

# CONTROLLED COPY CENTRAL FILE

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## THREE MILE ISLAND NUCLEAR STATION UNIT #2 EMERGENCY PROCEDURE 2202-3.1 FIRE

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Unit 1 Staff Recommends Approval

Approval NA Date       
Cognizant Dept. Head

Unit 2 Staff Recommends Approval

Approval NA Date       
Cognizant Dept. Head

Unit 1 PORC Recommends Approval

NA Date       
Chairman of PORC

Unit 2 PORC Recommends Approval

RP Warren Date 10/6/78  
V-Chairman of PORC

Unit 1 Superintendent Approval

NA Date     

Unit 2 Superintendent Approval

J L DeLuca Date 10/6/78

Manager Generation Quality Assurance Approval

NA Date

THREE MILE ISLAND NUCLEAR STATION  
UNIT #2 EMERGENCY PROCEDURE 2202-3.1

FIRE

1.0 SYMPTOMS

Symptoms of a fire or potential fire emergency include any or all of the following:

- a. Fire-Smoke alarm received on Panel 7 in the Control Room.
- b. Temperature alarm received on Heating and Ventilation, Panel 25, Annunciator in the Control Room.
- c. Indication of deluge system actuation on Panel 7.
- d. Sight or smell of smoke or flames in any location.

2.0 IMMEDIATE ACTION

2.1 Automatic Action

- a. Deluge system actuation for applicable area.
- b. Sprinkler system actuation for applicable area.
- c. Halon system actuation for fire in Air Intake Tunnel.
  1. All three tunnel deluge systems actuate.
  2. Air intake fire dampers AH-D-2A, 2B, 2C, 2D, 2E, and 2F close.
  3. Air intake tunnel sump pumps (SD-P-4A and B) and air intake tunnel emergency pumps (SD-P-11A and B) start.
  4. Ventilation systems respond (refer to Appendix D).
- d. Fire pumps start on Low Fire Main pressure indicated below:

Motor Fire Pump Unit 1	(FS-P-2)	90 psig
Diesel Fire Pump Unit 2	(FS-P-1)	85 psig
Diesel Fire Pump Unit 1	(FS-P-3)	80 psig
Cool Tower Fire Pump Unit 1	(Also designated, FS-P-1)	70 psig



- e. Actuation of the Halon System in the Cable Room.

## 2.2 Manual Action

- a. Announce the following using the page channel: "Fire, (Location), (Class, if known), Fire brigade report to Location".
- b. Actuate fire alarm by depressing and releasing the pushbutton on Panel LATER in the Control Room.
- c. If the fire main pressure decreases, verify the starting of the fire pumps by observing the illuminated red running indication lights on Panel 7. If the Diesel Fire Pump Unit 2 (FS-P-1) has not started, dispatch an Aux Operator to start the pump manually in accordance with the Fire Protection System procedure 2104-6.1. Coordinate with Unit 1 the starting of the Motor Fire Pump Unit 1 (FS-P-2), the Diesel Fire Pump Unit 1 (FS-P-3) and the Cool Tower Fire Pump Unit 1 (also designated FS-P-1).

NOTE 1: The announcement of any fire in an enclosed "Out Building" or any other area requiring admittance by a security guard shall require the roving security officer to report to the scene and provide the necessary entry.

NOTE 2: Refer to Appendix A for a fire in the Control Room. Refer to Appendix B for a fire in the Cable Room, and refer to Appendix C for a fire in the Reactor Building.

## 3.0 FOLLOW UP ACTION

### 3.1 Duties and Responsibilities.

3.1.1 Control Room Operator.

- a. Perform required Manual Action (refer to paragraph 2.2).
- b. Carry out Manual Action as specified in applicable alarm responses.

