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# SYSTEM

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50-251 Turkey Point Plant, Unit 4, Florida Power and Light C			05000251
AUTH.NAME	AUTHOR AFFILIATION		
WOODY,C.O.	Florida Power & Light Co.		
RECIP.NAME	RECIPIENT AFFILIATION		
CASTO,C.W.	Region 2, Ofc of the Director		

SUBJECT: Advises that ref matl re operator exam scheduled for wk of 891106 shipped to listed address, per NRC 890831 request.

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FPL

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

SEPTEMBER 13 1989

L-89-334  
10 CFR 55

Mr. Charles W. Casto, Acting Chief  
Operator Licensing Section, Region II  
U. S. Nuclear Regulatory Commission  
101 Marietta Street, N. W., Suite 2900  
Atlanta, GA 30323

Dear Mr. Casto:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Operator License Examinations  
Scheduled for Week of November 6, 1989

Florida Power & Light Company (FPL) has shipped the reference material requested by an NRC letter dated August 31, 1989 to the examiners and addresses listed below:

Attn: Jim Morman  
U. S. Nuclear Regulatory Commission, Region II  
101 Marietta Street, N. W., Suite 2900  
Atlanta, Georgia 30323

Attn: Bob Grul  
Battele Pacific N. W. Labs  
Sigma 3 Building 13000 Area  
3160 George Washington Way  
Richland, WA 99352

The reference material was shipped by Federal Express to NRC Region II and Battele Pacific N.W. Labs on September 6, 1989, from the Turkey Point Plant. An index of the reference material is attached for your information.

The examiners are requested to return the reference material to the Turkey Point Plant Training Staff, after the exam, so it can be maintained current for the next exam cycle.

8909200241 890913  
PDR ADOCK 05000250  
V PDC

an FPL Group company

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Should you require any additional information, please contact Mr.  
Paul J. Baum at (305) 246-1300.

Very truly yours,

*R. J. Geosta*  
*for*

C. O. Woody  
Acting Senior Vice President - Nuclear

COW/JRH/cm

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Bob Grul, Battele Pacific N. W. Labs  
Document Control Desk, USNRC

## SUMMARY OF REFERENCE MATERIAL

Technical Specifications and O-ADM-021 Technical Specification  
Implementation Procedure

Unit 3 Plant Curve Book

Precautions, Limitations, and Setpoints Document

Special Instructions Book

Radiation Protection Manual and RWP Procedure

Transient and Accident Analysis Text

Mitigating Core Damage Text

\*System Descriptions

\*Simulator Training Materials

Lesson Plans

- Systems
- Procedures
- Transient and Accident Analysis
- Mitigating Core Damage

Question Bank

- Systems
- Procedures
- Transient and Accident Analysis
- Mitigating Core Damage

\*JPM's

Plant Drawings

- Primary Systems
- Secondary Systems
- Logics
- Controls

Original and Upgrade Procedure Index

- \*Original Administrative Procedures
- \*Original Operating Procedures
- \*Original Off-Normal Procedures
- \*Upgrade Administrative Procedures
- \*Upgrade Unit 3 and Common Operating Procedures
- \*Upgrade Unit 3 General Operating Procedures
- \*Upgrade Unit 3 and Common Off-Normal Operating Procedures
- \*Fuel Handling Procedures
- \*Annunciator Procedures
- \*Emergency Plan Implementing Procedures
- \*Unit 3 Emergency Operating Procedures
- \*Unit 3 Emergency Operating Procedures Basis Documents

\* - Detailed Lists included on subsequent pages

# TURKEY POINT NUCLEAR TRAINING DEPARTMENT

## SYSTEM DESCRIPTIONS

SD No.	Rev. No.	Final Approval Date	TITLE
2	4	01/07/89	Reactor Vessel and Internals
3	2	11/22/88	Incore Instrumentation
4	4	06/20/89	Excore Nuclear Instrumentation
5	5	06/14/89	Full Length Rod Control
6	3	07/12/89	Rod Position Indication System
7	3	12/14/88	Reactor Coolant System
8	2	01/06/89	Reactor Coolant Pumps
9	4	06/02/89	Pressurizer and Relief System
11	3	11/16/88	Steam Generator
13	3	08/11/88	Chemical & Volume Control System
21	5	02/28/89	Emergency Core Cooling System
25	5	06/20/89	Containment Spray
28	3	05/16/89	Containment Post Accident Monitoring & Post Accident Sampling System
40	3	02/28/89	Component Cooling Water
44	3	10/03/88	Fuel Handling System
63	3	08/22/88	Reactor Protection and Safeguards Actuation System
68	4	08/24/88	Radiation Monitoring and Protection
90	2	12/07/88	Electrical Heat Tracing System
102	2	08/15/88	Steam Generator Blowdown System
104	4	09/29/88	Main and Extraction Steam System
105	3	12/14/88	Steam Dump System
112	4	06/17/88	Condensate and Feedwater Systems
117	10	06/23/89	Auxiliary Feedwater System
123	3	06/14/89	Condenser and Circulating Water System
127	2	10/10/88	Main Turbine Control
130	5	02/17/89	Turbine, Turbine Oil, and Gland Seal Systems
132	3	02/27/89	Turbine Plant Cooling Water System
137	4	02/28/89	Emergency Diesel Generator and Auxiliaries
139	2	10/10/88	Main Generator and Controls
140	2	11/22/88	Main Power Distribution
144	3	10/12/88	120 VAC & 125 VDC Distribution System
153	4	02/28/89	Fire and Service Water
155	8	07/17/89	Plant Air Systems
165	6	08/21/89	Intake Cooling Water
166	4	06/14/89	Ventilation System and Air Conditioning
170	3	10/18/88	Emergency Load Sequencer/Bus Stripping
176	3	02/23/89	Fire Protection and Alarm System

