nuclear Security trailer on the berm.	
<u>MAR 82-04-14-04</u>	Completed 04/18/84
Installed TSO terminals in the following areas:	
<ol style="list-style-type: none"> 1. TSO Conference Room 2. Electrical Shop 3. Cold Machine Shop Library 4. Instrument Shop office 5. Control Room Chart Room 	
<u>MAR 82-04-15-01</u>	Completed 01/06/84
Replaced Chemistry's silica analyzer with an Orion research Chlorine Analyzer.	
<u>T-MAR 82-05-06-02</u>	Completed 08/28/84
Temporarily reinjected a leaky furmanite connection (T-MAR #82-05-06-01) into MSV-54.	
<u>MAR 82-05-11-01</u>	Completed 08/02/84
Provided the means to lock the handwheels for MUV-2, 6 and 10 so they could be throttled.	
<u>MAR 82-05-13-01</u>	Completed 04/24/84
Changed out cables and assigned circuit numbers for telephones installed to support the CNSI Solidification Unit.	
<u>MAR 82-05-24-08</u>	Completed 09/11/84
Upgraded the valve operators for DHV-5, 6, 34 and 35 to meet NRC requirement of 10 CFR 50.49.	
<u>T-MAR 82-06-13-01</u>	Completed 08/28/84
Temporarily injected furmanite to stop leak in the manway cover of MSRH-A (cold reheat).	
<u>MAR 82-06-14-01</u>	Completed 12/04/84
Relocated the RC Evaporator Tank High Level Alarm and the Waste Evaporator Tank High Level Alarm annunciators to the Radwaste Panel, Auxiliary Building.	
<u>T-MAR 82-06-26-01</u>	Completed 02/29/84
Temporarily added bracing and changed hardware on 5 conduit supports in the Auxiliary Building.	
<u>T-MAR 82-06-26-02</u>	Completed 02/29/84
Temporarily added bracing and changed unistrut hardware on 9 conduit supports.	

<u>T-MAR 82-06-26-05</u>	Completed 03/01/84
Temporarily added bracing on 4 conduit supports in the Control complex.	
<u>T-MAR 82-06-26-06</u>	Completed 03/06/84
Temporarily provided structural strengthening of electrical conduits.	
<u>MAR 82-06-26-07</u>	Completed 01/27/84
Made T-MARs 82-06-26-01, 02, 03, 04, 05 and 06 permanent and was in direct response to NCORs 82-167 and 82-169.	
<u>MAR 82-07-05-01</u>	Completed 01/27/84
Removed the old OTSG Main Feedwater Sprayhead Nozzles.	
<u>MAR 82-07-23-01</u>	Completed 03/28/84
Updated drawing #FD-302-142 and FD-318-142 to reflect deletion of GWV 66 and 70.	
<u>T-MAR 82-07-26-01</u>	Completed 11/27/84
Qualified different types of concrete anchor bolts.	
<u>MAR 82-08-05-01</u>	Completed 07/19/84
Allowed the use of Dwyer differential pressure switch model numbers (1640-0 and 1630-0) in the existing Dwyer air handling system location.	
<u>MAR 82-08-19-01</u>	Completed 04/27/84
Replaced the existing SC system transmitter, Leads & Northrup (Model #470-314-2B-49-614-802-804) with a wider range.	
<u>T-MAR 82-08-21-01</u>	Completed 06/13/84
Temporarily changed to use a cloth reinforced black rubber flapper in SDV-116.	
<u>MAR 82-08-24-01</u>	Completed 11/05/84
Upgraded transmitters, EX-23-PT and EX-29-PT to better withstand system pressure.	
<u>T-MAR 82-08-36-01</u>	Completed 10/04/84
Temporarily allowed the use of Fluorocarbons Rubber "O" Rings", as well as the original Nitrile (Bunna-N) with the filter assembly for the fuel oil strainer of the Emergency Diesel Generator.	
<u>MAR 82-08-36-01A</u>	Completed 10/04/84
Allowed the use of Fluorocarbon Rubber (Viton) "O" Ring, as well as the original Nitrile (Bunna-N) "O" Ring to be used in the fuel oil system of the Emergency Diesel Generators.	

