



Entergy

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W. K. Hughey  
Director  
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Affairs

June 5, 1997

Senior Emergency Preparedness Analyst  
U.S. Nuclear Regulatory Commission  
611 Ryan Drive, Suite 400  
Arlington, TX 76011-8064

Attention: Ms. Gail Good

Subject: Grand Gulf Nuclear Station  
Docket No. 50-416  
License No. NPF-29  
Emergency Preparedness Core Inspection

GNRO-97/00052

Dear Ms. Good:

As we've discussed with you, Grand Gulf Nuclear Station will use a dynamic simulator for the emergency preparedness core inspection to be conducted at Grand Gulf on June 25, 1997.

The material you requested is enclosed.

Due to the short time between Grand Gulf's decision to utilize a dynamic simulator setting and the time for submitting the crew participants, scheduling of shift personnel during their relief shift has been difficult. A crew will be called in during their off time to participate.

If you need more information concerning the scenario, please contact Lloyd Calvery, SRO, Emergency Planning at (601) 437-6355. //

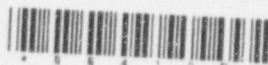
Yours truly,

WKH/WBA/ams

enclosure: Core Inspection Material  
cc: (See Next Page)

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PDR ADOCK 05000416  
PDR

G9706051



June 5, 1997  
GNRO-97/00052  
Page 2 of 2

cc: NRC Senior Resident Inspector(w/a)  
Mr. N. S. Reynolds (w/o)  
Mr. L. J. Smith (w/o)  
Mr. H. L. Thomas (w/o)  
Mr. J. W. Yelverton (w/o)

Mr. E. W. Merschhoff (w/2)  
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# **Table of Contents**

1. Schedule for the week of June 23, 1997
2. Scope and Objectives
3. Scheduled Participants
4. Drill Scenario
5. Detailed Narrative of Scenario
6. Source Term and Meteorological Data



Schedule for the week of  
June 23, 1951



**Grand Gulf Nuclear Station**  
**1997 EP Core Inspection 82701 Drill**

**SCHEDULE FOR WEEK OF JUNE 23**

Monday, June 23

Entrance - General Manager's Conference Room at 1300 (1:00 P.M.)

Tuesday, June 24

07:30 - Verification and validation of scenario with Inspection Team

Wednesday, June 25

07:30 - Exercise for drill utilizing relief shift crew. (When drill is complete, crew will remain under the cognizant of the EP OPS Coordinator until released)

12:00 - Second exercise for drill utilizing training shift.

Thursday, June 26

Friday, June 27

Exit- General Manager's Conference Room at 0900 (9:00 A.M.)

Scots and O...



### **SCOPE:**

The purpose of this drill is to demonstrate by actual performance in a dynamic simulator setting the primary emergency preparedness functions that will be performed by the operating crew prior to augmentation of other emergency facilities.

At no time will the drill be permitted to interfere with the normal safe operation of the plant.

The drill will include the appropriate offsite dose calculations and simulated notifications to Federal, State, Local, and plant emergency personnel.

Using the applicable procedures and instructions, the operating crew will respond to the following:

- Control Rod Drift
- Fuel Failure
- Loss of Offsite Power
- RCIC Steam Leak with Failure to Isolate
- Emergency Depressurization Due to High Offsite Release Rate
- Implement the Emergency Plan as necessary

### **Drill Objectives:**

The primary objective of the Emergency Preparedness Core Inspection drill is to demonstrate the adequacy of the operating shift and other required emergency response personnel during a simulated accident. The simulated accident will be represented only to the point of augmentation for the shift by the activation of the other emergency facilities. In general, the scenario will include the following objectives for the operating crew:

1. Provide plant overview during initial Emergency Procedure implementation.
2. Classifies the emergency as an Unusual Event in accordance with 10-S-01-1, Activation of the Emergency Plan, 3.1.1 or 3.1.2 if required.
3. Assume the role of Emergency Director upon initial classification of emergency and makes announcement to the operating crew in accordance with 10-S-01-1, Activation of the Emergency Plan.
4. Performs assessment actions and directs actions from other departments to ensure safe operation of the plant and protection of plant personnel, the general public, and plant equipment.
5. Completes a Notification form in accordance with 10-S-01-6, Notification of Offsite Agencies and Plant On-Call Emergency Personnel.
6. Designates communicators to make initial notifications to the state and local agencies within fifteen minutes of declaration and the NRC Operations Center immediately after but within one hour of declaration.
7. Activates the VIP 2000 in accordance with 10-S-01-6, Notification of Offsite Agencies and Plant On-Call Emergency Personnel.
8. Announces the nature and classification of the event over the plant paging system and the Administration Building paging system.

9. Classifies the emergency as an Alert in accordance with 10-S-01-1, Activation of the Emergency Plan, 3.2.1, 3.2.2. or 3.2.3 if required.
10. Activates ERDS (Emergency Response Display System) within one hour of the declaration of an Alert or higher classification.
11. Ensures an Offsite Dose Calculation is performed following the declaration of an Alert or higher.
12. Performance of an Offsite Dose Calculation by the on-shift Chemist.
13. Implements Emergency Plan procedures as necessary.
14. Upgrades the emergency to a Site Area Emergency in accordance with 10-S-01-1, Activation of the Emergency Plan, if required.
15. Upgrades the emergency to an General Emergency in accordance with 10-S-01-1, Activation of the Emergency Plan, if required.
16. Issues Protective Action Recommendations when a General Emergency is declared.



# Scheduled Participants

## Drill Participants

### Morning Scenario:

#### "E" Shift

Shift Superintendent	McIntyre, Thomas
Shift Supervisor	Weaver, Frank
Plant Supervisor	Roberts, Charlie
Reactor Operator	Keesee, Sandra
Reactor Operator	Griffith, Walter
Reactor Operator	Elliott, Steve
Primary Communicator	Broome, Bryan
Secondary Communicator	McGuffee, Barry
Offsite Dose Calculator	Brad Philpott

### Afternoon Scenario

#### "F" Shift

Shift Superintendent	Sparks, Greg
Shift Supervisor	Miller, Chris
Plant Supervisor	Powell, Tony
Reactor Operator	Hall, Errol
Reactor Operator	Killingsworth, David
Reactor Operator	Hogue, Ronnie
Primary Communicator	Thomas, Barry
Secondary Communicator	Weeks, J. D.
Offsite Dose Calculator	Eric James



SECRET



**ENTERGY**

**GRAND GULF  
NUCLEAR STATION**

**EMERGENCY PLANNING  
DEPARTMENT**

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**June 25, 1997 Emergency Preparedness Assessment (82701) Drill**

**CONTROL ROD DRIFTS / ATWS/ FUEL FAILURE / MSL  
STEAM LEAK IN TURBINE BUILDING / FAILURE TO  
ISOLATE OF B MSL/ OFFSITE DOSE RATES > GENERAL  
EMERGENCY LEVEL (EP-2 and EP-4)**



APPROXIMATE TIME: 1.25 HOURS

REFERENCES:

1. 05-S-01-EP-2, RPV Control
2. 05-S-01-EP-21, RPV Control - ATWS
3. 05-S-01-EP-3, Primary Containment Control
4. 05-S-01-EP-4, Auxiliary Building and Radioactive Release Control
5. 05-1-02-I-1, Reactor Scram
6. 05-1-02-I-4, Loss of AC Power
7. 05-1-02-IV-1, Control Rod / Drive Malfunctions
8. 05-1-02-II-2, Offgas Activity High
9. 10-S-01-1, Activation of the Emergency Plan
10. 10-S-01-19, Personnel Injury
11. 10-S-01-, Notification of Offsite Agencies and Plant On-Call Emergency Personnel.
12. GGNS Technical Specifications
13. 01-S-06-2, Conduct of Operations
14. SOER 94-1, Nonconservative Decisions and Equipment Performance Problems Result in a Reactor Scram, Two Safety Injections, and Water-Solid Conditions
15. SOER 96-1, Control Room Supervision, Operational Decision-Making, and Teamwork