	<u>INITIAL CONDITIONS</u>	<u>1</u>
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<u>TURKEY POINT SIMULATOR</u>		
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## JOB PERFORMANCE MEASURES (JPM)

1005018100 TRANSFER FROM AUXILIARY TRANSFORMER TO STARTUP TRANSFORMER  
1005020300 POWER "C" 4 KV BUS FROM CRANKING DIESELS  
1005021300 POWER "C" 4 KV BUS FROM OPPOSITE UNIT'S TRANSFORMER  
1005023300 POWER A OR B BUS FROM CRANKING DIESELS VIA C BUS  
1005024100 TRANSFER FROM THE STARTUP TRANSFORMER TO THE AUXILIARY TRANSF  
1023014500 MANAGE DIESEL LOADING BASED ON ONE EDG FAILURE CONCURRENT WIT  
1023015500 RECOVER FROM AN EMERGENCY DIESEL GENERATOR AUTO START FAILURE  
1028002100 PERFORM AN E.C.P.  
1028004100 DETERMINE SHUTDOWN MARGIN  
1028006100 DAMPEN XENON OSCILLATION  
1028007200 INDUCE XENON OSCILLATION  
1028009500 RESPOND TO ATWS  
1028010300 PERFORM A DROPPED ROD RECOVERY  
1028014300 RESET BANK OVERLAP  
1028016300 RECOVER MISALIGNED CONTROL ROD  
1028022100 CONDUCT A 1/M PLOT  
1028023300 INVESTIGATE ROD CONTROL SYSTEM URGENT FAILURE  
1028025300 RESPOND TO CONTINUOUS ROD WITHDRAWAL  
1028026300 RESPOND TO CONTINUOUS ROD INSERTION  
1028030300 RESPOND TO IMMOVABLE RCC  
1028032200 BYPASS REACTOR TRIP BREAKERS  
1041004100 COOL DOWN THE PRESSURIZER  
1041005100 PURGE THE PRT (FEED AND BLEED)  
1041006100 ADJUST PRESSURIZER PRESSURE SETPOINT  
1041007200 PERFORM RCS OVERPRESSURE TEST  
1041010100 EQUALIZE RCS/PZR BORON CONCENTRATIONS  
1041011100 DRAIN DOWN PRESSURIZER RELIEF TANK  
1041012100 REDUCE PRT TEMPERATURE  
1041021100 VENT THE PRT  
1041023100 VERIFY PROPER SPRAY VALVE ACTUATION  
1041063100 PURGE THE PRT (MAJOR GAS VOLUME)  
1041064300 VERIFY NATURAL CIRCULATION FROM THE ALTERNATE SHUTDOWN PANEL



## JOB PERFORMANCE MEASURES (JPM)

1046003100 RECIRCULATE BORIC ACID STORAGE TANKS  
1046006100 BLEND TO THE RWST  
1046007100 BORATE THE RCS VIA THE BLENDER  
1046008300 EMERGENCY BORATE THE RCS (MOV-350)  
1046010100 MANUALLY MAKEUP TO THE RCS  
1046013100 DILUTE THE REACTOR COOLANT SYSTEM BORON CONCENTRATION  
1046029100 SET UP BLENDER FOR AUTOMATIC OPERATION  
1046049300 RECOVER FROM FAILURE OF FCV-113A AND/OR BLENDER STATION  
1046054300 DIRECT PERFORMANCE OF POST ACCIDENT RCS CHEMICAL INJECTION  
1049001200 TEST REACTOR PROTECTION SYSTEM  
1049002300 TRIP A FAILED INSTRUMENT BISTABLE MANUALLY  
1050004300 RESPOND TO LOSS OF RHR SYSTEM WITH RCP'S AVAILABLE (MODE 3 TO  
1050005500 ALIGN RHR FOR COLD LEG RECIRCULATION  
1050007300 RESPOND TO LOSS OF RHR SYSTEM W/O RCP'S (MODE 3 TO MODE 5 TR  
1050008300 RESPOND TO LOSS OF RHR SYSTEM - RCS DRAINED AND OPEN  
1051018300 MANUALLY CLOSE INSTRUMENT AIR BLEED VALVE  
1053001100 SHUTDOWN CONTAINMENT PURGE SYSTEM  
1053002100 INITIATE (AUTHORIZE) CONTAINMENT PURGE  
1059003100 ADJUST HIGH FLUX AT SHUTDOWN ALARM  
1059005200 PERFORM A MANUAL CALIBRATION OF THE NIS  
1059007100 REMOVE A SOURCE RANGE CHANNEL FROM SERVICE  
1059017200 TEST SOURCE RANGE NIS CHANNEL (REACTOR SHUTDOWN)  
1059024300 RESPOND TO LOSS OF INTERMEDIATE RANGE INSTRUMENTATION  
1059025300 RESPOND TO LOSS OF SOURCE RANGE INSTRUMENTATION  
1059029300 RESPOND TO A SOURCE RANGE NIS MALFUNCTION (MODE 6)  
1062012500 ALIGN SAFETY INJECTION FOR HOT LEG RECIRC  
1062013500 ALIGN SAFETY INJECTION FOR COLD LEG RECIRC  
1063008500 VERIFY SAFETY INJECTION OPERATION  
1064002100 FILL THE ACCUMULATORS  
1064003100 DRAIN THE ACCUMULATORS  
1064004100 INCREASE ACCUMULATOR PRESSURE (HIGH PRESSURE SOURCE)  
1064005100 REDUCE ACCUMULATOR PRESSURE