<u>MAR 82-08-40-01</u>	Completed 06/01/84
Temporarily modified the capability of the toxic gas monitors to shut the control complex intake dampers.	
<u>MAR 82-09-01-01</u>	Completed 10/11/84
Made the change of manufacturer's model numbers for the pressure switches, TB-231-PS and TB-232-PS.	
<u>MAR 82-09-02-01</u>	Completed 08/02/84
Replaced the access door on the rear head and added grounding straps on each of the heat exchangers (SWHE-1A, 1B, 1C and 1D).	
<u>MAR 82-09-13-05</u>	Completed 02/21/84
Upgraded the typical conduit support drawings.	
<u>MAR 82-09-15-01</u>	Completed 04/18/84
Replaced an obsolete part for the MT Inverter Meter Relay System.	
<u>T-MAR 82-09-25-01</u>	Completed 06/28/84
Temporarily injected furmanite into the cold heat manway for MSR-B.	
<u>MAR 82-10-14-01</u>	Completed 02/01/84
Installed the original PORV (RCV 10) valve, Serial #BL-08901 with the Dresser Mod.-2 design change.	
<u>T-MAR 82-10-24-01</u>	Completed 05/08/84
Temporarily replaced SWV 378 with an Anderson Greenwood valve (Model #81P544-4).	
<u>MAR 82-10-28-01</u>	Completed 09/11/84
Installed additional PA speakers and fire alarm bells in the TSC.	
<u>MAR 82-11-10-01</u>	Completed 07/16/84
Installed a mechanical seal on the lube oil pump, LOP-1.	
<u>MAR 82-11-13-01</u>	Completed 10/24/84
Installed a check valve in the instrument air line to the Fire Surge Tank (FST-3).	
<u>MAR 82-12-03-11</u>	Completed 06/28/84
Reduced the amount of oxygen intrusion into the secondary system by the following means:	
1. Installed valves on the drain lines for RHV 7, 9, 10 and 11.	
2. Removed a portion of the vent stacks for RHV 9, 10, 11 and 12 (so they may be capped during start-up and shutdown).	

<u>MAR 82-12-04-01</u> Allowed the use of a new booster for either EGDG governor.	Completed 08/21/84
<u>MAR 82-12-05-02</u> Installed jumpers (new) and removed existing wiring between TSC State Ringdown Panel and FTC interface point in the guard house.	Completed 07/30/84
<u>T-MAR 82-12-06-01</u> Temporarily replaced SWV 362 and 365 with an Anderson Greenwood valve, Model #81P544-4.	Completed 08/27/84
<u>MAR 82-12-06-01A</u> Made T-MAR #82-12-06-01 a permanent installation.	Completed 08/27/84
<u>MAR 82-12-10-01</u> Replaced the blank flange downstream of MSV-475 to be able to drain down the shell side of the steam generators.	Completed 09/27/84
<u>T-MAR 82-12-20-01</u> Temporarily injected liquid sealant stop leak (Furmanite) into the flanged strainer upstream of GSV-7.	Completed 05/14/84
<u>MAR 83-01-08-01</u> Installed extra telephone lines in the TSC.	Completed 05/15/84
<u>T-MAR 83-01-11-01</u> Temporarily installed piping to enable discharging contents of SDT-1 to the settling ponds.	Completed 08/27/84
<u>MAR 83-03-07-01</u> Changed the internals of FSV 184 to be able to increase the lifting pressure to 140 psig.	Completed 11/06/84
<u>MAR 83-03-10-01</u> Replaced SSP-4C with Model #GA-1K-751H-1S.	Completed 08/16/84
<u>MAR 83-03-12-01</u> Installed 120V AC receptacle to power a Blue Giant Lift.	Completed 08/29/84
<u>T-MAR 83-03-11-01</u> Temporarily installed electrical power to the Tool Decontamination Trailer just outside the Cold Machine Shop in support of Refuel IV.	Completed 04/04/84
<u>MAR 83-03-13-01</u> Provide permanent power to the vending machine in the Turbine Building, elevation 119'.	Completed 03/30/84
<u>T-MAR 83-03-18-01</u> Temporarily installed lead shielding between RCV 14 and the R.C. Pressurizer.	Completed 04/25/84