TERMINAL OBJECTIVE:

Given the applicable procedures and instructions, respond to the following:

- Aircraft Crash into Non-Vital Onsite Structure
- CRD Pump Trip
- Drift of Two Control Rods
- ATWS
- Fuel Failure
- Main Steam Line Break Outside Containment
- Failure of a Main Steam Line to Isolate
- Emergency Depressurization Due to High Offsite Release Rate (or to stop steam leak)
- Implement the Emergency Plan as necessary

ENABLING OBJECTIVES:

Upon completion of this simulator scenario, the operating crew will complete the following objectives in accordance with simulator performance standards.

A. CREW

1. Perform the immediate and subsequent actions associated with the Control Rod / Drive Malfunctions ONEP for a control rod pump trip.
2. Perform the immediate and subsequent actions associated with the Control Rod / Drive Malfunctions ONEP for a control rod drifts.
3. Perform the immediate and subsequent actions associated with the Reactor Scram ONEP.
4. Perform the immediate and subsequent actions associated with the Loss of AC Power ONEP.
5. Perform the immediate and subsequent actions associated with the Offgas Activity High ONEP.
6. Recognize and respond to entry conditions of EP2.
7. Recognize and respond to entry conditions of EP3.
8. Recognize and respond to entry conditions of EP4.

B. RO

1. Perform the immediate and subsequent actions associated with the Control Rod / Drive Malfunctions ONEP for a control rod pump trip.
2. Perform the immediate and subsequent actions associated with the Control Rod / Drive Malfunctions ONEP for control rod drifts.
3. Perform the immediate and subsequent actions associated with the Reactor Scram ONEP.
4. Perform the immediate and subsequent actions associated with the Loss of AC Power ONEP.
5. Perform the immediate and subsequent actions associated with the Offgas Activity High ONEP.



6. Recognize and respond to entry conditions of EP2.
7. Recognize and respond to entry conditions of EP3.
8. Recognize and respond to entry conditions of EP4.

C. Plant Supervisor

1. Direct the activities associated with the Control Rod / Drive Malfunctions ONEP for a control rod pump trip.
2. Direct the activities associated with the Control Rod / Drive Malfunctions ONEP for two control rod drifts.
3. Direct the activities associated with the Reactor Scram ONEP.
4. Direct the activities associated with the Loss of AC Power ONEP.
5. Direct the activities associated with the Offgas Activity High ONEP.
6. Direct the activities associated with EP-2.
7. Direct the activities associated with EP-3.
8. Direct the activities associated with EP-4.

D. Shift Supervisor/STA

1. Recommend actions to ensure that core cooling is maintained.
2. Independently verify the operating shift's identification of an event.
3. Evaluate the incident to determine that events are following the expected sequence.
4. Assist in evaluating the point-of-operation of the Emergency Procedure (EP) curves.
5. Recommend actions to mitigate or terminate the event.
6. Determine if indications of core damage are present.
7. Provide recommendations on classification of event in terms of levels of the Emergency Plan.
8. Analyze indications to determine the cause of the event.
9. Check systems governed by Tech Specs to ensure operability requirements are met.
10. Clarify Tech Specs and apply action statement requirements to an event.

D. Shift Superintendent

1. Provide plant overview during initial Emergency Procedure implementation.
2. Classify the emergency as an Alert in accordance with 10-S-01-1, Activation of the Emergency Plan, 15.2.1.

