

GULF STATES UTILITIES  
RIVER BEND STATION  
1991  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE

JANUARY 30, 1991

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1991 EMERGENCY PREPAREDNESS PRACTICE EXERCISE

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SECTION 1.0

INTRODUCTION

**RIVER BEND STATION**  
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**1.0**      **INTRODUCTION**

The River Bend Station (RBS), owned and operated by Gulf States Utilities (GSU), conducts a practice exercise in preparation for the annual joint Emergency Plan Evaluated Exercise with the State of Louisiana and the Parishes of East and West Feliciana, East and West Baton Rouge, and Pointe Coupee. These exercises are conducted for the purpose of demonstrating that the health and safety of the residents of the five parishes can be protected in the event of a radiological emergency at the plant.

The practice exercise will be conducted as outlined in Section 6, and will include full mobilization of GSU, State, and Parish agencies and resources, in order to demonstrate the capabilities to jointly respond to an accident at the plant. The exercise will demonstrate that emergency response organizations are adequately trained to respond according to current plans and procedures. Exercise participants will not have prior knowledge of the scenario.

The exercise will be observed and critiqued by evaluators assigned by GSU. A critique will be conducted following the exercise to discuss exercise findings identified. The time schedule for the critique is identified in Section 6 and will be attended by exercise Controllers, Evaluators and key exercise participants. All exercise findings will be characterized and documented and subsequent resolution of emergency preparedness deficiencies shall be assured by management.

This manual has been prepared to assist exercise Controllers, Evaluators and Observers in the conduct and evaluation of the exercise. This manual contains all information and data necessary to properly conduct the exercise in an efficient and coordinated manner.

SECTION 2.0

SCOPE AND OBJECTIVES

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2.0      SCOPE AND OBJECTIVES

2.1      SCOPE

The 1991 River Bend Station Emergency Preparedness Practice Exercise, to be conducted on January 30, 1991, will test and provide the opportunity to evaluate Gulf States Utilities' emergency plan and procedures as well as those of the State and local parishes. It will also test the emergency response organizations' ability to assess and respond to emergency conditions and coordinate efforts with other agencies for protection of the health and safety of the public.

The scenario will depict a simulated sequence of events, resulting in sufficiently degraded conditions to warrant the mobilization of GSU, State and local agencies to respond to the emergency. Whenever practical, the exercise will incorporate provisions for "free play" on the part of the participants.

2.2      OBJECTIVES

The River Bend Station 1991 Practice Exercise objectives are based on the Nuclear Regulatory Commission (NRC) requirements delineated in 10 CFR 50.47 and 10 CFR 50, Appendix E. Additional guidance is provided in NUREG 0654, FEMA-REP-1, Revision 1.

The major objective of the exercise is to evaluate the integrated capability of a major portion of the basic elements identified in the emergency plans and procedures. The specific objectives of the exercise to be demonstrated are listed below.

2.2.1      Gulf States Utilities Objectives

- A. Demonstrate the ability to assess initial values of plant system and effluent parameters and provide continuing assessment of those parameters throughout the course of the accident.

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- B. Demonstrate the ability to determine which emergency action level has been reached and properly classify the emergency using the emergency action levels identified in emergency procedures.
- C. Demonstrate the ability to alert, notify and mobilize emergency response personnel, and facilities, send out initial emergency messages, and warn or advise individuals who may be in areas within the owner controlled area as necessary.
- D. Demonstrate the reliability and effective use of onsite and offsite emergency communications equipment and procedures.
- E. Demonstrate the ability to control radiological exposures, determine doses, control contamination, perform dose assessment, and monitor individuals.
- F. Demonstrate the ability to make the appropriate protective action recommendations to State and local authorities utilizing all relevant factors.
- G. Demonstrate the line of succession for the Emergency Director/ Recovery Manager at the required emergency classification.
- H. Demonstrate the ability to activate Security/Fire Brigade in response to plant conditions.
- I. Demonstrate the capability of the first responders and search and rescue teams.
- J. Demonstrate the ability to handle a contaminated injured individual and transport to a medical support facility.



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- K. Demonstrate the ability of Security personnel to provide prompt access for emergency equipment and support.
- L. Demonstrate the ability to determine and issue potassium iodide (KI).
- M. Demonstrate the ability to perform accountability of onsite personnel within 30 minutes of the start of the emergency and account for all onsite personnel continuously thereafter.
- N. Demonstrate the ability to perform recovery operations.
- O. Demonstrate the ability to fully activate the Joint Information Center (JIC).
- P. Demonstrate the ability to control rumors.

**2.2.2 Local and State Government Objectives**

The River Bend Station 1991 Emergency Preparedness Exercise objectives for the Parishes and State of Louisiana are based on the Federal Emergency Management Agency (FEMA) requirements delineated in NUREG-0654, FEMA-REI-1, Rev. 1 and Guidance Memorandum Ex-3, March 1988. The specific objectives of the exercise to be demonstrated are listed below.

**Objectives for Parish EOC's**

- A. Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECL's as required by the scenario. The four ECL's are: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.

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- B. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- C. Demonstrate the ability to direct, coordinate and control emergency activities.
- D. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- E. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.
- F. Demonstrate the ability to continuously monitor and control emergency worker exposure.
- G. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local official(s).
- H. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.
- I. Demonstrate the ability to brief the media in an accurate, coordinated and timely manner.
- J. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion (Media briefings and interface are conducted at the Joint Information Center (JIC) at River Bend Station (RBS). Rumor control is also conducted at the JIC through coordination between the Spokesperson and the EOC).

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- K. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.
- L. Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons and institutionalized persons).
- M. Demonstrate the ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ. This objective will be demonstrated within the EOC only (not outside of it.).
- N. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas (EOC staff discussions will include overall traffic control/access control problems and establishment. But, only one traffic control point/access control point will be established in each parish.).
- O. Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies' assistance.
- P. Demonstrate the ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available EPA PAG's and other relevant factors.
- Q. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.

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Objectives for Mon/Decon Centers

- A. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- B. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- C. Demonstrate the ability to continuously monitor and control emergency worker exposure.
- D. Demonstrate the adequacy of facilities, equipment, supplies, procedures and personnel for decontamination of emergency workers, equipment and vehicles and for waste disposal.

Objectives for Centriplex Reception/Care Centers

- A. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- B. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- C. Demonstrate the ability to continuously monitor and control emergency worker exposure.
- D. Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees.

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- E. Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees (This objective is to be demonstrated by walk-throughs and discussions at the Riverside Centerplex and \_\_\_\_\_ (Later) School, by the Red Cross and School staff that would operate the center.).
- F. Demonstrate the adequacy of facilities, equipment, supplies, procedures and personnel for decontamination of emergency workers, equipment and vehicles and for waste disposal.

Objectives for West Feliciana Hospital & Ambulance Service

- A. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- B. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- C. Demonstrate the ability to continuously monitor and control emergency worker exposure.
- D. Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured or exposed individuals.
- E. Demonstrate the adequacy of medical facilities equipment, procedures and personnel for handling contaminated, injured or exposed individuals.

Objectives for State EOC

- A. Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation

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of emergency functions and activities corresponding to ECL's as required by the scenario. The four ECL's are: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.

- B. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- C. Demonstrate the ability to direct, coordinate and control emergency activities.
- D. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- E. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.
- F. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAG's, availability of adequate shelter, evacuation time estimates and other relevant factors.
- G. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local official(s).
- H. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.
- I. Demonstrate the ability to brief the media in an accurate, coordinated and timely manner (EOC staff discussions will include overall traffic

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control/access control problems and establishment. But, only one traffic control point/access control point will be established in each parish.).

- J. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion (Media briefings and interface are conducted at the Joint Information Center (JIC) at River Bend Station (RBS). Rumor control is also conducted at the JIC through coordination between the Spokesperson and the EOC.).
- K. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radiiodine releases.
- L. Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies' assistance.
- M. Demonstrate the ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available EPA PAG's and other relevant factors.
- N. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.

Objectives for LRPD, OPNS-RBNS EOC

- A. Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECL's as required by the scenario. The four ECL's are: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.

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- B. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- C. Demonstrate the ability to direct, coordinate and control emergency activities.
- D. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- E. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.
- F. Demonstrate the ability to continuously monitor and control emergency worker exposure.
- G. Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure, based on plant and field data.
- H. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAG's, availability of adequate shelter, evacuation time estimates and other relevant factors.
- I. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate State and/or local official(s).
- J. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.



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- K. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.
- L. Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies' assistance.
- M. Demonstrate the ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available EPA PAG's and other relevant factors.
- N. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.

Objectives for LRPD Field Teams

- A. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- B. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- C. Demonstrate the ability to continuously monitor and control emergency worker exposure.
- D. Demonstrate the appropriate equipment and procedures for determining field radiation measurements.
- E. Demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as  $10^{-7}$  microcurie per cc in the presence of noble gases.

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- F. Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses.
- G. Demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).

Objectives for LRPD Lab Operations

- A. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- B. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- C. Demonstrate the appropriate lab operations and procedures for measuring and analyzing samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).

Objectives for JIC

- A. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.
- B. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.
- C. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.

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- D. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.
- E. Demonstrate the ability to brief the media in an accurate, coordinated and timely manner.
- F. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion (Media briefings and interface are conducted at the Joint Information Center (JIC) at River Bend Station (RBS). Rumor control is also conducted at the JIC through coordination between the Spokesperson and the EOC.).
- G. Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change.

2.3 SIMULATIONS

- o Decontamination of onsite emergency workers and equipment will be simulated.
- o Anti-contamination clothing will be worn, as deemed necessary by players, in response to simulated scenario conditions; however SCBAs will be worn and not activated.
- o Repair activities will be simulated.
- o Recovery actions will be limited to planning discussions.
- o Actual plant coolant and containment atmosphere samples will not be drawn.

SECTION 3.0

EXERCISE INFORMATION

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3.0      EXERCISE INFORMATION

3.1      CONDUCT OF THE EXERCISE

The exercise will simulate an abnormal radiological incident at the River Bend Station. The effectiveness of selected organizations, personnel and functions of the appropriate Emergency Plans and Implementing Procedures will be demonstrated. The simulated emergency will then be terminated. The Recovery Phase will be initiated, and the Exercise will then be concluded.