## JOB PERFORMANCE MEASURES (JPM)

1064010200 PERFORM ACCUMULATOR BACKLEAKAGE TEST  
1071013500 ISOLATE STEAM GENERATOR BLOWDOWN  
1074036500 CLOSE FEEDWATER CONTROL AND BYPASS VALVES  
1075002300 CONTROL STEAM GENERATOR LEVEL LOCALLY WITH AUXILIARY FEEDWATER  
1094001500 PLACE POST ACCIDENT HYDROGEN MONITOR IN SERVICE  
1200001500 RESPOND TO UNIT TRIP  
1200022500 DIAGNOSE CAUSE OF SAFEGUARDS ACTUATION  
1200060500 PERFORM POST ACCIDENT CONTAINMENT VENTING  
2001011400 REPORT SIGNIFICANT EVENTS  
2001012400 MAKE PROTECTIVE ACTION RECOMMENDATIONS  
2001013400 MAKE EMERGENCY NOTIFICATIONS  
2016007400 RESPOND TO A PLANT FIRE  
2201019400 CLASSIFY PLANT EMERGENCY  
2201022400 RESPOND TO A MEDICAL EMERGENCY  
3028023300 INVESTIGATE ROD CONTROL SYSTEM URGENT FAILURE  
3028039300 INVESTIGATE ROD CONTROL SYSTEM NON-URGENT FAILURE  
14002009500 TRIP THE GENERATOR FROM THE SWITCHYARD  
14003008100 PLACE A DEENERGIZED BATTERY CHARGER IN STANDBY  
14003009100 DEENERGIZE A STANDBY BATTERY CHARGER  
14003012100 PLACE A VITAL INVERTER IN STANDBY  
14003013100 DEENERGIZE A STANDBY VITAL INVERTER  
14003014100 PLACE A NON-VITAL INSTRUMENT INVERTER IN SERVICE  
14003015100 REMOVE A NON-VITAL INSTRUMENT INVERTER FROM SERVICE  
14003016100 TRANSFER VITAL LOAD BETWEEN INVERTERS  
14003017100 TRANSFER INSTRUMENT BUS FROM INVERTER TO CVT  
14003018100 TRANSFER INSTRUMENT BUS FROM CVT TO INVERTER (INTERNAL TRANSFER)  
14003023500 PERFORM 125 VDC BUS SHEDDING (BLACKOUT IN PROGRESS)  
14003024100 SHIFT BATTERY CHARGERS  
14003025100 TRANSFER INSTRUMENT BUS LOAD FROM CVT TO SPARE INVERTER  
14003026100 TRANSFER INSTRUMENT BUS LOAD FROM CVT TO NORMAL INVERTER  
14005009100 RACK-IN C BUS 4KV BREAKERS  
14005010100 RACK-OUT C BUS 4KV BREAKERS