3. Assume the role of Emergency Director upon initial classification of an emergency and makes announcement to the operating crew in accordance with 10-S-01-1, Activation of the Emergency Plan.
4. Performs assessment actions and directs actions from other departments to ensure safe operation of the plant and protection of plant personnel, the general public, and plant equipment.
5. Completes a Notification form in accordance with 10-S-01-6, Notification of Offsite Agencies and Plant On-Call Emergency Personnel.
6. Designates communicators to make initial notifications to the state and local agencies within fifteen minutes of declaration and the NRC Operations Center immediately after but within one hour of declaration.
7. Activates the VIP 2000 in accordance with 10-S-01-6, Notification of Offsite Agencies and Plant On-Call Emergency Personnel.
8. Announces the nature and classification of the event over the plant paging system and the Administration Building paging system.
9. Simulate activating ERDS (Emergency Response Display System) within one hour of the declaration of an Alert or higher classification.
10. Ensures an Offsite Dose Calculation is performed following the declaration of an Alert or higher.
11. Implements Emergency Plan procedures as necessary.
12. Upgrades the emergency to a Site Area Emergency in accordance with 10-S-01-1, Activation of the Emergency Plan, if required.
13. Upgrades the emergency to an General Emergency in accordance with 10-S-01-1, Activation of the Emergency Plan, if required.
14. Issues Protective Action Recommendations when a General Emergency is declared.



## I. SUMMARY

The plant is operating at 100% power four months into the cycle. This is an off Friday and scheduled work is at a minimum today. The Chief Operating Officer is scheduled to bring some junior members of Congress down to the plant site for a tour today so housekeeping is a priority today.

### At time 10:

The Director of PP&S calls the Control Room and informs them that he just witnessed the company's helicopter crash into the Unit II warehouse just across from the SSW basins. There is no fire at this time. He is not sure if anyone was at work in the warehouse or how many persons was on the helicopter. He will be going over to the scene as soon as he hangs up.

- Fire Brigade Dispatched to the scene.
- Shift Superintendent assumes the role of Emergency Director.
- Declares an Alert.
- Emergency Director implements Emergency Plan.

### At time 40:

Plant Supervisor will report that the pilot is conscious and is being readied to be transport to the Parkview Regional Medical Center. No fire has erupted and the fuel that has leaked has been foamed down. He reports that he will be returning to the Control Room leaving two fire brigade members standing by while waiting on FAA officials.

### At time 45: (After Plant Supervisor has returned to Control Room)

Health Physics personnel will contact the Control Room and inform them that a turbine building roof hatch is open and Operations personnel need to take actions to close it.

- Condition Report may be initiated
- Plant Supervisor will contact a Non-licensed Operator to close hatch

### At time 46:

The running CRD pump will receive a spurious trip. The standby pump will be started. When the standby pump is started, two control rods will start drifting in. Upon recognition of the two rods, a manual scram will be inserted. All rods will not insert due to a hydraulic block in the Scram Discharge Volume and an ATWS will exist.

- EP-2A will be entered.
- Since the turbine is still on line, reactor water level and reactor pressure may be maintained in its normal band as allowed by the EP-2A. The power leg of the EP will direct the shift to call for attachments 18, 19, and 20.

### At time 52:

A overcurrent lockout will occur on Load Control Center 16BB4. Breaker 52-16401 will have a ground. The LCC can be repaired by replacing the breaker. Power to the motor operated steam supply shutoff valves will be lost rendering the valves unable to be closed.

**At time 55:**

Report of possible steam in the Turbine Building. Small Main Steam Line break will occur. Break will be accompanied by Turbine Bldg Ventilation High-High Radiation alarms and various area radiation monitors. The severity of the fuel failure malfunction will be increased to the point where MSL HI radiation alarm will annunciate. This will be an entry condition for EP-4. Offgas Pretreatment HI and HI-HI alarms will also illuminate requiring response per the Offgas Activity High ONEP.

- Crew will attempt to isolate steam leak by closing MSIVs.
- "B" MSL will not isolate.

**At time 57:**

The security shift supervisor will call the Control Room and inform them that door 1T302 stills indicates open from where the operator exited it. He will request a Condition Report be initiated for the exit of the emergency door. Fuel failure has begun due to flux tilts and rod tip crossing.

**NOTE:**

Crew may decide to emergency depressurize the RPV to stop the uncontrolled steam leak.