3.1.2 Shift Supervisor.

- a. Report to the scene of the fire and coordinate the fire fighting activity.
- b. Verify Fire Brigade personnel have reported to the scene of the fire with the equipment outlined in the following table:

Fire Brigade Personnel	Equipment	Remarks
Aux Operator #1	Ansul Portable Fire Ext.	Use fire ext. and/or fire hose to fight fire per direction of Shift Supervisor
Aux Operator #2	Ansul Portable Fire Ext.	Same as above
Aux Operator #3	Self Contained Breathing Apparatus	Take action to protect equipment and/or personnel as directed by Shift Supervisor
Aux Operator #4	Self Contained Breathing Apparatus	Same as above
Rad Chem Tech/Jr.	Battery Powered Air Sampler & a High Range Beta Gamma Instrument	Perform function of Rad Tech or provide other assistance as required by Shift Supervisor

- c. Establish communications with the Control Room and inform the Shift Foreman if outside assistance is not needed.
- d. INSURE that all unnecessary personnel are evacuated from the scene of the fire and organize efforts to rescue anyone who may be trapped in an area made hazardous by the fire.
- e. Establish a Radiation Particulate Monitor downwind of any radiological fire as soon as possible.
- f. Submit a written report containing an analysis of the fire emergency and recommendations for cleanup to the Station/Unit Superintendent.

3.1.3 Shift Foreman.

- a. Report to the Control Room.
- b. Direct Plant Operations to maintain safe conditions based on information supplied by the Shift Supervisor.
- c. Call the Dauphin County Civil Defense Director, Telephone No. 236-7976, or call 911 for fire fighting assistance unless informed by the Shift Supervisor that outside assistance will not be needed.
- d. Call in additional personnel as required.
- e. Dispatch Aux Operator (if available) to monitor Unit 2 Fire Pump operation if the pump starts.
- f. Establish communications with Unit 1 Control Room.
- g. Notify Management personnel listed below:
  - 1. Supervisor of Operations.
  - 2. Supervisor of Maintenance.
  - 3. Station/Unit Superintendent.
  - 4. Station Safety Supervisor.



## APPENDIX A

### FIRE IN THE CONTROL ROOM

#### 1.0 DISCUSSION

Fires in the Control Room will most probably be class A (Normal Combustible Materials) or class C (Electrical) in nature. An electrical fire is the more probable type and would have more serious consequences. A class A fire would probably be of insignificant size such as trash in a waste basket.

#### 2.0 PROCEDURE

2.1 Follow provisions of the main body of this Emergency Procedure.

2.2 Personnel in the Control Room shall, additionally, accomplish the following:

- a. Determine class of fire and its exact location by Panel number, if possible.
- b. Fight fire using the following readily available equipment:
  1. Electrical fire, use portable Halon extinguishers first, then CO<sub>2</sub>. Water in the form of "Fog" shall be used as a last resort.
  2. Class "A" fire, use Ansul Dry Chemical Extinguisher.

CAUTION: Excessive use of CO<sub>2</sub> in a closed space may result in asphyxiation.

NOTE: If fire/smoke forces operators to leave the Control Room, shutdown plant according to 2202-1.10, Shutdown from Outside Control Room.

## APPENDIX B

### Fire Emergency in Cable Room

#### 1.0 SYMPTOMS

- a. Control Bldg Cable Room Fire Alarm on Panel 7.
- b. Cable Room Temp. HI Alarm on Panel 25.

~~c. Visual detection of smoke and/or flame in or near the Cable~~  
Spreading Room.

#### 2.0 AUTOMATIC ACTION

- a. After a fire signal is received, the Cable Room Halon System is activated.

#### 3.0 MANUAL ACTION

- a. A serious fire in the Cable Room as evidenced by symptoms 1a and 1b, or observance of a cable tray fire by a Shift Supervisor/Foreman requires the following action:

1. Announce on the paging system:  
EVACUATE THE CABLE ROOM. THE HALON SYSTEM HAS BEEN ACTUATED.
2. Manual trip of the unit.
3. If automatic actuation of the Halon System has not occurred, manually activate from outside the Cable Room doors. In the event unit trip is required proceed as follows:
  - (1) Trip the reactor by pressing the REACTOR TRIP pushbutton.
  - (2) Press Turbine Trip.
  - (3) Verify the Generator Breakers and Generator Field Breaker open.
  - (4) Proceed with Reactor Trip Procedure.
  - (5) Actuate the station fire alarm by pressing and releasing the pushbutton on panel LATER in the Control Room.