## JOB PERFORMANCE MEASURES (JPM)

14005011100 RACK-IN A/B BUS 4KV BREAKERS  
14005012100 RACK-OUT A/B BUS 4KV BREAKERS  
14005019100 OPERATE 4 KV BREAKER LOCALLY  
14005020300 POWER C 4KV BUS FROM CRANKING DIESELS  
14005023300 POWER A OR B BUS FROM CRANKING DIESELS VIA C BUS  
14006008100 RACK-IN 480 VOLT LOAD CENTER BREAKER  
14006009100 RACK-OUT 480 VOLT LOAD CENTER BREAKER  
14007004300 MANUALLY INITIATE TELEMAND TRANSFER  
14007008300 MANUALLY INITIATE TELEMAND TRANSFER (OPERATION OF MANUAL BR  
14008028500 ISOLATE CV-2201 (SI WITH ONE OPERATING ICW PUMP)  
14013016100 STARTUP DIESEL INSTRUMENT AIR COMPRESSOR  
14023003100 START AND SYNCHRONIZE THE EDG LOCALLY  
14028003100 STARTUP A ROD DRIVE MOTOR GENERATOR SET  
14028009500 RESPOND TO ATWS  
14028018100 SHUTDOWN A ROD DRIVE MOTOR GENERATOR SET  
14028020100 PARALLEL MOTOR GENERATOR SETS  
14028028100 RACK-IN REACTOR TRIP BREAKERS  
14028029100 RACK-OUT REACTOR TRIP BREAKERS  
14071013500 LOCALLY ISOLATE BLOWDOWN  
14074036500 CLOSE MAIN FEEDWATER CONTROL AND BYPASS VALVES LOCALLY  
14075011100 RESET AUX FW PUMP OVERSPEED TRIP LATCH  
14200056500 RE-ENERGIZE BACKUP HEATERS ON EMERGENCY DIESEL GENERATOR  
24006008100 RACK IN F&G 480V LOAD CENTER BREAKER  
24006009100 RACK OUT F&G 480V LOAD CENTER BREAKER  
24041065300 LOCALLY ISOLATE RCP SEAL COOLING  
24046039300 MANUALLY EMERGENCY BORATE (356)  
24046052500 PERFORM POST ACCIDENT R.C.S CHEMICAL INJECTION  
24051018300 LOCALLY CLOSE THE CONTAINMENT INSTRUMENT AIR BLEED VALVE CV.  
24062019100 CLOSE BIT INLET ISOLATION VALVES  
24094001500 PLACE POST-ACCIDENT HYDROGEN MONITOR IN SERVICE  
24200056500 REENERGIZE BACKUP HEATERS ON THE EMERGENCY DIESEL GENERATOR  
24200060500 PERFORM POST ACCIDENT CONTAINMENT VENTING

# ORIGINAL ADMINISTRATIVE PROCEDURES

AP	0103.4	7/27/89	In Plant Equipment Clearance Orders
AP	0103.12	3/31/89	Notification of Significant Events to NRC
AP	0103.36	3/10/87	Control of Operator Aids and Temporary Information tags
AP	0103.41	12/11/86	Caution Tag Clearance Procedure
AP	0109.3	3/29/89	On the Spot Changes to Procedures
AP	0109.6	8/4/87	Temporary Procedures

## ORIGINAL OPERATING PROCEDURES

OP	0204.2	7/27/89	Periodic Tests, Checks, and Operating Evolutions
OP	1009.1	8/24/88	Estimated Critical Conditions
OP	1009.3	4/19/89	Shutdown Margin Calculation
OP	1009.4	5/26/88	Operation Within Flux Difference Target Band
OP	5163.2	5/19/89	Waste Disposal System - Controlled Liquid Release to the Circulating Water
OP	5523.1	5/30/89	Waste Disposal System - Gas Decay Tank, Controller Release to Atmosphere
OP	14004.8	6/14/89	Use of the QSPDS - Inadequate Core Cooling Monitor

# ORIGINAL OFF-NORMAL OPERATING PROCEDURES

ONOP	0208.14	5/12/89	Deviation or Failure of Reactor Protection and Safety Related Hagan Instrumentation Channels
ONOP	1108.1	5/16/89	Reactor Coolant Pump Off-Normal Conditions
ONOP	1208.1	7/27/89	Pressurizer Power Operated Relief System - (Reliefs and MOV's) - Malfunction
ONOP	1568.1	4/7/88	Secondary Chemistry - Operator Actions in the Event of Deviation from Limits
ONOP	2608.2	5/26/88	CVCS - Malfunction of Boron Concentration Control System
ONOP	3108.2	5/16/89	High Activity in Component Cooling Water
ONOP	3208.1	3/30/89	Malfunction of Residual Heat Removal System
ONOP	3308.1	5/30/89	Turbine Plant Cooling Water Malfunction
ONOP	3408.1	5/18/89	Intake Cooling Water - Malfunction
ONOP	3408.2	1/24/89	Intake Cooling Water - Failure Due to Transport of Heavy Loads
ONOP	5168.5	8/10/89	Waste Holdup Tank-Pump Back System
ONOP	5508.2	4/7/87	WDS - Off Normal Operation, Gaseous Waste Disposal System
ONOP	7308.1	3/24/89	Malfunction of the Auxiliary Feedwater System
ONOP	8608.1	4/9/87	Generator Radio Frequency Monitor (Unit 4 Only)
ONOP	9108.1	7/28/86	Main Transformer - Malfunction
ONOP	9208.1	10/30/86	Auxiliary Transformer - Malfunction
ONOP	9308.1	4/6/89	Startup Transformer - Malfunction
ONOP	9308.2	4/9/87	"C" Bus Transformer - Malfunction
ONOP	9408.1	2/10/88	Loss of "A" or "B" 4KV Bus
ONOP	9408.2	6/30/88	Energizing 4KV Buses Using the Cranking Diesels Bus Tie Lines or Startup Transformer from the Opposite Unit
ONOP	9408.3	4/6/89	Loss of Voltage to "C" 4160 Volt Bus
ONOP	9608.1	3/24/89	125 V DC System - Location of Grounds
ONOP	9608.2	8/17/88	Auxiliary 125V DC System - Location of Grounds
ONOP	10308.1	4/28/89	Control Building Heating Ventilation and Air Conditioning System (HVAC)
ONOP	11108.1	5/24/89	Process Radiation Monitor - Off-Normal Condition Operation
ONOP	11208.1	5/28/87	Area Radiation Monitoring System (ARMS) Off-Normal Operation
ONOP	12308.2	10/22/87	Power Range Nuclear Instrumentation Verification of Upper, Lower, and Channel Deviation Alarms
ONOP	15608.2	3/2/89	Instrument Air Dryer Malfunction
ONOP	16708.1	7/24/86	Spent Fuel Cask Emergency Cooling