Emergency response actions during the simulated emergency will include: recognition and classification of emergency conditions; personnel accountability; search and rescue; Protected Area evacuation; assessment of onsite/offsite radiological consequences; alert/notification and mobilization of emergency response organizations; implementation of in-plant corrective actions, activation/operation of emergency response facilities and equipment; preparation of reports, messages, and record keeping; recommendation of protective actions (if necessary), termination of the emergency condition and limited recovery/reentry discussions.

The Simulator will be the central point for distribution of exercise messages and the key to ensuring that the Exercise progresses on schedule. Simulated plant parameters and annunciators will be provided to the Control Room operators using message forms and plant data sheets. A wide variety of plant information is provided so that at no time will the messages prompt the players or provide undue assistance in recognition of events. Information available on SPDS will also be provided in the TSC and the EOF where output consoles are located. Contingency messages (denoted by an 'x' after the message number) are delivered only when conditions described in the controller notes have been met.

Radiological and meteorological data (presented in Sections 9.0 and 10.0) and information included in the supplemental scenarios (Section 8.2) will be disseminated by controllers when players demonstrate the capability to obtain the information from appropriate sources. At no time, unless noted specifically as an exception, will

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information be interjected at a point where it would not be available in a real emergency. The Lead Controllers may interject other information or change a message to ensure that the Exercise progresses as planned.

The Exercise Players are expected to "free play" the scenario to the extent practical. If corrective actions are postulated that would terminate the emergency, they should be identified to the Lead Controller in the affected facility, so that the scenario will progress as designed. Notifications of, and contact with, supervisors, plant management, and offsite agencies will be made in accordance with the Emergency Plan Implementing Procedures. No simulations are to be allowed unless specifically noted in the Exercise Manual or directed by a Controller for scenario purposes.

**3.2 PRECAUTIONS AND LIMITATIONS**

This section provides information for all exercise Controllers and Observers related to the rules and guidelines to be followed throughout the conduct of this Exercise. Prior to initiation of the Exercise, a pre-exercise briefing will be held to review the entire exercise process with all the Exercise Controllers and Observers.

- o Should at any time during the course of the conduct of this Exercise, an actual emergency situation arise, all activities and communications related to the Exercise will be suspended. It will be the responsibility of any Exercise Controller or Observer that becomes aware of an actual emergency to suspend exercise response in his/her immediate area and to inform the Lead Exercise Controller of the situation. Upon notification of an actual emergency, the Lead Exercise Controller may notify all other Controllers to suspend all exercise activities.
  
- o Should, at any time during the course of the conduct of this Exercise, an exercise Controller or Observer witness an exercise participant undertake any action which would, in the opinion of the Controller, place either an individual

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or component in an unsafe condition, the Controller is responsible for intervening in the individual's actions and terminating the unsafe activity immediately.

- o All repair activities associated with the scenario will be simulated with extreme caution emphasized around operating equipment. Manipulation of any plant operating systems, valves, breakers, or controls in response to this Exercise is to be simulated. There is to be no alteration of any plant operating equipment, systems, or circuits during the response of this Exercise. No pressurization of fire hoses, discharging of fire extinguishers, or initiation of any fire suppression systems will be allowed for the Exercise.
- o All telephone communications, radio transmissions, and public address announcements related to the Exercise must begin and end with the statement, "This is a drill". Should a Controller witness a drill participant not observing this practice, it is the Controller's responsibility to remind the individual of the need to follow this procedure.
- o Any motor vehicle response to this Exercise, whether it be an ambulance, fire fighting equipment, police/security vehicles or field monitoring teams, should observe all normal motor vehicle operating laws including posted speed limits, stop lights/signs, one way streets, etc.
- o Care must be taken to assure that any non-participating individuals who may observe exercise activities or overhear exercise communications are not misled into believing that an actual emergency exists. Any Exercise Controller who is aware of an individual or group of individuals in the immediate vicinity who may have become alarmed or confused about the situation, should approach that individual or group and explain the nature of the Exercise and its intent.

SECTION 4.0

CONTROLLER INFORMATION



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4.0 CONTROLLER INFORMATION

4.1 GENERAL INFORMATION

Each Controller should be familiar with the following:

- o The objectives of the exercise (Section 2.0).
- o The assumptions and precautions being taken (Section 3.0).
- o The exercise scenario, including the initiating events and the expected course of action to be taken (Sections 7.0 and 8.0).
- o The various locations that will be involved and the specific items to be observed at those locations.
- o The evaluation checklists provided.

4.2 CONTROLLER INSTRUCTIONS

- o Controllers will position themselves at their assigned locations 30 minutes prior to the activation of the facility for which they have responsibility.
- o Controller communications equipment will be tested prior to exercise commencement. All watches and clocks will be synchronized with the Lead Exercise Controller as part of the communications testing.
- o All Controllers will comply with instructions from the Lead Exercise Controller.
- o Each Controller will have copies of the messages controlling the progress of the exercise scenario. No message shall be delivered out of sequence or other than as written unless specifically authorized by the Lead Exercise Controller.

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- o Controllers will not provide information to the Players regarding scenario progression or resolution of problems encountered in the course of the simulated emergency. The exercise participants are expected to obtain information through their own organizations and exercise their own judgement in determining response actions and resolving problems.
  
- o In the event any player insists that certain parts of the scenario are unrealistic, the Controllers have the sole authority to clarify any questions regarding scenario content.

**4.3 EVALUATION INSTRUCTIONS**

Each Controller will take detailed notes regarding the progress of the exercise and response of the exercise participants at their assigned locations. Each Controller should carefully note the arrival and departure times of participants, the times when major activities or milestones occur, and problem areas encountered. Controllers' comments will be used for the purpose of reconstructing the Exercise chronology and preparing a written evaluation of the Exercise.

Controller evaluation forms for each facility/team will be distributed at the pre-Exercise controller briefing.

#### 4.4 PERSONNEL ASSIGNMENTS

SECTION 5.0

PLAYER INFORMATION

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**5.0      PLAYER INFORMATION**

**5.1      GENERAL INFORMATION**

This section provides information for all exercise Players. These guidelines should be followed throughout the conduct of the Exercise. A pre-exercise briefing will be held for key players to review the entire exercise process, including "Precautions and Limitations" in Section 3.2, and the following information.

The success of the exercise is largely dependent on player performance. Appropriate reaction to simulated emergency conditions and demonstrated competence in the Emergency Plan and implementing Procedures are the key criteria by which the players are evaluated. It is imperative, therefore, that all player actions and activities are witnessed by a Controller. Any actions that are to be simulated must be brought to the attention of the Controller to ensure that credit is awarded. The success of the exercise is based on the demonstration of the predetermined exercise objectives.

**5.2      PLAYER GUIDELINES**

- o      Maintain a serious attitude throughout the exercise.
- o      Maintain courtesy and professionalism at all times.
- o      Teamwork is essential! Do your job and then help other people do theirs. For example, if you know certain information should be available, ask for it. This makes you look good and may reduce a deficiency for someone else.
- o      Think! Brainstorm and look for all possible solutions or consequences of events. Maintain the "big picture" of what is happening.
- o      Identify yourself by name and function to the Controller in your area. Always wear your identification badge.

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- o If you are entering normal nuclear station radiation areas, observe all rules and procedures. No one (including Controllers) is exempt from normal station radiological practices and procedures.

**NOTE: DO NOT ENTER HIGH RADIATION AREAS IN THE PLANT; FOLLOW ALARA PRINCIPLES.**

- o Observe all normal security procedures. All normal security procedures are in effect without exception. If a security condition arises, obey immediately the directions of Security Officers.
- o Elements of exercise play will be introduced through use of controlled exercise messages and by information generated by Players as a result of a particular emergency activity performed. Therefore, be responsible for initiating actions in accordance with instructions and responsibilities.
- o Communications should be concise and formal with use of abbreviations minimized. Always include "This is a drill".
- o Use and demonstrate knowledge of the Emergency Plan and Implementing Procedures.
- o No response to an exercise situation will be simulated without Controller approval. No action will be taken that reduces the margin of safety in the plant.
- o Keep a list of items which you believe will improve the plan and/or procedures. Provide this to your Controller/Evaluator at the end of the Exercise.
- o Remember, one of the main purposes of an exercise is for you to assure yourself that you are adequately prepared. Areas for improvement or lessons learned, when identified, will improve your overall emergency preparedness.

SECTION 6.0

SCHEDULE OF EVENTS

## SCHEDULE OF EVENTS

### January 28, 1991

<u>EVENT</u>	<u>TIME</u>	<u>PARTICIPANTS</u>	<u>LOCATION</u>
Player Briefing	1:00 p.m.	All Players	TC Auditorium

### January 29, 1991

<u>EVENT</u>	<u>TIME</u>	<u>PARTICIPANTS</u>	<u>LOCATION</u>
Controller Briefing	1:00 p.m.	All Controllers	TC Auditorium

### January 30, 1991

<u>EVENT</u>	<u>TIME</u>	<u>PARTICIPANTS</u>	<u>LOCATION</u>
Practice Exercise	7:30 a. m.	All	All Facilities
Facility Critiques	2:00 p.m.	All	All Facilities
Controller Critique	4:30 p.m.	Lead Controllers	EOF

### January 31, 1991

<u>EVENT</u>	<u>TIME</u>	<u>PARTICIPANTS</u>	<u>LOCATION</u>
Characterize Findings	8:00 a.m.	Lead Controllers	EOF
Management Critique	1:00 p.m.	Management & Players	TC Auditorium



SECTION 7.0

EXERCISE SCENARIO



Need  
copy  
for  
RIV

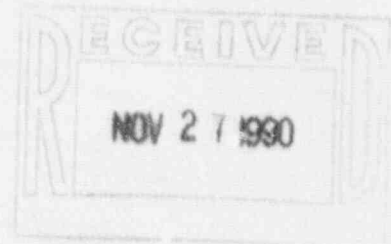


**GULF STATES UTILITIES COMPANY**

RIVER BEND STATION      POST OFFICE BOX 320      ST FRANCISVILLE, LOUISIANA 70775  
AREA CODE 504      835-6094      344-8851

November 21, 1990  
RBG- 34045  
File Nos. G9.5, G12.2.4

Mr. Robert Martin, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza, Suite 1000  
Arlington, TX 76011



Dear Mr. Martin:

River Bend Station - Unit 1  
Docket No. 50-458

Gulf States Utilities Company (GSU) is submitting the enclosed objectives to be fulfilled during the River Bend Station (RBS) Emergency Planning Exercise in order to support the February 27, 1991 RBS exercise date. The scenario package will be provided 60 days prior to the RBS exercise date.