APPENDIX B

(6) Announce on the paging system:

FIRE IN THE CABLE ROOM, (type) FIRE BRIGADE REPORT

~~TO: CONTROL BUILDING 1ST FLOOR, 305' ELEVATION.~~

(7) Duties and responsibilities shall be as assigned in 3.0.

- b. Either alarm 1a or 1b above or any other symptoms of fire required immediate investigation of the Cable Room, and action as directed by the Shift Supervisor.



## APPENDIX C

### Fire in the Reactor Building

#### 1.0 SYMPTOMS

- a. Reactor Building Fire Alarm on Panel 7.
- b. Reactor Building High Temp. Alarm on Panel 25.
- c. Visual detection of smoke and/or flame in the Reactor Building.

#### 2.0 AUTOMATIC ACTION

- a. Reactor Building purge, if in progress is secured (See Appendix D).

#### 3.0 MANUAL ACTION

- a. Announce the following using the page channel:  
"FIRE IN THE REACTOR BUILDING, (Class, if known), FIRE BRIGADE  
REPORT TO THE REACTOR BUILDING PERSONNEL ACCESS HATCH".
- b. If the severity of the fire has been established, proceed with  
step d.
- c. If the severity of the fire is unknown, the Rad/Chem Tech and  
Aux Operator #2 will enter the Reactor Building to determine  
the severity of the fire under the direction of the Shift  
Supervisor/Foreman.

CAUTION: In an extreme emergency, only a Scott Air Pack or  
equivalent need be donned. The Rad/Chem Tech will  
carry a high range Beta-Gamma Dose Rate Meter when  
entering the Reactor Building. Even in an extreme  
emergency, every effort should be made to wear  
personnel dosimetry.

- d. If time permits, as determined by the Shift Supervisor/Foreman,  
TLD's and pocket dosimeters will be issued to the Fire Brigade  
by Health Physics personnel. If not, proper Health Physics

APPENDIX C

coverage will be provided to insure that the relative exposures of the fire fighting personnel can be ascertained. Also, if time permits, protective clothing may be donned by the Fire Brigade personnel.

CAUTION: ~~Under all~~ circumstances, personnel entering the

Reactor Building during a Fire Emergency will wear a Scott Air Pack or equivalent.

- e. As determined by the Shift Supervisor/Foreman, the Fire Bridge will enter the Reactor Building to fight the fire.
- f. When individuals leave the Reactor Building, they will be monitored and decontaminated in accordance with approved Health Physics procedures.

APPENDIX O

FIRE PROTECTION ZONE DETECTION SYSTEM

BUILDING	ELEVATION	ZONE	DETECTOR FS-XD	PANEL	FPP-4 FUSE #	AUXILIARY FUNCTIONS
Auxiliary	258'-6 & 280'	2	6087 thru 6097 6083, 6084	711 Auxiliary Building 305' Elev Near South Stairwell	#1	Stops Fans AH-E-7A/B AH-E-8A, B, C, D AH-E-41
	305'	3	6085 6098-1 thru 6105			
	328'	4A	6086			
		4B	6081, 6082			
		4C	6086			
		4D	6107-1 thru 6110			
Chlorinator		5	6111-1 thru 6113	712 Chlorinator Bldg. Out- side Main Entry	#2	Stops Fans AH-E-44, 45 46 & 47, Shuts Dampers 05236A, B, C, & D.
Circ. Water		6	6116-1 thru 6123-2	713 C.W. PH Near Main Entrance	#3	Stops Fans AH-E-22A, B, C, D, E, F, AH-E-29, Shuts Dampers 05081A, B, C, D, E, F & 05080A, B, C.
Coagulator		7	6130 thru 6131-6	714 Coag. Bldg. Near Entry to Turbine Bldg.	#4	Stops Fans AH-E-17A, B, AH-E-20
Control	280'	8A	6135, 6142-1 thru 6142-4	715 Control Bldg 331' Elev Outside Control Room	#5	Stops Fans AH-E-17A, B, AH-E-20
		8B	6136, 6143-1 thru 6143-4			
	Mezzanine	8C	6137, 6144-1 thru 6144-9			
	280'	8D	6138-1 thru 6138-4			
		8E	6139-1 thru 6139-4			
	351'	8F	6141			
	305'	9	6140-1, 2 6147-2, 4, 6, 8 10, 12, TS-6147			
		9A	6147-1, 3, 5, 7 9, 11, 13			
						Stops Fans AH-E-17A/B, 21