**At time 70:**

Offsite Dose Calculator will report that analyses indicates a TEDE at the site boundary of 1140 mrem/yr. The Shift Superintendent/Emergency Director will reclassify the event as a General Emergency and inform the Plant Supervisor that offsite release rates are above the General Emergency level. In accordance with EP-4, the Plant Supervisor will direct an Emergency Depressurization. The Shift Superintendent/Emergency Director will recommend to the state and local agencies to evacuate for a two mile radius, 5 miles in downwind sectors and to seek shelter for the remainder in a ten mile Emergency Planning Zone (EPZ).

**At time 90:**

The repair team will report to the Control Room that they have replaced the breaker for 52-16401 and that the Control Room may attempt to close it if desired. Once the breaker is closed, B21-F098A-D may be closed terminating the un-monitored release. The drill may be terminated after this if the Superintendent/Emergency Director has made the Protective Action Recommendation for the General Emergency.



## **II. SIMULATOR INITIALIZATION AND PLANT CONDITIONS**

### **A. Simulator Initialization**

1. Reset the simulator, clear or verify clear all the counters at the top of the screen and kill or verify killed all cases.
2. Enter the following command and press enter:  
case simsc EXD88
3. Take the simulator out of freeze
4. Startup all PDS/SPDS screens. Clear any graphs and trends off of SPDS.
5. Ensure the correct shutdown sequence is available at the P680 for the present IC.  
NOTE: Cases can take several minutes to execute. Use "Case Summary" to determine when the case is done.

6. Verify or perform the following

IC:	15
Power level:	100%

7. Run through any alarms and ensure alarms are on. Put the simulator in freeze if desired.
8. Refer to the following tables to ensure all simulator functions are inserted.

**Caution:** You may have to click on the item on the summary to see the full status. Click **CANCEL** when you are done to avoid altering the item.

9. Install turnover guide.
10. Advance all chart recorders and ensure all pens inking properly.
11. Enter the following meteorological conditions:
  - 1935 hours
  - wind speed of 4 mph
  - wind direction of 189
  - stability class D
  - Delta temperature 0.1 degree F

**The Simulator Instructor will need a copy of an Emergency Notification form to assist in the roll call once the communicator calls on the OHL.**

**B Simulator Function Summary****Malfunctions**

<u>Event</u>	<u>Malfunction</u>	<u>Severity</u>	<u>Trigger</u>	<u>Delay</u>	<u>Ramp</u>	<u>Title</u>
N/A	C11164	.05	N/A	N/A		CRD Scram Discharge Volume Hydraulic Block
N/A	C41263	1.0	N/A	N/A	N/A	SLC Piping Rupture
N/A	MS183B	N/A	N/A	N/A	N/A	"B" Inboard MSIV fails as is
	MS184B	N/A	N/A	N/A	N/A	"B" Outboard MSIV fails as is
1	021021_20_37		7			Control Rod 20-37 Drift
1	021021_20_17		7			Control Rod 20-17 Drift
2	RR071	.2	8		05 min	Fuel Cladding Leak (display shows 0.00) (to be ramped to 1.0 after MSIVs are closed)
2	R21142AA		8			480 Volt bus 16BB4 Overcurrent Trip
2	MS067B	.05	8	N/A	N/A	Small break of Main Steam Line "B"

**Component Malfunctions**

<u>Event</u>	<u>Component Malfunction</u>	<u>Severity</u>	<u>Trigger</u>	<u>Delay</u>	<u>Ramp</u>	<u>Title</u>
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<u>Event</u>	<u>Overrides Time</u>	<u>OVRD #</u>	<u>Severity</u>	<u>Trigger</u>	<u>Delay</u>	<u>Title</u>
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**C. Turnover Information:**

1. Place the simulator back in freeze for turnover with the following conditions:

Power	100%
Pressure	1020 psig
Pull sheet step	At target rod pattern
BOC	

Inform the crew during turnover of the following:

The plant is operating at 100% power four months into the cycle. This is an off Friday and scheduled work is at a minimum today. The Chief Operating Officer is scheduled to bring some junior members of Congress down to the plant site for a tour today so housekeeping is a priority today.