Sincerely,

W. H. Odell  
Manager, River Bend Oversight  
River Bend Nuclear Group

*DNY*  
WHO/LAE/DNL/JWC/JCM/WMS/ks

cc: Mr. Frank J. Conjel, Director  
Division of Radiation Protection and  
Emergency Preparedness  
Office of Nuclear Reactor Regulation  
Washington, D.C. 20555

90-1795

IE-35

## RIVER BEND STATION EMERGENCY PLANNING EXERCISE OBJECTIVES

The River Bend Station 1991 Emergency Preparedness Exercise objectives are based on the Nuclear Regulatory Commission (NRC) requirements delineated in 10CFR50.47 and 10CFR50, Appendix E. Additional guidance is provided in NUREG 0654, FEMA-REP-1, Revision 1.

The primary objective of the exercise is to evaluate the integrated capability of a major portion of the basic elements existing within the onsite emergency plan and emergency response organization. The specific objectives of the the exercise are listed below.

- A. Demonstrate the ability to assess initial values of plant system and effluent parameters and provide continuing assessment of those parameters throughout the course of the accident.
- B. Demonstrate the ability to determine which emergency action level has been reached and properly classify the emergency using the emergency action levels identified in emergency procedures.
- C. Demonstrate the ability to alert, notify and mobilize emergency response personnel, and facilities, send out initial emergency messages, and warn or advise individuals who may be in areas within the owner controlled area as necessary.
- D. Demonstrate the reliability and effective use of onsite and offsite emergency communications equipment and procedures.
- E. Demonstrate the ability to control radiological exposures, determine doses, control contamination, perform dose assessment, and monitor individuals.
- F. Demonstrate the ability to make the appropriate protective action recommendations to State and local authorities utilizing all relevant factors.
- G. Demonstrate the line of succession for the Emergency Director/Recovery Manager at the required emergency classification.
- H. Demonstrate the ability to activate Security/Fire Brigade in response to plant conditions.
- I. Demonstrate the capability of the first responders and search and rescue teams.
- J. Demonstrate the ability to handle a contaminated injured individual and transport to a medical support facility.
- K. Demonstrate the ability of Security personnel to provide prompt access for emergency equipment and support.

- L. Demonstrate the ability to determine and issue potassium iodide (KI).
- M. Demonstrate the ability to perform accountability of onsite personnel within 30 minutes of the start of the emergency and account for all onsite personnel continuously thereafter.
- N. Demonstrate the ability to perform recovery operations.
- O. Demonstrate the ability to fully activate the Joint Information Center.
- P. Demonstrate the ability to control rumors.

SECTION 7.1

SCENARIO TIMELINE

River Bend Station  
1991 Practice Exercise

Sequence of Events

Clock Time	Event Time	Event Description
0730	-00/30	<p>Control Room briefing and Exercise Initial Conditions.</p> <p>SRV F051G has been weeping for approximately one week and, as of yesterday, appears to be intermittently chattering: Suppression Pool temperature is currently 94°F, and slowly decreasing. 'B' RHR is in Suppression Pool cooling mode.</p> <p>Fuel leakers are causing high gaseous activity in the Turbine Building and the Auxiliary Building. Chemistry samples indicate that Reactor Coolant Dose Equivalent Iodine (DEI) and Suppression Pool Chemistry are elevated.</p> <p>Condenser air inleakage (suspected to be through the turbine seals) has resulted in difficulty in maintaining main condenser vacuum. Gland sealing steam pressure has been raised to 7.0 psig as directed from the night orders, and condenser vacuum is stable at 27.3" Hg. Offgas flow has increased due to the inleakage.</p> <p>Standby Liquid Control System pump 'A' is out of service for a cylinder sleeve replacement due to severe scoring. Repairs have been underway since late yesterday morning. The pump is presently dismantled and it is expected that repairs will be completed by 1600 tomorrow.</p> <p>The plant is currently operating at 100% power. The core has 143 days equivalent full power exposure and has been operating at 100% power for the last 84 days.</p> <p>Meteorological Conditions: Clear today with a slight breeze from the Northwest, expected to increase to about 5 to 10 mph late this afternoon. Temperature is presently 42°F, with an expected high today of 58°F, and no precipitation likely for the next two days.</p>
0800	00/00	<p>While reactor power is being reduced to 90% in an attempt to close SRV F051G per procedure AOP-0035, air inleakage through the condenser seals increases, causing condenser vacuum to decrease. Annunciators in the Control Room alert operators to the increased</p>



River Bend Station  
1991 Practice Exercise

Sequence of Events

Clock Time	Event Time	Event Description
		flow through the offgas system. An NEO is dispatched to investigate the loss of vacuum. Refer to Supplemental Scenario #1 for additional information regarding the loss of vacuum.
0805	00/05	<p>The "Loop Seal Blown Water Level Low" alarm on Panel 845 annunciates. Position indication lights on the panel show the Prefilter Inlet Drain Valve, N64-F054, in mid-position, and the Prefilter Loop Seal Drain Valve, N64-F048, open. Control Room Operators are unable to remotely close either valve from Control Room Panel 845. Refer to Supplemental Scenario #2 for additional information regarding the loss of the loop seal and the resulting high airborne activity.</p> <p>Turbine Building and Offgas Area Radiation Monitors alarm on DRMS. Shift Supervisor orders an evacuation of the Turbine Building in accordance with the Alarm Response Procedure 1H13-P845-B/F06.</p>
0815	00/15	Operations and health physics personnel are sent to the Offgas Building and the Turbine Building to assess the radiological conditions and attempt to isolate and refill the loop seal. Health physics conducts a survey of the Offgas area and proceeds to take air samples.
0830	00/30	The Control Room verifies that the radiological release from the Turbine Building ventilation system is below Technical Specification limits.
0845	00/45	<p>Health physics reports airborne radiation levels in excess of 1000 times normal in the area near dirty waste drain sump 1CND-TK12 to the Control Room.</p> <p>An ALERT should be declared in accordance with EIP-2-001, ALERT #AL No. 4, Initiating Condition 2, "Alarm of DRMS Airborne Ventilation Monitors and Confirmation of Readings Greater Than 1,000 Times Normal Levels".</p>

River Bend Station  
1991 Practical Exercise

Sequence of Events

Clock Time	Event Time	Event Description
		The Shift Supervisor directs implementation of the following emergency procedures:
		EIP-2-003, "Alert"
		EIP-2-006, "Notifications"
		EIP-2-012, "Radiation Exposure Controls"
		EIP-2-013, "Onsite Radiological Monitoring"
		EIP-2-016, "Operations Support Center - Activation"
		EIP-2-017, "Operations Support Center - Support Functions"
		EIP-2-018, "Technical Support Center - Activation"
		EIP-2-019, "Technical Support Center - Support Functions"
		EIP-2-026, "Evacuation"
		EIP-2-027, "Personnel Accountability"
		EIP-2-023, "Joint Information Center Staff Activation and Support"
0915	01/15	An NEO is able to locally isolate the loop seal and terminate the release of radioactive gases into the Turbine Building. Condenser vacuum appears to have stabilized at approximately 26" Hg.
0930	01/30	The loop seal is refilled and unisolated per SOP-0092. Health Physics continues to monitor the affected areas.
0945	01/45	Condenser vacuum decreases below 25" Hg. Per AOP-005, "Loss of Condenser Vacuum", the Control Room begins to rapidly reduce power in an attempt to maintain condenser vacuum at or above 25" Hg.
1015	02/15	At approximately 40% power, condenser vacuum suddenly drops below 22.3" Hg, causing a turbine trip and reactor scram signal, but the reactor fails to fully scram, remaining at ~30% power. The resultant reactor level transient causes the MSIVs to close, containment isolations to take place, and ECCS to initiate and begin injecting into the vessel. SRVs cycle in an attempt to control pressure.

River Bend Station  
1991 Practice Exercise

Sequence of Events

Clock Time	Event Time	Event Description
		RCIC initiates, but the flow controller is unable to stabilize turbine speed. Oscillations cause the RCIC turbine to trip on overspeed. Refer to Supplemental Scenario #3 for additional information.
		Suppression Pool temperature increases rapidly as do Suppression Pool level, drywell pressure and drywell temperature. ECCS injection is manually overridden and ADS is manually inhibited. After 10 minutes, 'A' and 'B' loops of RHR are placed into the Suppression Pool cooling mode.
		Per EOP-1A, "Anticipated Transient Without Scram", operators initiate Standby Liquid Control. SLC 'B' pump trips on overcurrent within 2 minutes of initiation, and is unable to inject the required minimum amount of Boron into the reactor vessel. Subsequent investigation reveals that the SLC pump power supply breaker on 1EHS-MCC2A has failed. ('B' SLC is OOS as an initial condition.)
		Refer to Supplemental Scenario #4 for additional information regarding the ATWS and the subsequent recovery actions.
		With reactor pressure above 700 psig and Suppression Pool temperature rising past 160°F, the heat capacity temperature limit for the Suppression Pool (Figure 1, EOP-1A) is exceeded. An emergency depressurization of the reactor should be accomplished in accordance with EOP-1A.
		A SITE AREA EMERGENCY should be declared in accordance with EIP-2-001, SAE EAL No. 7, "Transient Requiring Operation of Shutdown Systems with Failure to SCRAM (ATWS)".
		The Emergency Director directs the implementation of the following procedures:
		EIP-2-004, "Site Area Emergency"
		EIP-2-006, "Notifications"
		EIP-2-020, "Emergency Operations Facility Activation"

River Bend Station  
1991 Practice Exercise

Sequence of Events

Clock Time	Event Time	Event Description
		EIP-2-023, "Emergency Operations Facility Support Functions"
		EIP-2-026, "Evacuation"
		EIP-2-027, "Personnel Accountability"
1030	02/30	With Control Room operators driving rods individually, reactor power has decreased to approximately 28%. Suppression Pool temperature is greater than 200°F, and primary containment temperature and pressure are still rising. With the SLC system inoperable and no Boron injection taking place, reactor level must be lowered to control reactor power in accordance with EOP-1A, Level/Power Control Section.
1045	02/45	Reactor level is being maintained between -100" and -193" by feedwater per EOP-1A, Level/Power Control Section. Control rods are being inserted into the reactor core individually; reactor power is about 25% and slowly decreasing.  SRVs are being used to maintain pressure below the minimum required for RPV flooding per EOP-1A, Table 2, and are providing the pathway for venting the steam being produced in the reactor to the Suppression Pool.
1135	03/35	A local loss of instrument air pressure results in the repositioning of air operated valves in the condensate system, causing a low suction pressure for the feedwater pumps. Feedwater pumps are now unavailable to provide makeup water to the RPV. Refer to Supplemental Scenario #6 for details.
1145	03/45	With vessel level at -193", and power at approximately 20%, operators must initiate makeup flow to the RPV to restore level to -100". Since feedwater pumps are still unavailable, HPCS is initiated and relatively cold (~200°F) water is injected directly inside the shroud. Valve E22*F004 fails to the completely open position, resulting in a rapid rate of injection, and producing a significant power spike (~120%) and causing substantial additional damage to the fuel cladding.