## UPGRADE ADMINISTRATIVE PROCEDURES

0-ADM-031	8/31/88	Independent Verification
0-ADM-200	6/28/89	Conduct of Operations
0-ADM-201	5/10/89	Upgrade Operations Procedure Usage
0-ADM-202	4/17/89	Shift Relief and Turnover
0-ADM-203	7/13/89	Shift Operating Practices
0-ADM-204	4/5/89	Operations Narrative Logbooks
0-ADM-207	9/30/88	Operations Instructions in the Event of a Situation Not Addressed by Procedure
0-ADM-503	5/20/89	Control and Use of Temporary System Alterations

# UPGRADE UNIT 3 AND COMMON OPERATING PROCEDURES

0-OP-003.1	4/4/89	125V Vital DC System
0-OP-003.2	4/26/89	125V Auxiliary DC System
0-OP-003.3	4/4/89	120V Vital Instrument AC System
0-OP-003.4	4/26/89	Auxiliary 120V AC System
3-OP-005	5/22/89	4160 Volt Buses A and B
3-OP-005.1	5/22/89	4160 Volt Bus C
3-OP-006	6/1/89	490 Volt Switchgear System
3-OP-007	4/27/88	490 Volt Motor Control Centers
3-OP-008	7/13/89	Turbine Plant Cooling Water
3-OP-013	5/30/89	Instrument Air System
3-OP-019	8/3/89	Intake Cooling Water System
0-OP-023	7/20/89	Emergency Diesel Generator
0-OP-025	3/22/89	Control Room Ventilation System
3-OP-030	4/26/89	Component Cooling Water System
3-OP-038.23	9/24/87	Fuel Transfer System - Normal Operation
3-OP-041.1	4/4/89	Reactor Coolant Pump
3-OP-041.2	4/4/89	Pressurizer Operation
3-OP-041.3	4/5/88	Pressurizer Relief Tank
3-OP-041.4	4/6/89	Overpressure Mitigating System
3-OP-041.7	3/24/89	Draining the Reactor Coolant System
3-OP-041.8	7/27/89	Filling and Venting the Reactor Coolant System
3-OP-041.9	6/14/89	Reduced Inventory Operations
0-OP-046	7/11/89	CVCS - Boron Concentration Control
3-OP-047	6/23/89	CVCS - Charging and Letdown
0-OP-048	4/12/89	Heat Tracing System
3-OP-050	3/24/89	Residual Heat Removal System
0-OP-051.2	7/18/87	Post Accident Containment Vent System
0-OP-053	4/11/89	Containment Purge System
3-OP-055	4/26/89	Emergency Containment Cooling and Filtering System
3-OP-057	6/16/89	Containment Normal Ventilation and Cooling System
3-OP-061.3	12/2/88	Reactor Coolant Drain Tank
3-OP-062	4/4/89	Safety Injection
3-OP-064	4/13/89	Safety Injection Accumulators
3-OP-067	5/12/89	Process Radiation Monitoring System
3-OP-068	2/2/89	Containment Spray System
3-OP-071	4/6/89	Steam Generator Blowdown Recovery System
3-OP-072	4/28/89	Main Steam System
3-OP-073	3/24/89	Condensate System
0-OP-074.1	5/12/89	Standby S/G Feedwater System
3-OP-075	3/24/89	Auxiliary Feedwater System
3-OP-087	4/6/89	Turbine Lube Oil System
3-OP-089	7/13/89	Main Turbine
3-OP-094	3/24/89	Containment Post Accident Monitoring Systems

# UPGRADE UNIT 3 GENERAL OPERATING PROCEDURES

3-GOP-103	7/20/89	Power Operation to Hot Standby
3-GOP-301	7/13/89	Hot Standby to Power Operation
3-GOP-305	8/15/89	Hot Standby to Cold Shutdown
3-GOP-503	7/20/89	Cold Shutdown to Hot Standby