2. Assign positions and direct the crew to walk down the panels. Ensure the planned evolutions of the day are understood. After the crew has assumed the shift, the plant supervisor should conduct a pre-shift briefing.
3. All activities shall be done in accordance with approved procedures.
4. The simulator "console" instructor will simulate performing the duties of the building operators. He should ensure proper communication is practiced.
5. Refer to the tables at the end for this scenario for a detailed listing of expected operator actions.
6. The following instructions contain the minimum required actions of the crew. More notifications or actions may be performed in each event than expected.

<b>SCENARIO GUIDE</b>
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**III. SCENARIO ACTIVITIES****A. Aircraft crash into unit II warehouse.**

1. Ten minutes after the drill has commenced, the simulator instructor (SI) will call the Control Room as the Director of PP&S. The SI will state that he was just coming in on his off day and observed the company's helicopter veer sharply after taking off from the EOF and crash into the southwest corner of the Unit II warehouse. There is no sign of a fire at this time but you did not investigate the wreckage prior to calling to report the occurrence. You are not sure if anyone was at work but there were very few cars in the parking lot since it is an off Friday. You don't know how many people was on the helicopter. Inform the Control Room that you will assemble everyone you can find in the Site Services Building to help.
2. The Fire Brigade may be dispatched. If so, have the Plant Supervisor, acting as the Fire Brigade Leader, come into the Instructor's booth so that he can simulate talking to the Control Room and keep the Control Room informed.
3. The Control Room will contact Health Physics (for medical assistance) and provide them with what details of the crash they have. As HP, respond that you will dispatch a first aid team to the site.
4. The Shift Superintendent will declare an ALERT and call for communicators. The SI should allow the shift's communicator to answer either the radio or the telephone and respond accordingly.
5. Ten minutes after the initial call, have the Fire Brigade Leader (Plant Supervisor) contact the Control Room that the pilot was the only occupant of the helicopter. All MP&C personnel are accounted for and none have received injuries. The pilot has head and chest lacerations and will require transportation to an emergency medical facility. Fuel is leaking but has been foamed down and is being contained at the moment.
6. At drill time 30 minutes, have the Fire Brigade Leader contact the Control Room and inform them that the on-site ambulance is on its way to the scene. Inform the Control Room that the pilot's name is John Doe and that the EMT's do not think his injuries are life threatening.
7. At drill time 40 minutes, have the Fire Brigade Leader contact the Control Room and inform them that the on-site ambulance has left with the pilot in route to the Parkview Regional Medical Center. Actions have been taken to mitigate the possibility of a fire and that you are returning to the Control Room. (If the Shift Superintendent/ED contacts the offsite agencies to terminate the event, as a MEMA representative, ask that he allow you some time to consult with other officials)

**B. CRD pump trip and subsequent control rod drifts.**

1. At drill time 45 minutes, the SI will contact the Control Room as a Health Physics person and inform them that a turbine building roof hatch is open on the north end above areas 3/6. Ask if they could get someone to close it. (The shift may simulate writing a condition report for the operational event.)