River Bend Station  
1991 Practice Exercise

Sequence of Events

Clock Time	Event Time	Event Description
		<p>The vibration and shock caused by this transient results in a pipe rupture and bellows seal failure of LPCI injection line 'C', downstream of LPCI injection valve E12*F042C. Steam, along with fission products released from the damaged fuel, is blowing directly into the primary containment. Refer to Supplemental Scenario #7 for additional information regarding this thermal/hydraulic transient and the cladding damage and LPCS piping break that result.</p>
1200	04/00	<p>Containment pressure increases rapidly to approximately 19 psig, since the RPV is now being vented directly to the containment by way of the ruptured LPCI line. Containment temperature increases to 187°F, and Suppression Pool temperature increases slightly.</p> <p>Emergency Director may consider these conditions as a challenge to containment integrity, since the two fission product barriers have already been breached. Loss of containment would result in a path for the release of radioactive material from the damaged fuel, into containment, through containment penetrations, and out to the environment through the Standby Gas Treatment System. A General Emergency <u>may</u> be declared at this time.</p> <p>Refer to Supplemental Scenario #8 for additional information regarding this breach of containment.</p>
1215	04/15	<p>The O-Ring seals on several containment electrical penetrations have failed, and fission product gases pass through the O-Ring seal areas, out the protective cover for the cables, and into the annulus. The radioactive products are picked up by Standby Gas Treatment and released to the environment.</p> <p>A GENERAL EMERGENCY should be declared in accordance with EIP-2-001, General Emergency EAL No. 2, Initiating Condition 5, "Loss of two of three fission product barriers with potential for loss of the third".</p>

River Bend Station  
1991 Practice Exercise

Sequence of Events

Clock Time	Event Time	Event Description
		The Emergency Director and Recovery Manager should direct the implementation of the following procedures:
		EIP-2-005, "General Emergency"
		EIP-2-006, "Notifications"
		EIP-2-007, "Protective Action Recommendation Guidelines"
		EIP-2-012, "Radiation Exposure Controls"
		EIP-2-013, "Onsite Radiological Monitoring"
		EIP-2-014, "Offsite Radiological Monitoring"
		EIP-2-024, "Offsite Dose Calculations"
1245	04/45	The 'A' SLC pump power supply has been repaired. SLC injection commences.
1315	05/15	With the minimum amount of boron injected into the vessel, reactor level restoration begins. Boron injection continues per EOP-1A.  Containment pressure has decreased to less than 1 psig, reactor pressure is negligible, and steam blowdown into containment has ceased. The release of airborne activity through the electrical penetrations has ended.
1325	05/25	The Reactor is subcritical with 111 lbs. of Boron injected into the reactor. Preparations are under way to establish a method of long term Shutdown Cooling.
1330	05/30	Shutdown Cooling has been established, all control rods are inserted, and operation of SLC is terminated.
1400	06/00	Recovery plans are formulated as the trailing edge of the plume disperses.
1430	06/30	The exercise is terminated.

SECTION 7.2

MASTER EVENTS SUMMARY

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
0730	-00/30	I.C.	CR	<p>Initial Conditions for the exercise are as follows:</p> <p>RBS is currently operating at 100% power and has maintained 100% power for 84 consecutive days. The core is near the middle of core life with an exposure of 143 equivalent full power days.</p> <p>SLC pump 'A' is out-of-service for mechanical repairs to the pump due to a scored cylinder sleeve. Pump repairs started yesterday morning. The pump is presently dismantled and repairs are expected to be completed by 1600 tomorrow.</p> <p>SRV F051G has been weeping for approximately one week. Last night erratic indications on the acoustic monitor along with tallpipe temperature variations indicated that the SRV was chattering. These indications happened twice more during the midnight shift. It has been decided to follow the operator actions outlined in procedure ACP-0035, Safety Relief Valve Stuck Open, and reduce Reactor Power to 90% in an attempt to reseal the SRV and prevent further chattering.</p> <p>Condenser air inleakage is suspected to be through the turbine gland seals. Gland sealing steam pressure was raised from 5.0 psig to 7.0 psig. Condenser vacuum has been stable at 27.3" Hg. for the past two days. Increased inleakage has resulted in increased offgas flow.</p> <p>Fuel leakers are causing high airborne conditions in the Turbine and Auxiliary Buildings. Chemistry samples indicate that</p>	<p>Shift Supervisor should inform the load dispatcher of the impending reduction in power and then direct the reactor operator to begin power reduction to 90%.</p>



River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
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reactor coolant Dose Equivalent Iodine (DEI) is now 0.8 uCi/gm and Suppression Pool chemistry is elevated. Technical Specification 3/4.4.5 LDO will be entered at 0800 on January 31.

Meteorological conditions are: Clear today with a slight breeze from the Northwest, expected to increase to about 5 to 10 mph late this afternoon. Temperature is presently 42°F, with an expected high today of 58°F, with no precipitation likely for the next two days. Because of the potential for SRV F051G to open and then stick open, operators are preparing to decrease reactor power to 90% per AOP-0035, Safety Relief Valve Stuck Open, to attempt to reseal the SRV.

Air leakage into the main condenser (suspected to be through the main turbine shaft seals), results in decreasing condenser vacuum. Even though gland sealing steam pressure was raised to about 7.0 psig, and condenser vacuum is stable at 27.3" Hg., it has not returned to its normal value of 28.5" Hg. Additional information concerning the air leakage problem is found in Supplemental Scenario No. 1.

Due to microcracks in some of the fuel cladding, radioactive gases produced during the fission process are leaking out through the cracks into the reactor coolant system. Some of these gases then carry over into the Turbine and Auxiliary Buildings through other systems that interface with the reactor coolant system and reactor vessel. Suppression Pool activity increases because of the weeping safety/relief valve.

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
0800	00/00	1	CR	<p>Air inleakage has caused Offgas System flow to increase to the alarm point. Condenser vacuum is slowly decreasing.</p> <p>See Supplemental Scenario No. 1, and provide condenser vacuum data from the attached graph as requested by the operators.</p>	<p>The Shift Supervisor should dispatch an operator to inspect for signs of additional inleakage or malfunction of equipment used to maintain vacuum (air ejectors, vacuum pump seals, water and loop seals), per AOP-005, Loss of Main Condenser Vacuum.</p> <p>Control Room operators should carefully check the Offgas System to ensure the recombiner is functioning properly.</p>
0805	00/05	1.1	CR	<p>Control room operators are unable to close valve N64-F054 from control panel P-845. The loop seal must be isolated locally.</p> <p>Main condenser vacuum continues to slowly decrease.</p> <p>Refer to Supplemental Scenario No. 2 for system valve arrangements and radiological information.</p> <p>Data indicate that monitors RE-118F and RE-118G (Turbine Bldg. ventilation) have increased by a factor of more than <math>10^3</math>.</p>	<p>Evacuate all unnecessary personnel from the Turbine Building per Alarm Response Procedure 1H13-P845-B/F06, Loop Seal Blown Water Level Low.</p> <p>The Offgas System parameters should continue to be checked, and condenser vacuum to be monitored.</p> <p>Radiation Protection is notified, and should begin to take samples of the Turbine Building atmosphere, and Offgas areas. Sample results are shown on Tables 9.2.15 and 9.2.16.</p> <p>Once it is determined that the loop seal is potentially unisolated and still blowing through, an NEO should be notified to go to the Offgas Building to check the condition of the loop seal, and isolate it if possible.</p>

River Bend Station  
 1991 Practice Exercise  
 Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
0810	00/10	1.2	CR	<p>Gases from the main condenser are now blowing into the Turbine Building through the dirty waste suction (1CND-TK12) vent. This gaseous activity, combined with the already elevated activity levels due to the fuel leakers, puts the main plant exhaust monitor into an alarm condition.</p> <p>Vacuum continues to slowly decrease as a result of air leakage past the turbine shaft seals.</p> <p>The Offgas Pretreatment monitors record no increase in radiation levels on recorder R604 located on the process radiation recorder panel P-600 in the Control Room. Increased radiation levels on these monitors would indicate possible fuel damage, or damage to equipment in the Offgas System.</p>	<p>Operators should check the various building/area exhaust monitors to determine the area causing the increased activity, and set the DRMS to trend every 10 minutes to monitor the activity levels.</p> <p>Radiation Protection should be notified of existing conditions.</p> <p>Chemistry is notified to draw samples to ensure Technical Specification 3.11.2.1 (Dose Rates of Gaseous Effluents) are not exceeded. Results indicate Technical Specification limits are not exceeded.</p> <p>Condenser vacuum should continue to be monitored. Once entry conditions are established, operators should be directed to re-enter the Turbine Building and continue to inspect for other signs of in-leakage or equipment malfunctions which may be causing low vacuum conditions.</p>
0815	00/15	2	CR	<p>DRMS data sheets show trends are increasing. See Supplemental Scenario No. 2.</p> <p>Condenser vacuum is 26.2" Hg., and decreasing very slowly. See Supplemental Scenario No. 1.</p>	<p>Health Physics personnel are sent to Offgas building to assess radiological conditions, and establish entry conditions for areas within the Offgas Building.</p> <p>An NEO is dispatched to enter the Offgas Building and attempt to isolate the loop seal.</p> <p>Operators continue to monitor the Offgas System and condenser vacuum.</p>