<u>T-MAR 83-03-20-01</u>	Completed 09/07/84
Temporarily bypassed and isolated a leaky section of pipe so that the Makeup Tank (MUT) could be sampled and the pipe repaired.	
<u>MAR 83-04-06-01</u>	Completed 05/31/84
Documented "As Built" holes in the west wall of the Intermediate Building, elevation 119'-0".	
<u>MAR 83-04-21-01</u>	Completed 10/23/84
Replaced the existing DP switch (DO-25-PS) with Koenig-Pretempco's Model #DPS-300-P20PA-82582.	
<u>T-MAR 83-04-32-01</u>	Completed 09/06/84
Temporarily provided covers for the RCP seals while they were being worked on.	
<u>T-MAR 83-04-37-01</u>	Completed 06/07/84
Temporarily installed a replacement motor for the Boric Acid Mix Tank Mixer, CAMX-3.	
<u>T-MAR 83-04-40-01</u>	Completed 01/20/84
Temporarily isolated SWHE-3C and SWHE-3D from the rest of the RW System.	
<u>MAR 83-04-52-02</u>	Completed 09/07/84
Installed a key lock switch in the Control Room Rad Monitor Cabinet #3.	
<u>MAR 83-04-56-01</u>	Completed 08/03/84
Permitted the substitution (as needed) of fully threaded A193 G.R. B-7 in place of the specified A307 for all Power Piping hangers.	
<u>MAR 83-05-05-01</u>	Completed 08/29/84
Repaired small corroded holes in the Inlet Water Box of SWHE-1C.	
<u>MAR 83-05-07-01</u>	Completed 05/10/84
Replaced defective RW spool pieces, (RW 26, RW 55F, RW 56, RW 56B, RW 61, and RW 62), with piping having a urethane liner.	
<u>T-MAR 83-05-12-01</u>	Completed 09/26/84
Temporarily replaced the quality ES Timer Relay Coil with one that was nonquality.	
<u>MAR 83-05-26-01</u>	Completed 06/21/84
Changed the type of wire on the EGDG 1B skid from the engine overspeed switch (EOS) to the control relay cabinet.	

<u>MAR 83-05-28-01</u>	Completed 07/12/84
Revised RCPDM set points and time delays as follows:	
<ol style="list-style-type: none"> 1. Low set point - 1150 KW. 2. High set point - 14,400 KW. 3. Time delay - .84 seconds, nominal (not to exceed .89 sec.). 	
<u>MAR 83-05-34-01</u>	Completed 11/29/84
Provided a test connection with a root valve on the Reactor Building side of penetration #339.	
<u>MAR 83-05-35-01</u>	Completed 02/17/84
Installed electrical conduits in the Reactor Building.	
<u>MAR 83-05-36-01</u>	Completed 9/19/84
Updated the Rochester Instrument System drawing for Everton Recorder (Drawing #B-1013-586, sheet 1 through 88), and the annunciator/events Recorder Computer Printout List to current "As Built" status.	
<u>T-MAR 83-06-02-01</u>	Completed 01/06/84
Temporarily installed a gate at door C121.	
<u>MAR 83-06-10-01</u>	Completed 05/23/84
Allowed the use of Byron Jackson's redesigned thermocouples (RC-018 A/B-TE 1-6) for each of the four Reactor Coolant Pumps.	
<u>MAR 83-06-16-01</u>	Completed 05/04/84
Upgraded some 1-1/2 hour rating fire dampers to 3-hour rating fire dampers.	
<u>MAR 83-06-19-01</u>	Completed 06/29/84
Installed the means to test for positive pressure (and adjust the set point) of the low vacuum trip on the Main Condensers.	
<u>T-MAR 83-06-24-01</u>	Completed 06/14/84
Temporarily changed MSV 412 terminal box #1 to a Kulka series 601 terminal block.	
<u>MAR 83-06-29-01</u>	Completed 07/16/84
Provided Word Processing Department with computer connections to Nuclear Operations and G.O.C. Nuclear Support.	
<u>MAR 83-07-08-01</u>	Completed 02/03/84
Changed a series of Diamond Power drawings for the Control Rod Drive Mechanism.	
<u>T-MAR 83-07-09-01</u>	Completed 10/09/84
Temporarily relocated the spare receptacles in the Control Rod Drive Control Cabinets #4 and #5 Patch Panels.	