Stops Fans AH-E-17A/B  
AH-E-20, Actuates Halon  
Fire Suppression System  
Only if One Detector  
From Both 9A & 9 are  
Actuated



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## FIRE PROTECTION ZONE DETECTION SYSTEM

BUILDING	ELEVATION	ZONE	DETECTOR FS-XD	PANEL	FPPF-4 FUSE #	AUXILIARY FUNCTIONS
Control (cont'd)	331'	10	6148-1 thru 6148-16, 6154 6161, TS-6153	715	#5	Stops Fans AH-C-16A/B, AH-E-35, AH-E-4A/B AH-E-5, AH-E-25 Shuts Damper 04092C
	351'	11A	6149, 6150			Stops Fans AH-C-15A/B, AH-E-6, AH-E-40
		11B	6155, thru 6156			
Control Bldg. A.	280'	12A	6180 thru 6182-9	716 Control Bldg Area Near Ent- rance to Control Building	#6	Stops Fans AH-C-50A/B, AH-C-51
		12B	6183-1 thru 6183-12			Stops Fans AH-E-13 AH-58A thru J, AH-E-62
Diesel Generator	280' 6"	13A	6210-1 thru 6210-10	717 Diesel Generator Bldg. 280' in N.E. Corner of East Side	#7	Stops AH-E-24A
		13B	6212			Stops AH-E-24A DF-P-1A/B, Closes DF-V2A
		13C	6217-1 thru 6217-8			AH-E-24B
		13D	6219			Stops AH-E-24B DF-P-1C/D Closes DF-V2B
	305'	14A	6213-1 thru 6213-9, 6215 FD-6214			Stops AH-E-24A DF-P-1A/B Closes DF-V2A
		14B	6220-1 thru 6220-8, 6222 FD-6221			Stops AH-E-24B DF-P-1C/D Closes DF-V2B
Fire Pump	312'	15	6230, 6231 FD-6232	718	#8	Stops AH-E-32
Fuel Handling	280'	16	6240-1 thru 6240-12, 6249	719 Fuel Hand. Building 305' Elev. Inside Main Entrance	#9	Stops AH-E-9A/B AH-E-10A/B/C/D.
	305'	17	6241-1 thru 6241-4			
	328'	18A	6242			
		18B	6243, 6244 6245			
	347'	19	6251-1 thru 6251-12			

APPENDIX O

FIRE PROTECTION ZONE DETECTION SYSTEM

BUILDING	ELEVATION	ZONE	DETECTOR FS-XD	PANEL	FFFP-4 FUSE #	AUXILIARY FUNCTIONS
MOCT		20	6551, 6552	NA	#13	Stops AH-E-60
Reactor	328'	22A	6270, 6271	720 Service Building 305' Elev. Near Ent- rance to Hot Inst. Decon Room	#10	Stops Fans AH-E-12A/B 19A/B Closes AH-V1A/B 4A/B
		22B	6272			Stops AH-E-12A/B, AH-E-19A/B, AH-E-34 Closes AH-V1A/B AH-V4A/B
		22C	6273			
	305' & 347'	22D	6275-1 thru 6276-5, 6279-1 thru 6279-3			Stops AH-E-63
	358'	22E	6277			Stops AH-E-12A/B AH-E-19A/B, AH-E-34 Closes AH-V1A/B, AH-V4A/B
	282'	22F	6278			
RWPH	280'-312'	23	6290 thru 6291-9, 6294 thru 6297 6299-1 thru 6300-2	718 RWPH Near Main Entrance	#8	Stops AH-C-20A/B AH-E-13
Service	280'	24	6342-1 thru 6344-4	721 Service Building 305' Elev. Personnel Monitoring Area	#11	Stops AH-C-50A/B, AH-C-51
	305'	25	6319 thru 6339-2, 6348-1 thru 6348-4			Stops AH-E-23A/B AH-C-24, AH-C-25A/B, AH-E-26, AH-E-27, AH-E-28, AH-E-33 AH-C-36
	305', 322' & 333'	26A	6310			
		26B	6311, 6315-1 thru 6318, 6340-1 thru 6341-5			
		26C	6312			
		26D	6313			
Turbine	281'	27A	6360	722 Turbine Building 331' Elev. Near Ent- rance to Control Building	#12	Stops AH-E-1, 2, 3 AH-E-39, AH-E-61
		27B	6364, 6373-1 thru 6373-25			
	305'	28A	6362			
		28B	6363			
		30	6366-1 thru 6369-2			
	331'	29	6365, 6370 thru 6372-16			Stops AH-E-1, 2, AH-E-38