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
0830	00/30	3	CR	<p>Condenser vacuum has stabilized at 25.8" Hg., which is quite low and should continue to be of concern to the operators.</p> <p>DRMS trends continue to show increasing airborne activity.</p> <p>Shift Supervisor confirms the radiological release from the Turbine Building is below EAL Initiating Conditions.</p>	<p>Operators continue to monitor the Offgas System, DRMS trends, and condenser vacuum.</p> <p>The Shift Supervisor, or someone he has designated, should be determining that the activity associated with the gases being released through the main plant exhaust are below Technical Specification limits.</p>
0845	00/45	4	CR	<p>Condenser vacuum is holding steady at 25.8" Hg.</p> <p>DRMS trends of the Turbine Building Exhaust and Condensate Demin/ Offgas Building Vent are still increasing, but at a slower rate.</p> <p>Health Physics analysis indicates that airborne radioactivity in the vicinity of dirty waste sump 1CND-TX12 is 5.0E-08 uCi/cc.</p> <p>NOTE: Through discussions with Health Physics, the Shift Supervisor should be able to confirm that this airborne activity level is 1000 times normal.</p>	<p>Operators continue to monitor the Offgas System, and continue to investigate the low condenser vacuum situation.</p> <p>When the Shift Supervisor is notified that airborne radioactivity levels in the vicinity of the dirty waste sump exceed 1000 times normal, he should declare an ALERT in accordance with EIP-2-001, "Classification of Emergencies", EAL 4, Initiating Condition 2, "Alarm of DRMS Airborne Ventilation Monitors and Confirmation of Readings Greater Than 1,000 Times Normal Levels."</p> <p>The Shift Supervisor should direct the implementation of the following emergency procedures:</p> <p>EIP-2-003, "Alert" EIP-2-006, "Notifications" EIP-2-012, "Radiation Exposure Controls" EIP-2-013, "Onsite Radiological Monitoring" EIP-2-016, "Operations Support Center - Activation" EIP-2-017, "Operations Support Center - Support Functions" EIP-2-018, "Technical Support Center - Activation"</p>

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
					EIP-2-019, "Technical Support Center - Support Functions" EIP-2-023, "Joint Information Center Staff Activation and Support" EIP-2-026, "Evacuation" EIP-2-027, "Personnel Accountability"
0900	01/00	5	CR	Use Contingency Message 5.1x if Health Physics has not provided the analysis results to the Control Room in order for them to determine if airborne radioactivity levels have exceeded 1000 times normal.  Deliver Contingency Message 5.2x if the Shift Supervisor does not recognize that airborne activity levels are above 1000 times normal.	Operators continue their efforts to restore the loop seal.  Health Physics continue to monitor the affected areas of the Turbine Building and Offgas areas.  Continue to monitor condenser vacuum.
~0900	~01/00	5.1x	SS	Deliver this message to Health Physics if they have not notified the Shift Supervisor that airborne radioactivity levels in the vicinity of the dirty waste sump indicates 5.0E-08 uCi/cc.	The Shift Supervisor should declare an ALERT.
~0905	~01/05	5.2x	SS	Deliver this message if the Shift Supervisor has not recognized that airborne radioactivity levels in the vicinity of the dirty waste sump exceed 1000 times normal.	The Shift Supervisor should declare an ALERT.
~0910	~01/10	5.3x	SS	Deliver this message only if an ALERT has not been declared, and the Shift Supervisor has not recognized that events have occurred which require the declaration of an ALERT, and no actions are being taken which would result in the declaration of an ALERT.	The Shift Supervisor should declare an ALERT.

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
0915	01/15	6	CR	Plant Status Update.	<p>Operators continue their efforts to restore the loop seal. Deliver Contingency Message 6.1x when operator has isolated the loop seal, and blowdown to the dirty waste sump has stopped.</p> <p>Health Physics should continue to monitor the affected areas of the Turbine Building and Offgas areas.</p> <p>Continue to monitor condenser vacuum.</p>
~0915	~01/15	6.1x	CR	<p>This message provides Control Room indication that the N64-F048 Loop Seal valve is closed. Deliver when NEO has closed valve N64-F048, and informed the Control Room that the loop seal is isolated. The radiological release to the Turbine Building has ceased.</p> <p>Condenser vacuum is holding at 25.8" Hg.</p>	<p>Operators continue their efforts to restore the loop seal per Offgas System procedure SOP-0092.</p> <p>Health Physics continues to monitor the affected areas of the Offgas Building and Turbine Building.</p> <p>Operators monitor the Offgas System, condenser vacuum, and continue in their attempts to discover the source of inleakage to the main condenser.</p>
0930	01/30	7	CR	Plant Status Update.	<p>Operators continue their efforts to fill and restore the loop seal per procedure SOP-0092.</p> <p>Health Physics continues to monitor the affected areas of the Turbine Building and Offgas areas.</p> <p>Continue to monitor condenser vacuum.</p>
~0935	~01/35	7.1x	CR	<p>Deliver when the NEO refills the loop seal and report to the Control Room that the loop seal is refilled and the valve lineup is returned to normal. The isolated loop seal is now filled and reopened per procedure SOP-0092.</p> <p>Condenser vacuum is holding steady. Radiation levels are decreasing.</p>	<p>Continue to monitor condenser vacuum and attempt to restore to its normal level.</p>

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
0945	01/45	8	CR	<p>Turbine seals have further deteriorated, and condenser vacuum is decreasing. Since the main condenser is the primary heat sink, actions will center around stabilizing and restoring vacuum. See Supplemental Scenario No. 1.</p> <p>Data indicates reduced power as a result of operator action per AOP-005.</p>	<p>Operators rapidly reduce power by decreasing reactor recirculation flow and driving control rods in order to attempt to maintain condenser vacuum at or above 25" Hg.</p> <p>Operators continue to determine and isolate the source of in-leakage.</p> <p>Operators may consider placing the standby SJAE in service.</p>
1000	02/00	9	CR	<p>At the operators request, inform them that condenser vacuum has leveled out at approximately 24" Hg. and, as power is reduced further, starts to increase. See Supplemental Scenario No. 1 for a graph of vacuum.</p> <p>If the standby SJAE is placed in service, condenser vacuum will increase at a slightly faster rate as power is reduced, but still not reach 25" Hg. See Supplemental Scenario No. 1 for a vacuum graph.</p>	<p>Operators continue to reduce power and monitor condenser vacuum, while attempting to locate the source of inleakage.</p>
1015	02/15	10	CR	<p>With the reactor approaching 40% power, main condenser vacuum suddenly drops below 22.3" Hg. initiating a turbine trip. A main generator trip will follow, causing a transfer of the electrical buses to their alternate sources of power.</p> <p>Since reactor power is still above 40% power, a reactor scram signal will take place, and the control rods will start to automatically insert into the reactor core. The reactor fails to fully scram, and remains at approximately 30% power.</p>	<p>Enter EOP-1, "RPV Control" and carry out scram procedure.</p> <p>Enter EOP-2, "Primary Containment Control".</p> <p>Prepare to enter EOP-1A, "Anticipated Transient Without Scram".</p> <p>A SITE AREA EMERGENCY should be declared in accordance with EIP-2-001, SAE EAL# 7, "Transient Requiring Operation of Shutdown Systems with Failure to Scram (ATWS)".</p>

River Bend Station  
1991 Practice Exercise  
Master Events Summary

Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
				<p>Reactor steam production is beyond the capacity of the bypass valves, which causes the SRV's to open in an attempt to control pressure. The sudden pressure increase, coupled with the partial insertion of the control rods, causes level to drop dramatically to about -180", then recover to approximately -120".</p>	<p>The Emergency Director should direct the implementation of the following procedures:</p>
				<p>The MSIV's close (Level I) causing a loss of the primary heat sink. SRV's are open and blowing directly into the Suppression Pool, which is now the main heat sink; pool temperature starts to increase rapidly.</p>	<p>EIP-2-004, "Site Area Emergency" EIP-2-006, "Notifications" EIP-2-020, "Emergency Operations Facility - Activation" EIP-2-021, "Emergency Operations Facility - Support Functions" EIP-2-026, "Evacuation" EIP-2-027, "Personnel Accountability"</p>
				<p>RCIC initiates, but is unable to stabilize and trips on overspeed. See Supplemental Scenario No. 3 for RCIC controller malfunction.</p>	
				<p>HPCS initiates and begins to inject water into the reactor vessel; Division I and II ECCS pumps automatically start and align for injection, but the injection valves stay closed since reactor pressure remains at greater than 1000 psig.</p>	
				<p>Both 'A' and 'B' reactor recirculation pumps trip, and Division I and II containment isolations initiate.</p>	
				<p>Refer to Supplemental Scenario No. 4 for additional information regarding the recovery from the ATWS.</p>	



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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
~1017	~02/17	10.1x	CR	<p>When the operators realize that a reactor scram signal has been received and that all control rods are not fully inserted, they should enter EOP-1A, "Anticipated Transient Without Scram".</p> <p>Standby Liquid Control pump 'B' is started, but trips within 2 minutes and is unable to inject the required minimum amount of Boron (78 lbs.) into the reactor vessel. See Supplemental Scenario No. 5.</p> <p>Control rods can be selected and driven into the core individually from Control Room panel P680.</p>	<p>Enter EOP-1A, "Anticipated Transient Without Scram", and carry out the steps under the Power Control section of the procedure to initiate SLC, drive control rods, and control reactor level, pressure and power.</p> <p>ADS should be inhibited, and injection from ECCS and other major water sources should be either terminated or prevented.</p> <p>The operators should monitor primary containment parameters and be prepared to enter the Emergency RPV Depressurization section of EOP-1A when required.</p>
1020	02/20	10.1	CR	<p>With Reactor pressure greater than 700 psig, and Suppression Pool temperature exceeding 160°F and continuing to rise, the heat capacity temperature limit is in the unsafe zone according to Figure 1 of EOP-1A and Figure 1 of EOP-2.</p> <p>Pumps used for core cooling have been manually overridden, and stopped to prevent further injection of water into the reactor vessel in order to gain control of reactor power and level.</p> <p>The seven (7) ADS valves are manually opened from Control Room panel P601 to depressurize the reactor below the minimum alternate RPV flooding pressure in accordance with Table 2 of EOP-1A (125 psig above containment pressure).</p> <p>Once the reactor is depressurized, it is necessary to control level and power until the reactor can be maintained subcritical. When operators attempt to initiate SLC per EOP-1A, the</p>	<p>Operators monitor reactor power, level, pressure and primary containment parameters to determine when reactor depressurization is required per EOP-1A, Emergency RPV Depressurization Section.</p> <p>Prevent or terminate injection of water into the vessel.</p> <p>Open the seven (7) ADS valves to depressurize the reactor vessel.</p> <p>Shift Supervisor dispatch an NEO to investigate the trip of SLC pump 'B'.</p>