<u>MAR 83-07-09-01A</u>	Completed 07/11/84
Relocated the spare receptacles in the Control Rod Drive Control Cabinet #4 Patch Panels and wired to Group 7.	
<u>T-MAR 83-07-11-01</u>	Completed 08/28/84
Temporarily injected furmanite to stop a body to bonnet leak on FWV-19.	
<u>MAR 83-07-14-01</u>	Completed 09/17/84
Installed high temperature wires for the closed position limit switches on MSV 25 and 26.	
<u>T-MAR 83-07-17-01</u>	Completed 08/28/84
Injected furmanite into the body/bonnet area of ASV-52.	
<u>MAR 83-07-20-01</u>	Completed 07/25/84
Changed the mechanical seal drawing for MUP-1A, 1B and 1C.	
<u>MAR 83-07-22-01</u>	Completed 08/13/84
Installed permanent rigging in the ceiling of MUP-1C room.	
<u>MAR 83-08-05-01</u>	Completed 02/08/84
Modified the existing 10% High Accuracy Generator Metering Cabinet so that the signal going to the Energy Control Center from the Remote Terminal Unit represents the net generation to the System from CR-3.	
<u>MAR 83-08-07-02</u>	Completed 07/24/84
Modified conduit support, C-124-232.	
<u>MAR 83-08-34-01</u>	Completed 07/17/84
Permitted the use of ASTM A105 plug material in lieu of ASTM A216 WCB material for EFV-7 and 8.	
<u>T-MAR 83-08-32-01</u>	Completed 06/15/84
Temporarily installed a 15V DC electric supply to the Met Tower.	
<u>MAR 83-08-33-01</u>	Completed 04/18/84
Installed vital access barriers into the plant.	
<u>T-MAR 83-08-36-01</u>	Completed 05/04/84
Temporarily replaced the O-ring with a Teflon O-ring in CAV 252.	
<u>T-MAR 83-08-38-01</u>	Completed 05/10/84
Temporarily injected furmanite into MSV 430.	
<u>T-MAR 83-08-40-01</u>	Completed 08/28/84
Temporarily injected furmanite into a pipe plug on a line off of the Moisture Separator Reheater (MSR-D).	

<u>T-MAR 83-08-42-01</u> Temporarily "gagged" Main Steam Safety Relief Valve, MSV 33.	Completed 04/18/84
<u>T-MAR 83-09-14-01</u> Temporarily furmanited the manway studs in the line under the H.P. Turbine going to MSR 3B and 3C.	Completed 09/05/84
<u>MAR 83-09-15-01</u> Installed a protective plate in front of the heat trace transformer (HTTR-4B), which is adjacent to the Auxiliary Building elevator, elevation 95'.	Completed 08/17/84
<u>MAR 83-09-18-01</u> Changed the tag numbers of two valves (1) MSV 33 was changed to MSV 46, and (2) MSV 46 was changed to MSV 33.	Completed 07/17/84
<u>T-MAR 83-09-19-01</u> Temporarily replaced the normally closed "TS" contact terminal points 8 and 9 with the normally closed auxiliary "TS" contacts terminal points 12 and 13.	Completed 12/12/84
<u>T-MAR 83-09-25-01</u> Temporarily injected furmanite into the following valves; HDV 11 and 12, MSV 97, and RHV 14.	Completed 08/27/84
<u>MAR 83-09-28-01</u> Changed to G.E. type 12HFA151A2H Century series relays in the MT and EG systems.	Completed 08/21/84
<u>T-MAR 83-10-06-01</u> Temporarily installed a heavier spring into CAV 6 and 7 in order to overcome system pressure.	Completed 04/11/84
<u>MAR 83-10-06-01A</u> Made T-MAR #83-10-06-01 a permanent installation.	Completed 05/21/84
<u>MAR 83-10-08-01</u> Permitted the use of ASHE SA-182 F304 drain plugs in lieu of carbon steel plugs in DHP-1A and 1B.	Completed 02/08/84
<u>MAR 83-10-10-01</u> Replaced the level transmitter, SC-70-LT (Secondary Services Closed Cycle Surge Tank Level) with a Rosemount Model #1151.	Completed 08/24/84
<u>T-MAR 83-10-14-01</u> Temporarily jumped out battery cells 78 and 97 from battery bank 3B2.	Completed 02/08/84
<u>MAR 83-10-20-01</u> Replaced and design changed WOP5, A, B and C.	Completed 11/13/84