**APPENDIX D  
FIRE PROTECTION SYSTEMS**

SYSTEM	MULTIMATIC VALVE	ROOT ISOLATION VALVE	CONTROL PANEL	POWER SUPPLIES	AUXILIARY FUNCTIONS
Main Transformer 2A	FS-V-403A	FS-V403B	701	DC Dist. Pnl DCT-2A Dkr 20	None
Main Transformer 2B	FS-V402A	FS-V402B	Turb. Bldg. 305' Elevation East Wall		
Auxiliary Transformer 2A	FS-V-401A	FS-V401B			
Auxiliary Transformer 2B	FS-V400A	FS-V400B			
Turbine Building East Wall	FS-V404A	FS-V404B			
Hydrogen Seal Oil Unit	FS-V405A	FS-V405B	702 Turb. Bldg. 305' Elevation Near Heater Drain Tank	DC Dist. Pnl DCT-2A Dkr 4	Stops Pans All-E-1, 2, 3, All-E-39 & All-E-61
Main Turb. Oil Reservoir	FS-V408A	FS-V408B			
S.G.F.P. Turb. Oil Res'v 1A	FS-V409A	FS-V409B			
S.G.F.P. Turb. Oil Res'v 1B	FS-V410A	FS-V410B	704 Diesel Gen. Bldg. 280' Elevation	DC Dist. Pnl DCA-2A Dkr 19	Stops Pans All-E-24A, 24B Stops Pumps DP-P-1A,B,C,D Shuts Valves DP-V2A, 2B
Emergency Diesel Gen. Fuel Oil Tank	FS-V-425A	FS-V425B			
Emergency Diesel Gen. Bldg. Air Intake	FS-V-426A	FS-V426B			
Plant Air Intake Tunnel Vert. Shaft	FS-V-429A	FS-V429B	705/705A Service Bldg. 280' Elevation	705 DC Dist. Pnl DCC-1B Dkr 9 705A -	Control Rm - shuts Dampers D-4092C, D-4092D, ED-409B Opens Damper D-4092E Control Bldg. Mech. Room Stops Pan All-E-40 Shuts Damper D-4086 Control Bldg. Cable Room Shuts Dampers D-4073, ID-4075A, ED-4075, Open Damper ID-4075B



**APPENDIX D  
FIRE PROTECTION SYSTEMS**

SYSTEM	MULTIWAY VALVE	ROOT ISOLATION VALVE	CONTROL PANEL	POWER SUPPLIES	AUXILIARY FUNCTIONS
R.D. Purge Exhaust Charcoal Filter Unit All-F-31B	FS-V422A	FS-V422B	708	DC Dist. Pnl DCA-2A	Stops Fans All-E-12E All-E-19B
F.H. Bldg. Exhaust Charcoal Filter Unit All-F-14A	FS-V421A	FS-V421A	707 Auxiliary Bldg 32B' Elevation Near Chem. Add. Control Panel	DC Dist Pnl DCA-2A Bkr 21	Stops Fans All-E-9A, B All-E-10A, B, C, D.
F.H. Bldg. Exhaust Charcoal Filter Unit All-F-14D	FS-V420A	FS-V420B			
Aux. Bldg. Exhaust Charcoal Filter Unit All-F-10A	FS-V419A	FS-V419B			Stops Fans All-E-7A, B All-E-8A, B, C, D.
Aux. Bldg. Exhaust Charcoal Filter Unit All-F-10B	FS-V418A	FS-V418B			
Control Room Bypass Charcoal Filter Unit All-F-5	FS-V413	FS-V507	709 Control Bldg. 351' Elevation North Wall	DC Dist. Pnl DCC-1B Bkr 8	Stops Fans All-E-4A, B
Radwaste Gas Charcoal Filter Unit WDG-F-1	FS-V433A	FS-V433B	710 Auxiliary Bldg. 305' Elevation in WDG-F-1 Cubicle	DC Dist. Pnl DCA-2A Bkr 20	None.