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				<p>pump starts, comes up to pressure, then trips due to an electrical fault at the pump supply breaker. See Supplemental Scenario No.5 for further details.</p>	
1025	02/25	10.2	CR	<p>Suppression Pool temperature is approximately 200°F and increasing; reactor pressure is around 220 psig and decreasing; and reactor power is between 28% to 30%, with the reactor operator inserting control rods individually.</p> <p>The reactor is being depressurized with the intention of maintaining reactor level in a specified band and allowing boiling to continue per EOP-1A. This action will provide continued cooling for the reactor until either enough boron is injected, or all control rods have been inserted so that the reactor can be maintained in a shutdown condition.</p> <p>The operators should be preparing to place two loops of RHR into the Suppression Pool cooling mode in approximately 5 more minutes when the automatic open signal on the RHR heat exchanger bypass valves (E12*F048A/B) will be removed. These valves are maintained open for 10 minutes after the LPCi injection signals are received (fix low level-level 1, high drywell pressure).</p> <p>Data indicate that SGTS B has been placed in Secured Status by operators.</p>	<p>Continue to follow steps of EOP-1A and EOP-2.</p> <p>Monitor reactor pressure while depressurizing below the minimum alternate RPV flooding pressure (EOP-1A, Table 2).</p> <p>Continue to investigate the trip of SLC pump 'B'.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1030	02/30	11	CR	<p>With reactor power at 25% to 28%, the reactor vessel is depressurized below the minimum alternate RPV flooding pressure, the operators should be in the Level/Power Control section of EOP-1A, maintaining reactor level between -100" and -193" using a feedwater pump to inject water into the vessel as directed.</p> <p>The operator reports that SLC pump 'B' breaker, located on electrical panel 1EHS-MCC2B, has failed and is not able to be reset and closed. Electricians are presently troubleshooting the breaker. See Supplemental Scenario No. 5.</p> <p>With 10 minutes having elapsed since the receipt of a LPCI initiation signal, the operators can place the RHR System in the Suppression Pool cooling mode, and throttle back on bypass valves E12 F048A/B to direct flow from the Suppression Pool through the RHR heat exchangers.</p>	<p>Continue to follow the steps outlined in EOP-1A, L-vol/Power Control section, and continue to inset control rods.</p> <p>Maintain vessel level between -100" and -193", and perform all operations in a slow and controlled manner.</p> <p>Place RHR loops 'A' and 'B' in Suppression Pool cooling, and operate the system in accordance with RHR procedure SOP-0031.</p> <p>Continue to investigate SLC pump 'B' breaker failure.</p>
1035	02/35	11.1x	ED	<p>Deliver this message only if a SITE AREA EMERGENCY has not been declared, and the Shift Supervisor has not recognized that events have occurred which require the declaration of a SITE AREA EMERGENCY and no actions are being taken which would result in the declaration of a SITE AREA EMERGENCY.</p>	<p>Declare a SITE AREA EMERGENCY.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1045	02/45	12	CR	<p>Plant status update indicates that Suppression Pool temperature is decreasing. The 'A' and 'B' loops of RHR are in the Suppression Pool cooling mode of operation.</p> <p>Reactor level continues to be maintained between -100" and -193" with seven (7) SRV's open and venting to the Suppression Pool. Control rods are being inserted into the reactor core; power is approximately 25% and slowly decreasing.</p> <p>Electricians report that the SLC pump 'B' breaker's control transformer is electrically open and will have to be replaced. Repairs will take approximately two (2) hours to complete.</p>	<p>Continue to follow the steps outlined in EOP-1A and EOP-2.</p> <p>Continue to insert control rods into the reactor core.</p> <p>Affect repairs to the SLC pump 'B' breaker.</p>
1100	03/00	13	CR	<p>Plant status update indicates reactor level is being maintained between -100" and -193"; reactor power is approximately 24% and slowly decreasing.</p>	<p>Continue to follow the steps outlined in EOP-1A and EOP-2.</p> <p>Continue to insert control rods.</p> <p>Affect repairs to SLC pump 'B' breaker.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1115	03/15	14	CR	Plant status update indicates reactor level is being maintained between -100" and -193"; reactor power is approximately 23% and slowly decreasing.	<p>Continue to follow the steps outlined in EOP-1A and EOP-2.</p> <p>Continue to insert control rods.</p> <p>Affect repairs to SLC pump 'B' breaker.</p> <p>With alternate electrical power sources available and loads stable, the operators can shutdown the Diesel Generators at their discretion.</p> <p>Data indicate that Diesels are in Secured Status by 1130. If operators choose to continue to run Diesel, modify data accordingly.</p>
1130	03/30	15	CR	Plant Status Update.	
1135	03/35	15.1	CR	<p>Due to an air line break in the vicinity of the condensate demineralizer bypass valve controller, instrument air pressure is lost to the Condensate System air operated valves. The valves go to their failed position, which causes all condensate flow to be directed back to the condenser hotwell. See Supplemental Scenario No. 6 for the major valves affected by the loss of air and the subsequent flowpath setup by that loss.</p> <p>This results in a low suction pressure trip of the feedwater pumps. The feedwater pumps are now unavailable to be used for reactor level control.</p>	<p>Equipment operators should be directed to investigate the problem associated with the Condensate System, and recover condensate flow to the suction of the feedwater pumps per AOP-0008, Loss of Instrument Air.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1145	03/45	16	CR	<p>With instrument air to condensate system valves lost, condensate flow is directed back to the condenser hotwell. The feedwater pumps cannot be started to recover level because of low suction pressure. Reactor level continues to decrease quickly since approximately 20% power is still being produced.</p> <p>Operators start the HPCS pump and attempt to throttle flow with injection valve E22*F004; however, MOV torque/limit switches are out of calibration, and valve E22*F004 goes to its full open position. Once the valve is opened, it can then be throttled shut as necessary for level control.</p> <p>As cold water is sprayed onto the core, a significant power spike occurs immediately followed by a pressure surge. This results in a localized overpower condition with substantial fuel cladding damage.</p> <p>The resultant vibration and pressure shocks cause severe internal mechanical damage to RHR loop 'C' testable check valve E12*F041C located in the drywell. A subsequent pipe rupture, and guard pipe bellows failure occurs in the RHR loop 'C' line between testable check valve E12*F041C and LPCI injection isolation valve E12*F042C, allowing steam and fission products to blow directly into the primary containment.</p>	<p>Operators concentrate on reestablishing reactor level by initiating HPCS and attempting to regain level control.</p> <p>Operators continue to shift valves to recover condensate flow to the suction of the feedwater pumps.</p> <p>Monitor containment parameters, and discuss possible entry conditions for a General Emergency.</p> <p>Continue to follow steps of EOP-1A and EOP-2.</p> <p>Continue efforts to restore SLC pump 'B'.</p>
1150	03/50	16.1	CR	<p>Level has been restored to -100 and the HPCS injection valve E22*F004 is closed.</p>	<p>Continue to monitor containment parameters and attempt to determine where the pipe break occurred.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1155	03/55	16.2	CR	<p>Containment pressure is increasing rapidly since most of the steam blowdown is going directly into containment rather than through the SRV's into the Suppression Pool.</p> <p>Reactor power is approximately 30% and is slowly decreasing along with reactor pressure. Reactor level is recovered and being maintained between -100" and -193".</p> <p>Feedwater is again available for use in maintaining reactor level in the range of -100" to -193" per EOP-1A. The instrument air fault has been isolated and condensate system valves are lined up to provide flow to the feedwater pumps. See Supplemental Scenario No. 6.</p> <p>Containment pressure is still increasing, but appears to be leveling off, and containment temperature also appears to be stabilizing.</p>	<p>Continue efforts to restore condensate flow to the feedwater pumps.</p> <p>Continue efforts to restore SLC pump 'B'.</p> <p>Continue to insert control rods.</p> <p>Operators use feedwater to control reactor level between -100" and -193" per EOP-1A.</p> <p>Continue to monitor containment parameters, and follow associated steps of EOP-1A and EOP-2.</p> <p>Continue efforts to restore SLC pump 'B'.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1200	04/00	17	CR	<p>Radiation monitors 1RMS*RE16A/B have increased to the Alert setpoint due to the pipe break in containment allowing fission products to blow directly into primary containment.</p> <p>Containment pressure has leveled off at about 19 psig, and blowdown into containment has decreased in volume since reactor power and pressure levels have decreased to approximately the same values when the power transient occurred.</p> <p>The Emergency Director may choose to declare a General Emergency at this time.</p>	<p>Continue to follow steps of EOP-1A and EOP-2.</p> <p>Trend containment radiation levels. Monitor containment pressure and temperature closely.</p> <p>At this time, a GENERAL EMERGENCY <u>may</u> be declared in accordance with EIP-2-001, GE EAL 2, Initiating Condition 5, "Other Indications of Loss of Two of the Following With Potential Loss of the Third: Fuel Cladding, RCS Pressure Boundary, Containment Integrity".</p> <p>If a General Emergency is declared, the Emergency Director should direct the implementation of the following procedures:</p> <ul style="list-style-type: none"> <li>EIP-2-005, "General Emergency"</li> <li>EIP-2-006, "Notifications"</li> <li>EIP-2-007, "Protective Action Recommendation Guidelines"</li> <li>EIP-2-012, "Radiation Exposure Controls"</li> <li>EIP-2-013, "Onsite Radiological Monitoring"</li> <li>EIP-2-014, "Offsite Radiological Monitoring"</li> <li>EIP-2-024, "Offsite Dose Calculations"</li> </ul>