# UPGRADE UNIT 3 AND COMMON OFF-NORMAL OPERATING PROCEDURES

3-ONOP-003.4	5/8/89	Loss of DC Bus 3D01 (3A)
3-ONOP-003.5	5/8/89	Loss of DC Bus 4D23 (3B) Loss of DC Bus 3D01 (4D01)
3-ONOP-003.6	8/10/89	Loss of 120V Vital Instrument Panel 3P06
3-ONOP-003.7	8/10/89	Loss of 120V Vital Instrument Panel 3P07
3-ONOP-003.8	1/12/88	Loss of 120V Vital Instrument Panel 3P08
3-ONOP-003.9	8/10/89	Loss of 120V Vital Instrument Panel 3P09
3-ONOP-004	5/24/89	Loss of Offsite Power
3-ONOP-004.1	3/18/86	Restoration of Electrical Systems Following the Recovery of Offsite Power
3-ONOP-005.4	1/22/88	4KV Bus 3A or 3B Ground
0-ONOP-013	4/6/89	Loss of Instrument Air
3-ONOP-014	5/31/89	Main Condenser Loss of Vacuum
0-ONOP-016.2	6/9/89	Response to Spurious Actuation of a Fire/Isolation Damper
0-ONOP-016.7	8/10/89	Screen Wash Emergency Makeup to the Fire Protection System
0-ONOP-016.8	5/6/89	Response to a Fire/Smoke Detection System Alarm
3-ONOP-016.9	6/14/89	Response to a Reported Fire in the Charging Pump Room, MCC B Room, Cable Spreading Room or Control Room
0-ONOP-023.2	7/13/89	Emergency Diesel Generator
0-ONOP-025.2	9/1/88	Loss of Control Room Ventilation System (CRVS) Air Conditioning
3-ONOP-028	8/8/89	Reactor Control System Malfunction
3-ONOP-028.1	2/15/89	RCC Misalignment
3-ONOP-028.2	4/10/89	RCC Position Indication Malfunction
3-ONOP-028.3	10/26/88	Dropped RCC
3-ONOP-030	5/16/89	Loss of Component Cooling Water
3-ONOP-033.1	2/11/88	Spent Fuel Pit (SFP) Cooling System Malfunction
3-ONOP-033.2	3/24/89	Refueling Cavity Seal Failure
3-ONOP-033.3	8/10/89	Accidents Involving New or Spent Fuel
3-ONOP-038.1	9/15/87	Fuel Transfer System Manual/Emergency Operation
3-ONOP-041.3	7/27/89	Excessive Reactor Coolant System Leakage
3-ONOP-041.4	6/29/89	Excessive Reactor Coolant System Activity
3-ONOP-041.5	8/10/89	Pressurizer Pressure Control Malfunction
3-ONOP-041.6	7/27/89	Pressurizer Level Control Malfunction
3-ONOP-046.1	7/6/89	Emergency Boration
0-ONOP-046.3	7/12/88	Loss of Boration Flowpath(s)
3-ONOP-047.1	5/24/89	Loss of Charging Flow in Modes 1 Through 3
0-ONOP-048	4/12/89	Off-Normal Critical Heat Tracing System Temperature
3-ONOP-049	5/20/88	Re-energizing Safeguard Racks After Loss of Single Power Supply
3-ONOP-050	3/30/89	Loss of RHR
3-ONOP-053	5/31/89	Loss of Containment Integrity
3-ONOP-059.4	6/30/89	Excessive Axial Flux Difference
3-ONOP-059.5	2/25/88	Source Range Nuclear Instrumentation Malfunction
3-ONOP-059.6	5/11/88	Backup NIS (Gamma Metrics) Malfunction
3-ONOP-059.7	1/9/89	Intermediate Range Nuclear Instrumentation Malfunction
3-ONOP-059.8	9/21/88	Power Range Nuclear Instrumentation Malfunction
3-ONOP-067	5/16/89	Inadvertent Release of Radioactive Gas
0-ONOP-067.2	5/30/89	Inadvertent Release of Radioactive Liquid
3-ONOP-071	7/6/89	Steam Generator Tube Leak
0-ONOP-074.1	7/27/89	Standby Steam Generator Feedwater System Operation With Loss of Offsite Power and Loss of Auxiliary Feedwater
3-ONOP-089	10/20/88	Turbine Runback
3-ONOP-094	4/26/89	Alternative Methods for Containment Post Accident Monitoring
3-ONOP-100	7/20/89	Fast Load Reduction
0-ONOP-105	7/13/89	Control Room Evacuation

# FUEL HANDLING PROCEDURES

OP	16000.1	4/7/89	Limitations and Precautions for Handling Fuel Assemblies
OP	16200	12/3/88	Manipulator Crane - Operating Instructions

# ANNUNCIATOR PROCEDURES

ONOP	0208.3	8/22/89	Annunciator List - Panel A - Reactor Coolant
ONOP	0208.4	11/25/88	Annunciator List - Panel B - Reactor Panel
ONOP	0208.5	8/22/89	Annunciator List - Panel C - Steam Generator and Reactor Trips
ONOP	0208.6	8/22/89	Annunciator List - Panel D - Condensate and Feedwater
ONOP	0208.7	8/22/89	Annunciator List - Panel E - Turbine Generator
ONOP	0208.8	8/22/89	Annunciator List - Panel F - Electrical
ONOP	0208.9	8/22/89	Annunciator List - Panel G - Miscellaneous
ONOP	0208.10	8/22/89	Annunciator List - Panel H - Safety Injection and Auxiliary
ONOP	0208.11	8/22/89	Annunciator List - Panel I - Station Service
ONOP	0208.12	8/22/89	Annunciator List - Panel X - Common
ONOP	0208.13	4/26/89	Annunciator List - Waste/Boron Panels
ONOP	0208.15	6/14/89	Annunciator - General
ONOP	0208.16	8/22/89	Annunciator List - Panel J - Auxiliary Electrical Power
ONOP	0208.18	3/24/89	Annunciator List - Condensate Polishing System Panel
ONOP	0208.19	8/22/84	Annunciator List - Process Control Panel-C-46