**APPENDIX D  
FIRE PROTECTION SYSTEMS**

SYSTEM (Cont'd)	MULTIMATIC VALVE	ROOT ISOLATION VALVE	CONTROL PANEL	POWER SUPPLIES	AUXILIARY FUNCTIONS
					<p><u>Control Bldg. Area - Stops Fans AII-E-13, AII-C-51</u> Shuts Damper D-5560</p> <p><u>Aux. Bldg. - Stops Fans AII-E-23A, B, AII-E-0A, B, C, D</u> Shuts Damps D-4002</p> <p><u>Service Bldg. - Stops Fans AII-E-23A, B, AII-C-24, AII-E-26, AII-E-27, AII-E-20, AII-E-33, AII-C-36, Shuts Dampers D-5739, D-5742, SD-5739.</u></p> <p><u>Fuel Handling Bldg. - Stops Fans AII-E-9A, B, AII-E-10A, B, C, D.</u></p> <p><u>Reactor Bldg. - Stops Fans AII-E-12A, B, AII-E-19A, B. Shuts Dampers D-5120A, D-5120B.</u></p> <p><u>Air Intake Tunnel - Shuts Fire Dampers AII-E-2A, B, C, D, E, F.</u></p>
Plant Air Intake Tunnel North of Structural Div.	FS-V430A	FS-V430B			
Plant Air Intake Tunnel South of Structural Div.	FS-V431A	FS-V431B	706/705A	706-DC Dist Pnl DCC-10 Bkr 5	
Hydrogen Purge Exhaust Char- coal Filter Unit AII-F-34	FS-V424A	FS-V424B	700 Auxiliary Bldg. 328' Elevation Near South Stairway	DC Dist. Pnl DCA-2A Bkr 22	Stops Fan AII-E-34
R.D. Purge Exhaust Charcoal Filter Unit AII-F-31A	FS-V423A	FS-V423B			Stops Fans AII-E-12A, 19A

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FIRE PROTECTION SYSTEMS**

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SYSTEM	MULTIMATIC VALVE	ROOT ISOLATION VALVE	CONTROL PANEL	POWER SUPPLIES	AUXILIARY FUNCTIONS
Main Turbine Bearings	FS-V412A	FS-V412B	703	DC Dist. Pnl DCT-2A Bkr 8	Stops AI-E-1, 2, 3 AI-E-39, AI-E-61
S.G.F.P. Turbine Bearings	PS-V411A	FS-V411B			
East Turb Bldg. Basement and Mezzanine	PS-V407A	FS-V407B	H/A	H/A	None
West Turb Bldg. Basement and Mezzanine	FS-V406A	FS-V406B			
Fire Pump Room	FS-V434A	PS-V434B			
East Emergency Diesel Generator Room	PS-V427A	FS-V427B			
West Emergency Diesel Generator Room	PS-V428A	FS-V428B			
H.D. Cooling Tower A	FS-V520 FS-V521 FS-V522 FS-V523 FS-V524 PS-V525	FS-V155 PS-V156 PS-V157 FS-V158 FS-V159 FS-V160		DCT-2A (Subfuse Pnl. PPPP-8)	
H.D. Cooling Tower B	FS-V526 PS-V527 PS-V528 PS-V529 FS-V530 PS-V531	FS-V161 FS-V162 FS-V163 FS-V164 FS-V165 FS-V166		DCT-1A (Subfuse Pnl. PPPP-7)	
HDCY	FS-V544A	FS-V544B		DCT-1A (Subfuse Pnl. PPPP-6)	Stops Pan 2-1
	FS-V545A	FS-V545B			Stops Pan 2-2
	FS-V546A	FS-V546B			Stops Pan 2-3



## Appendix E

### Oil Fire in the Turbine Building

#### 1.0 DISCUSSION

Oil fires can be serious if not rapidly contained. For equipment protection, however, oil systems usually cannot be immediately shutdown upon the detection of a fire. Immediate action should be taken to contain the fire, and then as rapidly as possible proceed to plant conditions which allow the total shutdown of the oil system. This may include breaking vacuum, and/or dumping generator hydrogen gas to vent.