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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1215	04/15	18	CR	<p>O-ring seals on several electrical containment penetrations have failed completely; containment pressure is being released through the O-ring seal area, past the protective cover for the cables, and into the annulus area.</p> <p>Radioactive material from the primary containment is now being released to the environment through the Standby Gas Treatment System, which is presently taking a suction on the annulus area. See Supplemental Scenario No. 8.</p>	<p>Enter SOP-3, "Secondary Containment and Radiological Release Control".</p> <p>Continue to monitor primary containment radiation levels, and trend radiation levels for the annulus exhaust (1RMS*RE11A/E).</p> <p>Perform dose projections using effluent monitors and meteorological conditions and compare to results based on containment monitors.</p> <p>A General Emergency should be declared in accordance with EIP-2-001, GE EAL-2, Initiating Condition 5, "Other Indications of Loss of Two of the Following With Potential Loss of the Third: Fuel Cladding, RCS Pressure Boundary, Containment Integrity".</p> <p>The Emergency Director should direct the implementation of the following procedures:</p> <ul style="list-style-type: none"> <li>EIP-2-005, "General Emergency"</li> <li>EIP-2-006, "Notifications"</li> <li>EIP-2-007, "Protective Action Recommendation Guidelines"</li> <li>EIP-2-012, "Radiation Exposure Controls"</li> <li>EIP-2-013, "Onsite Radiological Monitoring"</li> <li>EIP-2-014, "Offsite Radiological Monitoring"</li> <li>EIP-2-024, "Offsite Dose Calculations"</li> </ul>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1220	04/20	18.1	CR	Radiation monitors 1RMS*RE11A/B have increased to the Alert setpoint due to leakage past the containment electrical penetrations into the annulus area.	<p>Trend annulus exhaust radiation levels, and continue to monitor containment radiation levels.</p> <p>Continue to follow the steps of EOP-1A, EOP-2, and EOP-3.</p> <p>Continue to monitor containment pressure and temperature.</p> <p>Review protective actions to ensure that previously recommended actions are conservative.</p>
1230	04/30	19	CR	<p>The radioactive release to the environment continues via the Standby Gas Treatment System.</p> <p>With reactor pressure below 50 psig all SRV's close.</p> <p>Dose projections based on the effluent monitors and actual meteorological data indicate that the protective action recommendations based on containment conditions are conservative.</p>	<p>Compare results of computer dose projections and field team readings.</p> <p>Continue to maintain reactor level between -100" and -193".</p> <p>Continue efforts to restore SLC pump 'B'.</p>
1235	04/35	19.1x	ED	Deliver this message only if a GENERAL EMERGENCY has not been declared, and the Emergency Director has not recognized that events have occurred which require the declaration of a GENERAL EMERGENCY, and no actions are being taken which would result in the declaration of a GENERAL EMERGENCY.	Emergency Director declares a GENERAL EMERGENCY.

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1245	04/45	20	CR	Reactor power is about 5% and containment pressure is approximately 11 psig.	<p>Continue to maintain reactor level between -100" and -193".</p> <p>Monitor containment radiation levels.</p> <p>Continue to monitor the release and track the plume.</p> <p>Continue efforts to restore SLC pump 'B'.</p>
1250	04/50	20.1x	CR	<p>SLC pump 'B' has been restored, and is now pumping the Boron solution into the reactor vessel. When the minimum amount of Boron has been injected (78 lbs.), reactor level will begin to be raised. See Supplemental Scenario No. 5.</p> <p>Deliver this message when SLC pump 'B' is restored.</p>	<p>Monitor SLC tank level to determine the amount of Boron being injected into the reactor vessel.</p>
1300	05/00	21	CR	<p>SLC continues to inject Boron into the vessel.</p> <p>Containment pressure and temperature are decreasing slowly. Reactor power is 0%, with reactor pressure approximately 2 psig.</p> <p>The radioactive release through SBGT continues.</p>	<p>Continue to monitor the release and track the plume.</p> <p>Continue to maintain reactor level between -100" and -193".</p> <p>Continue to monitor SLC tank level to determine the amount of Boron injection.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1315	05/15	22	CR	<p>The minimum amount of Boron has been injected (78 lbs.). Reactor level restoration should begin in order to bring level back into its normal operating band. Boron injection continues. See Supplemental Scenario No. 5 for table of injection requirements.</p> <p>As level is restored, reactor power remains below 1%, and there is no sustained increase that is detected.</p> <p>Reactor pressure is negligible, and steam blowdown into containment has ceased. Containment pressure has decayed off to about 1 psig. The release of fission products through the electrical penetrations has ended. See Supplemental Scenario No. 8.</p>	<p>Monitor reactor power, and restore level to approximately 40".</p> <p>Monitor containment radiation levels, and verify that the release has been terminated.</p> <p>Continue in EOP-1A.</p> <p>Continue to track the plume.</p>
1320	05/20	22.1x	CR	<p>Deliver this message to the Emergency Director:</p> <p>Recent information from General Electric shows that containment electrical penetrations associated with the BWR Mark III containment are prone to O-ring seal failures on the containment side when subjected to temperatures and/or pressures which exceed design parameters for the containment structure. This may lead to unacceptable leakage rates exceeding Technical Specification values, and potential loss of primary containment integrity.</p>	
1325	05/25	22.1	CR	<p>111 lbs. of Boron has been injected into the reactor vessel. See table of injection requirements in Supplemental Scenario No. 5.</p> <p>Operators should make preparations to establish long term shutdown cooling.</p>	<p>Operators should determine that 111 lbs. of Boron have been injected into the reactor vessel, and prepare to go into the Shutdown Cooling mode of RHR in accordance with EOP-1A.</p>

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Clock Time	Drill Time	Msg. No.	Msg. To:	Message Summary	Expected Actions
1330	05/30	23	CR	Plant is in a cold shutdown condition. Boron injection has been terminated, all control rods inserted, reactor level restored, and shutdown cooling established.	Continue to monitor plant and environmental conditions.  Formulate recovery plans.
1345	05/45	24	CR	Plant is in a cold shutdown condition.	Monitor plant and environmental conditions.  Consolidate recovery plans.
1400	06/00	25	CR	Plume is dispersed within the 10 mile EPZ.	
1415	06/15	26	CR	Plant Status Update.	
1430	06/30	27	CR	Deliver this message after all objectives have been evaluated:  The Exercise may be terminated with concurrence from the Lead Exercise Controller.	

SECTION 7.3

DATA TRENDS

1991 RIVER BEND STATION PRACTICE EXERCISE  
 DRMS MONITOR TREND DATA

Drill Time:	00/00	00/05	00/30	01/00	01/15	01/30	01/45	02/00	02/15	02/30	02/45	03/00
Clock Time:	0800	0805	0830	0900	0915	0930	0945	1000	1015	1030	1045	1100

ID Number Location (Units)

RE-16	A,B Containment PAM R.B. 186'(R/hr)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	500	500	500	500
RE-20	A,B Drywell PAM D.W. 114'(R/hr)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	10.0	10.0	10.0	10.0
RE-21	A,B Cont. Purge Monitor R.B. 141(mR/hr)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	5.0E5	5.0E5	5.0E5	5.0E5
RE-139	Inside Annulus 114'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	OSH	OSH	OSH	OSH
RE-141	Refuel Floor South R.B. 186'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	OSH	OSH	OSH	OSH
RE-146	Containment Airlock F.B. 114'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	OSH	OSH	OSH	OSH
RE-151	Sample Station Area R.B. 152'(mR/hr)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	OSH	OSH	OSH	OSH
RE-162	O.G.Bldg.Rege' Area O.G. 67' (mR/hr)	0.4	5.0	5.0	5.0	5.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-164	O.G.Bldg.Snpl. Area O.G. 123'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
RE-165	Cond.Demin Rgn. Area O.G. 67'(mR/hr)	9.2	35	35	35	35	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-166	Cond.Demin Str. Area O.G. 95'(mR/hr)	0.3	20	20	20	20	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-167	O.G. Bldg.Vlv.Area O.G. 137'(mR/hr)	28	28	28	28	28	28	28	28	28	28	28	28
RE-182	Recovery Sample Tank R.W. 65'(mR/hr)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-185	Storage Tank Area R.W. 90'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-186	Floor Drain Sump R.W. 65'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
RE-187	High Cond. Sump Area R.W. 67'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-192	Refuel Floor South F.B. 113'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	20	20	20
RE-193	Refuel Floor North F.B. 113'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.0	5.0	5.0	5.0
RE-194	Supt Rm Trans. Tube F.B. 123'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	20	20	20
RE-195	Sample Sirk Area F.B. 95'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	20	20	20
RE-196	Equip. Drain Sump F.B. 70'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	20	20	20
RE-200	North Hoist Area T.B. 123'(mR/hr)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
RE-201	Air Removal Pump T.B. 95'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-202	Rx Feed Pump Area T.B. 67'(mR/hr)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	Turb. Bldg Samp Rm T.B. 67'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-204	Cond Demin Samp Rack T.B. 95'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-210	PASS Panel A.B. 114'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	20	20	20
RE-211	Control Rod Drive A.B. 95'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.0	5.0	5.0	5.0
RE-212	HPCS Area East A.B. 70'(mR/hr)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	5.0	5.0	5.0	5.0
RE-213	RHR A Area West A.B. 70'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	5.0	5.0	5.0
RE-214	RHR B Area East A.B. 70'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	5.0	5.0	5.0
RE-215	RHR C Area A.B. 70'(mR/hr)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	5.0	5.0	5.0
RE-216	LPCS Area West A.B. 70'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	5.0	5.0	5.0	5.0
RE-217	HPCS Penetration East A.B.70'(mR/hr)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	20	20	20	20
RE-218	LPCS Penetration West A.B.70'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	20	20	20	20
RE-219	RCIC Area West A.B. 70'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.0	5.0	5.0	5.0