# EMERGENCY PLAN IMPLEMENTING PROCEDURES

EPIP	20101	5/5/89	Duties of Emergency Coordinator
EPIP	20102	9/27/88	Duties of an Individual Who Discovers an Emergency Condition
EPIP	20104	11/2/88	Duty Call Notifications/Staff Augmentation
EPIP	20105	5/11/88	Emergency Response Facilities
EPIP	20106	5/25/89	Natural Emergencies
EPIP	20107	3/24/89	Fire/Explosion Emergencies
EPIP	20109	10/11/88	Criteria For, and Conduct of Local Evacuations
EPIP	20110	6/19/89	Criteria For, and Conduct of Owner Controlled Area Evacuation
EPIP	20111	11/2/88	Re-entry
EPIP	20112	4/17/89	Communications Network
EPIP	20125	11/19/88	On-Site Emergency Organization
EPIP	20126	4/4/89	Off-Site Dose Calculations

## UNIT 3 EMERGENCY OPERATING PROCEDURES

3-EOP-E-0	XX/XX/XX	Reactor Trip or Safety Injection
3-EOP-E-1	XX/XX/XX	Loss of Reactor or Secondary Coolant
3-EOP-E-2	XX/XX/XX	Faulted Steam Generator Isolation
3-EOP-E-3	XX/XX/XX	Steam Generator Tube Rupture
3-EOP-ECA-0.0	XX/XX/XX	Loss of All AC Power
3-EOP-ECA-0.1	XX/XX/XX	Loss of All AC Power Recovery Without SI Required
3-EOP-ECA-0.2	XX/XX/XX	Loss of All AC Power Recovery With SI Required
3-EOP-ECA-1.1	XX/XX/XX	Loss of Emergency Coolant Recirculation
3-EOP-ECA-1.2	XX/XX/XX	LOCA Outside Containment
3-EOP-ECA-2.1	XX/XX/XX	Uncontrolled Depressurization of All Steam Generators
3-EOP-ECA-3.1	XX/XX/XX	SGTR With Loss of Reactor Coolant-Subcooled Recovery Desired
3-EOP-ECA-3.2	XX/XX/XX	SGTR With Loss of Reactor Coolant-Saturated Recovery Desired
3-EOP-ECA-3.3	XX/XX/XX	SGTR Without Pressurizer Pressure Control
3-EOP-ES-0.0	XX/XX/XX	Radiagnosis
3-EOP-ES-0.1	XX/XX/XX	Reactor Trip Response
3-EOP-ES-0.2	XX/XX/XX	Natural Circulation Cooldown
3-EOP-ES-0.3	XX/XX/XX	Natural Circulation Cooldown With Steam Void in With RVLMS (QSPDS)
3-EOP-ES-0.4	XX/XX/XX	Natural Circulation Cooldown With Steam Void in Vessel (Without RVLMS)
3-EOP-ES-1.1	XX/XX/XX	SI Termination
3-EOP-ES-1.2	XX/XX/XX	Post LOCA Cooldown and Depressurization
3-EOP-ES-1.3	XX/XX/XX	Transfer to Cold Leg Recirculation
3-EOP-ES-1.4	XX/XX/XX	Transfer to Hot Leg Recirculation
3-EOP-ES-3.1	XX/XX/XX	Post-SGTR Cooldown Using Backfill
3-EOP-ES-3.2	XX/XX/XX	Post-SGTR Cooldown Using Blowdown
3-EOP-ES-3.3	XX/XX/XX	Post-SGTR Cooldown Using Steam Dump
3-EOP-F-0	XX/XX/XX	Critical Safety Function Status Trees
3-EOP-FR-C.1	XX/XX/XX	Response to Inadequate Core Cooling
3-EOP-FR-C.2	XX/XX/XX	Response to Degraded Core Cooling
3-EOP-FR-C.3	XX/XX/XX	Response to Saturated Core Cooling
3-EOP-FR-H.1	XX/XX/XX	Response to Loss of Secondary Heat Sink
3-EOP-FR-H.2	XX/XX/XX	Response to Steam Generator Overpressure
3-EOP-FR-H.3	XX/XX/XX	Response to Steam Generator High Level
3-EOP-FR-H.4	XX/XX/XX	Response to Loss of Normal Steam Release Capabilities
3-EOP-FR-H.5	XX/XX/XX	Response to Steam Generator Low Level
3-EOP-FR-I.1	XX/XX/XX	Response to High Pressurizer Level
3-EOP-FR-I.2	XX/XX/XX	Response to Low Pressurizer Level
3-EOP-FR-I.3	XX/XX/XX	Response to Voids in Reactor Vessel
3-EOP-FR-P.1	XX/XX/XX	Response to Imminent Pressurizer Thermal Shock Condition
3-EOP-FR-P.2	XX/XX/XX	Response to Anticipated Pressurized Thermal Shock Condition
3-EOP-FR-S.1	XX/XX/XX	Response to Nuclear Power Generation/ATWS
3-EOP-FR-S.2	XX/XX/XX	Response to Loss of Core Shutdown
3-EOP-FR-Z.1	XX/XX/XX	Response to High Containment Pressure
3-EOP-FR-Z.2	XX/XX/XX	Response to Containment Flooding
3-EOP-FR-Z.3	XX/XX/XX	Response to High Containment Radiation Level