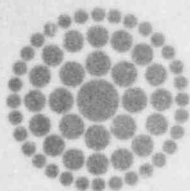
<u>T-MAR 83-10-23-01</u> Temporarily injected furmanite into a horizontal joint on the H.P. turbine.	Completed 08/27/84
<u>MAR 83-10-24-01</u> Changed the relief point setting of SWV 398, 399 and 400 from 100 psig to 180 psig.	Completed 07/30/84
<u>MAR 83-10-25-01</u> Repaired two holes in the HVAC ductwork downstream of AHF-14D.	Completed 02/08/84
<u>MAR 83-10-26-01</u> Increase the relief set point from 100 psig to 200 psig on the following valves: DCV 105, 106, 107, 108, 109, and 110.	Completed 09/04/84
<u>MAR 83-10-27-01</u> Modified three small bore pipe supports on the DC cooling water for MUP-1C.	Completed 08/22/84
<u>MAR 83-10-28-01</u> Installed switches from doors in the Plant Security system.	Completed 01/17/84
<u>MAR 83-10-29-01</u> Provided electrical and mechanical tie-in between FPC system and NHS Demineralizer system.	Completed 04/25/84
<u>MAR 83-10-34-01</u> Authorized the use of Thermexchanger Cooler head on MUP 1A, 1B, or 1C.	Completed 08/20/84
<u>T-MAR 83-11-06-01</u> Temporarily provided pipe supports for MUP 1A.	Completed 06/04/84
<u>MAR 83-11-41-01</u> Drilled a 5" diameter hole in the east wall of the Cable Spreading Room, and installed conduit through said hole with a fire seal.	Completed 02/08/84
<u>MAR 83-12-03-01</u> Added hangers to the seal lube piping of MUP-1A.	Completed 09/10/84
<u>MAR 83-12-11-01</u> Reconnected the Containment Pressure Input to recorder (BS-65-PR).	Completed 02/08/84
<u>MAR 83-12-12-01</u> Revised the 302 and 318 series flow drawings.	Completed 06/20/84

<u>MAR 83-12-18-01</u>	Completed 09/27/84
Replaced CDV 95 operator with one which is designed to withstand 100 psig pressure.	
<u>MAR 83-12-21-01</u>	Completed 04/11/84
Replaced the existing L&N Model #1970 "SA-4-OT" with a Rosemount Model #1144.	
<u>MAR 84-01-04-01</u>	Completed 08/21/84
Added a lockable lid over the emergency feedwater pump turbine speed control knob.	
<u>MAR 84-01-07-01</u>	Completed 09/17/84
Revised the set point of pressure switch (RW-63-PS-1) to 12 psig decreasing pressure.	
<u>MAR 84-01-08-01</u>	Completed 04/18/84
Changed the material requirements of a Velan Drawing P-35300-1.	
<u>MAR 84-01-09-01</u>	Completed 07/25/84
Permitted the use of ASTM A479 Type 316 SS with stellite #6 facing on Velan valve disc-drawing #P-35300-20.	
<u>T-MAR 84-01-19-01</u>	Completed 07/25/84
Temporarily installed the original type valve (tag #CAV 252) from Control Components, Inc. The old valve manufactured by Casho, Model #1965, had a poor performance record.	
<u>MAR 84-01-19A</u>	Completed 05/21/84
Documented the permanent installation of Control Components, Inc., Model #MDA 2504-6W for CAV 252.	
<u>MAR 84-01-21-01</u>	Completed 10/04/84
Removed the pressure regulators (SCV 644, 645, 646 and 647) from the cooling water system to the air compressor.	
<u>T-MAR 84-01-21-02</u>	Completed 10/17/84
Temporarily allowed parallel cooling water paths to IAP-1B and IAHE-1B.	
<u>MAR 84-01-25-01</u>	Completed 05/15/84
Relocated the hangers for the water supply and return to the EFP-2 Governor oil cooler.	
<u>MAR 84-02-09-01</u>	Completed 10/03/84
Installed a security barrier to protect a vital area along the south Turbine Building wall.	
<u>MAR 84-02-14-01</u>	Completed 10/22/84
Changed FSV 45 to a silent check valve.	