## SCENARIO GUIDE

2. After the call to the Control Room has been completed, trigger event #7. The running CRD pump, pump "A", will trip. The crew will respond per the ONEP to start the standby pump. Thirty (30) seconds after the trip, two control rods will begin drifting in (20-17 and 20-37). When the two control rods are identified, a manual scram will be inserted.
3. All control rods will not insert due to a hydraulic lock on the Scram Discharge Volume. Power will decrease to less than twenty percent and the main turbine will stay on line. (The main turbine may trip on high water level depending on operator actions. Even if the main turbine trips, the bypass valves will be adequate to handle the steam flow.)
4. EP-2A will be entered via EP-2. The actions of EP-2A will lead the Plant/Shift Supervisor to request attachments 18, 19, and 20 be performed. The SI will enter the Control Area and obtain the attachments. Once the attachments are in hand, the SI will hit F1 to access the EP Attachment page. Once on the attachment page, click on the buttons for attachments 18, 19, and 20. After the attachment are active, return the paperwork (attachments) back to the Control Room to signify that they are complete.
5. An ATWS will be classified as a Site Area Emergency.
6. The crew should observe the loss of power to Load Control Center 16BB4. As initial actions of the ATWS are completed, the Shift Superintendent/ED may call the Electrical Shop to have electricians investigate the loss of power. (The plant supervisor will direct the operator response.) Respond as the Electrical Supervisor that you will get an electrician to the LCC as soon as possible. If the Auxiliary Building operator is dispatched to check on the LCC, wait five minutes and then inform the Control Room that breaker 52-16401 is open and the white reset (86 device reset) button is sticking out further than normal.
7. At drill time 55 minutes, the SI, acting as the Turbine Building Operator will contact the Control Room with a sense of urgency. Report that you have violated radiological policies by exiting the emergency exit door in the stairway on 133 of the Turbine Building. Explain that when you exited the Main Turbine Lube Oil Reservoir room, you encountered what you think was steam filling the building. It was very warm and blinded you momentarily. (The SI conversation should be such that it becomes obvious there is a steam leak in the Turbine Building that is of personnel safety significance.)
8. As the fuel failure malfunction increases in severity, the Main Steam Line (MSL) Radiation High annunciator will alarm. This will be an entry condition to EP-4. Directions from EP-4 will direct the crew to attempt to isolate the leak. When the MSIVs are closed, the "B" line will remain open.
9. When the three Main Steam Lines are closed, **increase the severity of RR071, Fuel Failure, to 1.0 over two minutes.** The one remaining steam line will not provide the same magnitude of readings as the four lines had been supplying. Increasing the malfunction will enable the MSL Radiation High alarm to stay in.

## SCENARIO GUIDE

10. SI will return the EP attachments to the Control Room when they become active.
11. At drill time 57, SI will call the Control Room as Security Shift Supervisor and inform them that it appears the operator did not close door 1T302, emergency exit door on the 133 elevation in the turbine since it is still in alarm. (If the shift requested a non-licensed operator to close the turbine building roof hatch found open by the HP, contact the Control Room and ask them how you are suppose to close the hatch. Tell them you don't see how to get up on the roof.)

### C. Offsite Dose Calculations Exceed General Emergency Levels

1. At drill time 70 minutes, allow the Offsite Dose Calculator to inform the Shift Superintendent/ED that their calculations indicate a TEDE of 1140 mrem/hr at the site boundary.
2. After referring to the EALs, the Shift Superintendent/ED will upgrade the event to a General Emergency.
3. The Plant Supervisor will direct an Emergency Depressurization in accordance with EP-4.
4. Protective Action Recommendations will be included in the new notification to State and Local Agencies.

### D. Recovery Actions

1. If Electricians were dispatched to the LCC, at drill time 90 minutes inform the Control Room that breaker 52-16401 has been repaired and that you would like the Control Room to energize the LCC.
2. Once the motor operated main steam line shutoff valves, B21-F098A-D have been closed and protective action recommendations communicated to the offsite agencies, place the simulator in freeze and inform the crew that the drill is terminated.

## IV. REVIEW

- A. Compare the crew's actions to those required by applicable procedures (see References). Critique any differences.
- B. Review the scenario's activities against scenario objectives.
- C. Provide drill critique and feedback to the Crew.



## EXPECTED ACTIONS FOR EVENT #1

Crew Task Description: AIRCRAFT CRASH INTO UNIT II WAREHOUSE

Complete	Position	Expected Actions/Behavior
	SST	DECLARES AN ALERT
	PSV	MUSTERS THE FIRE BRIGADE AND ACTS AS LEADER
	SST	ASSUMES THE ROLE OF EMERGENCY DIRECTOR AND MAKES ANNOUNCEMENT
	SST	COMPLETES A NOTIFICATION FORM
	SST	DESIGNATES COMMUNICATORS
	SST	ACTIVATES THE VIP 2000
	SST	ANNOUNCES THE EVENT OVER THE PAGING SYSTEM
	SST	ACTIVATES ERDS (simulated since not on Simulator)
	SST	REQUESTS AN OFFSITE DOSE CALCULATION
	SST	IMPLEMENTS PERSONNEL INJURY PROCEDURE