# UNIT 3 EMERGENCY OPERATING PROCEDURES BASIS DOCUMENTS

3-BD-EOP-E-0	XX/XX/XX	Reactor Trip or Safety Injection
3-BD-EOP-E-1	XX/XX/XX	Loss of Reactor or Secondary Coolant
3-BD-EOP-E-2	XX/XX/XX	Faulted Steam Generator Isolation
3-BD-EOP-E-3	XX/XX/XX	Steam Generator Tube Rupture
3-BD-EOP-ECA-0.0	XX/XX/XX	Loss of All AC Power
3-BD-EOP-ECA-0.1	XX/XX/XX	Loss of All AC Power Recovery Without SI Required
3-BD-EOP-ECA-0.2	XX/XX/XX	Loss of All AC Power Recovery With SI Required
3-BD-EOP-ECA-1.1	XX/XX/XX	Loss of Emergency Coolant Recirculation
3-BD-EOP-ECA-1.2	XX/XX/XX	LOCA Outside Containment
3-BD-EOP-ECA-2.1	XX/XX/XX	Uncontrolled Depressurization of All Steam Generators
3-BD-EOP-ECA-3.1	XX/XX/XX	SGTR With Loss of Reactor Coolant-Subcooled Recovery
3-BD-EOP-ECA-3.2	XX/XX/XX	SGTR With Loss of Reactor Coolant-Saturated Recovery Desired
3-BD-EOP-ECA-3.3	XX/XX/XX	SGTR Without Pressurizer Pressure Control
3-BD-EOP-ES-0.0	XX/XX/XX	Radiagnosis
3-BD-EOP-ES-0.1	XX/XX/XX	Reactor Trip Response
3-BD-EOP-ES-0.2	XX/XX/XX	Natural Circulation Cooldown
3-BD-EOP-ES-0.3	XX/XX/XX	Natural Circulation Cooldown With Steam Void in Vessel With RVLMS (QSPDS)
3-BD-EOP-ES-0.4	XX/XX/XX	Natural Circulation Cooldown With Steam Void in Vessel (Without RVLMS)
3-BD-EOP-ES-1.1	XX/XX/XX	SI Termination
3-BD-EOP-ES-1.2	XX/XX/XX	Post LOCA Cooldown and Depressurization
3-BD-EOP-ES-1.3	XX/XX/XX	Transfer to Cold Leg Recirculation
3-BD-EOP-ES-1.4	XX/XX/XX	Transfer to Hot Leg Recirculation
3-BD-EOP-ES-3.1	XX/XX/XX	Post-SGTR Cooldown Using Backfill
3-BD-EOP-ES-3.2	XX/XX/XX	Post-SGTR Cooldown Using Blowdown
3-BD-EOP-ES-3.3	XX/XX/XX	Post-SGTR Cooldown Using Steam Dump
3-BD-EOP-F-0	XX/XX/XX	Critical Safety Function Status Trees
3-BD-EOP-FR-C.1	XX/XX/XX	Response to Inadequate Core Cooling
3-BD-EOP-FR-C.2	XX/XX/XX	Response to Degraded Core Cooling
3-BD-EOP-FR-C.3	XX/XX/XX	Response to Saturated Core Cooling
3-BD-EOP-FR-H.1	XX/XX/XX	Response to Loss of Secondary Heat Sink
3-BD-EOP-FR-H.2	XX/XX/XX	Response to Steam Generator Overpressure
3-BD-EOP-FR-H.3	XX/XX/XX	Response to Steam Generator High Level
3-BD-EOP-FR-H.4	XX/XX/XX	Response to Loss of Normal Steam Release Capabilities
3-BD-EOP-FR-H.5	XX/XX/XX	Response to Steam Generator Low Level
3-BD-EOP-FR-I.1	XX/XX/XX	Response to High Pressurizer Level
3-BD-EOP-FR-I.2	XX/XX/XX	Response to Low Pressurizer Level
3-BD-EOP-FR-I.3	XX/XX/XX	Response to Voids in Reactor Vessel
3-BD-EOP-FR-P.1	XX/XX/XX	Response to Imminent Pressurizer Thermal Shock Condition
3-BD-EOP-FR-P.2	XX/XX/XX	Response to Anticipated Pressurized Thermal Shock Condition
3-BD-EOP-FR-S.1	XX/XX/XX	Response to Nuclear Power Generation/ATWS
3-BD-EOP-FR-S.2	XX/XX/XX	Response to Loss of Core Shutdown
3-BD-EOP-FR-Z.1	XX/XX/XX	Response to High Containment Pressure
3-BD-EOP-FR-Z.2	XX/XX/XX	Response to Containment Flooding
3-BD-EOP-FR-Z.3	XX/XX/XX	Response to High Containment Radiation Level