<u>MAR 84-02-15-01</u> Provided a clearer vendor print of MUV 62 and 69 and revised material specs. for its operator's stud and nut.	Completed 04/18/84
<u>MAR 84-03-12-01</u> Documented the change to allow either epoxy coating or emulsion in certain areas of the Auxiliary Building with Plant Manager's authorization.	Completed 05/14/84
<u>T-MAR 84-03-15-01</u> Temporarily replaced SWV 378 with an Anderson Greenwood valve (Model #81P544-4).	Completed 05/07/84
<u>T-MAR 84-03-16-01</u> Temporarily injected furmanite to stop seal leakage on FWV 135.	Completed 05/15/84
<u>MAR 84-04-01-01</u> Permitted the use of an alternate pressure seal ring material (ASTM A-28 GR C, silver plated/lead free) in all Crane pressure seal valves.	Completed 09/12/84
<u>MAR 84-04-07-01</u> Changed the #9 MFW nozzle flange from a "J" bevel to a butt weld on OTSG "A".	Completed 05/22/84
<u>MAR 84-04-08-01</u> Allowed the use of ASTM B584 (copper alloy) in the manufacture of the yoke nut of Crane drawings PB 147658 (MSV 21, 22, 23 and 24).	Completed 06/20/84
<u>MAR 84-06-16-01</u> Documented the addition of SA 515 Gr 70 to the bill of materials of Crane/Chapman Drawing #PC-149250 of RWV 136.	Completed 08/16/84
<u>MAR 84-07-06-01</u> Added steps and hand holds to assist personnel entering the condenser water boxes.	Completed 10/23/84
<u>MAR 84-07-07-01</u> Removed the bottom row of tie rod plates on the Hurricane doors 8A and 8B to allow the door to lower completely.	Completed 10/23/84
<u>MAR 84-07-09-01</u> Revised the Main Steam flow diagrams and other documents to ensure that MSV 440 is a 600 psig globe valve.	Completed 10/04/84
<u>MAR 84-08-09-01</u> Allowed the use of plastic spray nozzles in the Screen Wash system.	Completed 12/04/84
<u>T-MAR 84-10-05-01</u> Temporarily replaced the cap screws on the fuel oil header to the injectors for diesel generator (EGDG-1A).	Completed 11/13/84

REPORT ON PRESSURIZER CODE SAFETIES AND
POWER OPERATED RELIEF VALVE FOR 1984

The PORV and the Pressurized Code Safety Valves were not challenged during 1984; therefore, no failures occurred.



**Florida
Power**
CORPORATION

February 28, 1985
3F0285-16

Dr. J. Nelson Grace
Regional Administrator, Region II
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, GA 30323

Subject: Crystal River Unit 3
Docket No. 50-302 76
Operating License No. DPR-72
1984 Annual Reports

Dear Sir:

Enclosed are the following four annual reports:

1. 1984 Annual Report on Personnel Exposure; as required by 10 CFR 20.407(b) and by Florida Power Corporation's Crystal River Unit 3 Technical Specifications, Section 6.9.1.5(a);
2. 1984 Annual Report on Reactor Vessel Material Surveillance Capsules; as required by Florida Power Corporation's Crystal River Unit 3 Technical Specifications Section 6.9.1.5(b);
3. 1984 Report on Production Facility Changes, Tests and Experiments; as required by 10 CFR 50.59b; and
4. Report on Challenges to and Failures of Pressurizer Relief and Code Safety Valves required by NUREG-0737, November 1980, Section II.K.3.3, as committed to in FPC's letter to the NRC dated July 21, 1980.

P.R.P.
OFFICIAL COPY

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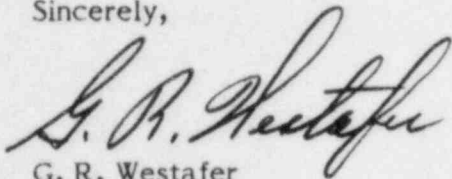
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February 28, 1985
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If you have any questions regarding these reports, please contact this office.

Sincerely,



G. R. Westafer
Manager, Nuclear Operations
Licensing and Fuel Management

GJF/feb

Enclosures

cc: Director of Nuclear Reactor Regulation (1)
Attn: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Director (1)
Office of Nuclear Regulatory Research
U.S. Nuclear Regulatory Commission
Washington, DC 20555