## EXPECTED ACTIONS FOR EVENT #2

CREW TASK DESCRIPTION: CRD PUMP TRIP AND CONTROL ROD DRIFTS

Complete	Position	Expected Actions/Behavior
	CRO	RESPOND TO AND REPORTS CRD TRIP ALARM
	PSV	DIRECT ACTION OF CRD MALFUNCTION ONEP
	ACRO	DIRECTS TWO CONTROL ROD DRIFTS
	PSV	DIRECT A MANUAL SCRAM
	ACRO	INSERTS MANUAL SCRAM, REPORTS ATWS
	PSV	ENTERS EP-2A
	PSV	REQUESTS ATTACHMENTS 18, 19, 20
	CRO	ANNOUNCES LOSS OF POWER TO 16BB4
	SST	CLASSIFIES THE EVENT AS SITE AREA EMERGENCY,
	PSV	DIRECTS MSIVS CLOSED TO STOP STEAM LEAK
	CRO	ANNOUNCES FAILURE OF MSL B TO ISOLATE
	CRO	ANNOUNCES THAT B21-F098B DOES NOT HAVE POWER
	SST	DIRECTS REPAIR TEAM TO LCC 16BB4

## EXPECTED ACTIONS FOR EVENT #3

CREW TASK DESCRIPTION: OFFSITE DOSE LEVEL EXCEED GE LEVELS

Complete      Position      Expected Actions/Behavior

	ST	GENERAL EMERGENCY ON TEDE
	ST	V OF GE LEVELS FOR EP-4
	SV	RGENCY DEPRESSURIZATION PER EP-4
	RO	EAST FIVE ADS/SRVs AS DIRECTED
	SV	ACING SUPPRESSION POOL COOLING IN SERVICE
	RO	PRESSION POOL COOLING IN SERVICE (A LOOP ONLY)
	ST	TECTIVE ACTION RECOMMENDATIONS TO PUBLIC

## EXPECTED ACTIONS FOR EVENT #4

CREW TASK DESCRIPTION: OFFSITE DOSE LEVEL EXCEED GE LEVELS

Complete      Position      Expected Actions/Behavior

	PSV	DIRECTS CRO TO CLOSE FEEDER BREAKER TO 16BB4
	PSV	DIRECTS B21-FO98A-D CLOSED WHEN POWER IS RESTORED



GRAND GULF NUCLEAR STATION  
EMERGENCY DOSE PROJECTION FOR 06/25/0830

Line Number	Item	Data
7	Rx Shutdown	06/25/97, 0846
8.A	Wind Direction	From 189 at 4.0 mph
8.B.	Affected Sectors	RAB
8 C.	Stability Class	D
9	Release Info	Duration 2 hrs Started 06/25/97
10	Type of Release	Radioactive Gases
11 A.	Release Rate	Noble Gases
11.B	Release Rate	Iodine
12.A.	Dose Commitment	2 hr.
12.B.	TEDE Dose	TEDE Dose in mRem SB 1.14 +E3 2 Mile 1.95 +E2 5 Mile 6.11 +E1 10 Mile 2.38 +E1
12.C	CDE Dose	Thyroid Dose in mRem SB 1.12 +E4 2 Mile 2.02 +E3 5 Mile 6.93 +E2 10 Mile 2.99 +E2

# NUCLIDE MIX DATA

Kr-85	0000	I-131	2.1815
Kr-85m	0000	I-132	20.07
Kr-87	.4451	I-133	13.9617
Kr-88	.4538	I-134	38.3948
Sr-89	0000	I-135	21.8153
Sr-90	0000	Xe-131m	.0004
Sr-91	0000	Xe-133	.1833
Y-91	0000	Xe-133m	.0067
Mo-99	0000	Xe-135	.5148
Ru-103	0000	Xe-138	1.8325
Ru-106	0000	Cs-134	0000
Sb-127	0000	Cs-136	0000
Sb-129	0000	Cs-137	0000
Te-129m	0000	Ba-140	0000
Te-131m	0000	La-140	0000
Te-132	0000	Ce-144	0000
		Np-239	0000