#### 2.0 PROCEDURE

##### 2.1 Main turbine generator oil fire.

2.1.1 Follow the provisions in the main body of this procedure.

2.1.2 Attempt to extinguish fire with on-hand equipment.

CAUTION: Do not trip the oil pumps unless absolutely necessary or bearing and seal damage may result.

2.1.3 If the fire is detected in the main lube oil reservoir, guard piping, or inside a bearing pedestal, the fire may be suffocated by stopping the vapor extractor LO-E-1 from panel 17.

CAUTION: With the vapor extractor stopped, oil may leak from bearing pedestal cover seals and present an additional fire hazard. Do not operate longer than necessary with the vapor extractor out of service.

2.1.4 If step 2.1.3 did not extinguish the fire, or if the fire is not in an enclosed space, attempt to contain the fire and proceed to shutdown the lube oil system as follows:

- a. Trip the turbine and insure generator breakers open.

NOTE: Insure the TGP, SOP, and 3L pumps are in AUTO and start to supply lube oil to the bearings.

- b. Break vacuum by opening VA-V7A&B from panel 5.
- c. Isolate  $H_2$  from Unit 1 by closing HY-V24.
- d. Dump  $H_2$  to the atmosphere by opening generator gas valves 7 and 24.
- e. Isolate LO system from the seal oil system by closing seal oil valve 265.

2.1.5 When the turbine is at zero speed, the lube oil system may be shutdown by placing the oil pumps panel 5 control switches in pull to lock.

CAUTION: When all oil pumps are stopped, the lube oil reservoir level will increase.

2.1.6 Extinguish fire.

2.2 Main turbine generator seal oil fire.

CAUTION: Do not trip all seal oil and lube oil pumps unless absolutely necessary before the turbine is at rest, and all  $H_2$  vented. Stopping pumps early may result in Hydrogen leakage and an explosion hazard around the generator.

2.2.1 Follow the provisions in the main body of this procedure.

2.2.2 Attempt to extinguish the fire with on-hand equipment.

2.2.3 If the fire cannot be extinguished without securing the seal oil system, attempt to contain the fire, and proceed as follows:

- a. Trip the turbine and insure generator breakers open.
- b. Break vacuum by opening VA-V7A&B from panel 5.
- c. Isolate  $H_2$  from Unit 1 by closing HY-V24.

- d. Dump Hydrogen to the atmosphere by opening generator gas valves 7 and 24.
- e. Start the DC air side seal oil backup pump, and trip the AC air and hydrogen side seal oil pumps.
- f. When the turbine speed has decreased to 500 RPM, inject  $\text{CO}_2$  to dilute the  $\text{H}_2$  by opening generator gas valves 5 and 60, and supplying  $\text{CO}_2$  from Unit 1.
- g. When the machine gas pressure decreases to 10 psig, the DC Seal Oil backup pump may be tripped.
- h. If required to extinguish the fire, the lube oil system may be isolated from the seal oil system by closing seal oil valve 265.
- i. If the turbine is at zero speed, the lube oil pumps may be tripped.

2.2.4 Extinguish the fire.

2.3 Feedpump Turbine Oil Fire.

CAUTION: Do not trip all oil pumps before the turbine is at rest, or damage to the bearings may occur.

2.3.1 Follow the provisions in the main body of this procedure.

2.3.2 Attempt to extinguish the fire with on-hand equipment.

2.3.3 If the fire cannot be extinguished, attempt to contain the fire and proceed as follows:

- a. Trip feedpump turbine.
- b. Start the DC Emergency oil pump, and trip the Main and Aux oil pumps.
- c. Close the feed pump's inlet, outlet, and exhaust valves (CO-V 52 A/B, FW-V8 A/B, and MS-V44/45).



- 2.3.3 When the turbine is at zero speed, trip the DC Emergency oil pump.
- 2.3.4 Extinguish the fire.