Note: OSH - Off Scale High

1991 RIVER BEND STATION PRACTICE EXERCISE  
DRMS MONITOR TREND DATA

ID Number	Location (Units)	Drill Time: Clock Time:	03/15	03/30	03/45	04/00	04/15	04/30	04/45	05/00	05/15	05/30	05/45
RE-16	A,B Containment PAM R.B. 186'(R/hr)		500	500	7.5E3	7.5E3	4.5E3	3.9E3	3.3E3	2.4E3	5.0E2	1.9E2	1.9E2
RE-20	A,B Drvwell PAM D.W. 114'(R/hr)		10.0	10.0	100	100	60.0	52.0	44.0	32.0	10.0	4.0	4.0
RE-21	A,B Cont. Purge Monitor R.B. 141(mR/hr)		5.0E5	5.0E5	7.5E6	7.5E6	4.5E6	3.9E6	3.3E6	2.4E6	5.0E5	1.9E5	1.9E5
RE-139	Inside Annulus 114'(mR/hr)		OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
RE-141	Refuel Floor South R.B. 186'(mR/hr)		OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
RE-146	Containment Airlock F.B. 114'(mR/hr)		OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
RE-151	Sample Station Area R.B. 162'(mR/hr)		OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
RE-162	O.G.Bldg.Regan Area O.G. 67' (mR/hr)		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-164	O.G.Bldg.Smpl. Area O.G. 123'(mR/hr)		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
RE-165	Cond.Demin Rgn. Area O.G. 67'(mR/hr)		9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-166	Cond.Demin Str. Area O.G. 95'(mR/hr)		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-167	O.G. Bldg.Vlv.Area O.G. 137'(mR/hr)		28	28	28	28	28	28	28	28	28	28	28
RE-182	Recovery Sample Tank R.W. 65'(mR/hr)		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-185	Storage Tank Area R.W. 90'(mR/hr)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-186	Floor Drain Sump R.W. 65'(mR/hr)		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
RE-187	High Cond. Sump Area R.W. 65'(mR/hr)		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-192	Refuel Floor South F.B. 113'(mR/hr)		20	20	300	300	180	150	125	90	20	8.0	8.0
RE-193	Refuel Floor North F.B. 113'(mR/hr)		5.0	5.0	75	75	45	38	30	23	5.0	2.0	2.0
RE-194	Supt Rm Trans. Tube F.B. 123'(mR/hr)		20	20	300	300	180	150	125	90	20	8.0	8.0
RE-195	Sample Sink Area F.B. 95'(mR/hr)		20	20	300	300	180	150	125	90	20	8.0	8.0
RE-196	Equip. Drain Sump F.B. 70'(mR/hr)		20	20	300	300	180	150	125	90	20	8.0	8.0
RE-200	North Hoist Area T.B. 123'(mR/hr)		0.5	0.5	12	12	12	12	12	12	12	12	12
RE-201	Air Removal Pump T.B. 95'(mR/hr)		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-202	Rx Feed Pump Area T.B. 67'(mR/hr)		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	Turb. Bldg Samp Rm T.B. 67'(mR/hr)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-204	Cond Demin Samp Rack T.B. 95'(mR/hr)		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-210	PASS Panel A.B. 114'(mR/hr)		20	20	300	300	180	150	125	90	20	8.0	8.0
RE-211	Control Rod Drive A.B. 95'(mR/hr)		5.0	5.0	75	75	45	40	33	24	5.0	2.0	2.0
RE-212	HPCS Area East A.B. 70'(mR/hr)		5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-213	RHR A Area West A.B. 70'(mR/hr)		5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-214	RHR B Area East A.B. 70'(mR/hr)		5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-215	RHR C Area A.B. 70'(mR/hr)		5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-216	LPCS Area West A.B. 70'(mR/hr)		5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-217	HPCS Penetration East A.B.70'(mR/hr)		20	20	300	300	180	150	125	90	20	7.5	7.5
RE-218	LPCS Penetration West A.B.70'(mR/hr)		20	20	300	300	180	150	125	90	20	7.5	7.5
RE-219	RCIC Area West A.B. 70'(mR/hr)		5.0	5.0	75	75	45	45	30	25	5.0	2.0	2.0

Note: OSH - Off Scale High



1991 RIVER BEND STATION PRACTICE EXERCISE  
DRMS MONITOR TREND DATA

Drill Time:	06/00	06/15	06/30
Clock Time:	1400	1415	1430

ID Number Location (Units)

RE-16	A,B Containment PAM R.B. 186'(R/hr)	1.9E2	1.9E2	1.9E2
RE-20	A,B Drivell PAM D.W. 114'(R/hr)	4.0	4.0	4.0
RE-21	A,B Cont. Purge Monitor R.B. 141(mR/hr)	1.9E5	1.9E5	1.9E5
RE-139	Inside Annulus 114'(mR/hr)	OSH	OSH	OSH
RE-141	Refuel Floor South R.B. 186'(mR/hr)	OSH	OSH	OSH
RE-146	Containment Airlock F.B. 114'(mR/hr)	OSH	OSH	OSH
RE-151	Sample Station Area R.B. 162'(mR/hr)	OSH	OSH	OSH
RE-162	O.G.Bldg.Regan Area O.G. 67'(mR/hr)	0.4	0.4	0.4
RE-164	O.G.Bldg.Smpl. Area O.G. 123'(mR/hr)	2.0	2.0	2.0
RE-165	Cond.Demin Rgn. Area O.G. 67'(mR/hr)	9.2	9.2	9.2
RE-166	Cond.Demin Str. Area O.G. 95'(mR/hr)	0.3	0.3	0.3
RE-167	O.G. Bldg.Vlv.Area O.G. 137'(mR/hr)	28	28	28
RE-182	Recovery Sample Tank R.W. 65'(mR/hr)	0.4	0.4	0.4
RE-185	Storage Tank Area R.W. 90'(mR/hr)	0.2	0.2	0.2
RE-186	Floor Drain Sump R.W. 65'(mR/hr)	0.5	0.5	0.5
RE-187	High Cond. Sump Area R.W. 65'(mR/hr)	0.3	0.3	0.3
RE-192	Refuel Floor South F.B. 113'(mR/hr)	8.0	8.0	8.0
RE-193	Refuel Floor North F.B. 113'(mR/hr)	2.0	2.0	2.0
RE-194	Supt Rm Trans. Tube F.B. 123'(mR/hr)	8.0	8.0	8.0
RE-195	Sample Sink Area F.B. 95'(mR/hr)	8.0	8.0	8.0
RE-196	Equip. Drain Sump F.B. 70'(mR/hr)	8.0	8.0	8.0
RE-200	North Hoist Area T.B. 123'(mR/hr)	12	12	12
RE-201	Air Removal Pump T.B. 95'(mR/hr)	0.2	0.2	0.2
RE-202	Rx Feed Pump Area T.B. 67'(mR/hr)	1.5	1.5	1.5
RE-203	Turb. Bldg Samp Rm T.B. 67'(mR/hr)	0.1	0.1	0.1
RE-204	Cond Demin Samp Rack T.B. 95'(mR/hr)	0.1	0.1	0.1
RE-210	PASS Panel A.B. 114'(mR/hr)	8.0	8.0	8.0
RE-211	Control Rod Drive A.B. 95'(mR/hr)	2.0	2.0	2.0
RE-212	HPCS Area East A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-213	RHR A Area West A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-214	RHR B Area East A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-215	RHR C Area A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-216	LPCS Area West A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-217	HPCS Penetration East A.B. 70'(mR/hr)	7.5	7.5	7.5
RE-218	LPCS Penetration West A.B. 70'(mR/hr)	7.5	7.5	7.5
RE-219	RCIC Area West A.B. 70'(mR/hr)	2.0	2.0	2.0

Note: OSH - Off Scale High

1991 RIVER BEND STATION PRACTICE EXERCISE  
PROCESS MONITOR TREND DATA

Drill Time:	00/30	00/00	00/05	00/30	00/45	01/00	01/15	01/30	01/45	02/00	02/15	02/30
Clock Time:	0730	0800	0805	0830	0845	0900	0915	0930	0945	1000	1015	1030

ID Number	Location (Units)	00/30	00/00	00/05	00/30	00/45	01/00	01/15	01/30	01/45	02/00	02/15	02/30
RE-5A,B	Fuel Bldg. Vent Exhaust ( $\mu\text{Ci}/\text{sec}$ )	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00	1.3E+00
RE-6A,B	Radwast Bldg. Vent Exh. ( $\mu\text{Ci}/\text{sec}$ )	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01	5.7E-01
1GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	7.4E-07	7.4E-07	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	7.4E-07	7.4E-07	7.4E-07	7.4E-07
2GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04	1.2E-04
3GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02	4.3E-02
4GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{sec}$ )	3.3E+01	3.3E+01	2.3E+02	2.3E+02	2.3E+02	2.3E+02	2.3E+02	3.3E+01	3.3E+01	3.3E+01	3.3E+01	3.3E+01
RE-110P	Aux. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12	2.0E-12
RE-110G	Aux. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08
RE-118P	Turbin Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	3.0E-11	3.0E-11	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	3.0E-08	8.0E-10	3.0E-11	3.0E-11	3.0E-10
RE-118G	Turbin Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	1.0E-10	1.0E-10	6.0E-07	6.0E-07	6.0E-07	6.0E-07	6.0E-07	6.0E-07	2.0E-08	1.0E-10	1.0E-10	1.0E-09
RE-124P	C.D./O.G. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-09	2.0E-08
RE-124G	C.D./O.G. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	2.0E-07	6.0E-08
RE-126P	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	6.0E-10	6.0E-10	6.5E-10	6.5E-10	6.5E-10	6.5E-10	6.5E-10	6.0E-10	6.0E-10	6.0E-10	5.3E-10	5.0E-10
RE-126G	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	7.4E-07	7.4E-07	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	7.4E-07	7.4E-07	7.4E-07	7.4E-07	7.4E-07
RE-111P	Cont. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	1.0E-07	2.0E-03
RE-111G	Cont. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	5.0E-06	3.0E+00
RE-112P	D.W. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07	6.7E-07
RE-112G	D.W. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05	3.3E-05
RE-103	SGYS Effluent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06	2.0E-06
RE-116	Cont. Purge ( $\mu\text{Ci}/\text{cc}$ )	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06	3.0E-06
RE-11A,B	Annulus Exhaust ( $\mu\text{Ci}/\text{cc}$ )	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08	2.5E-08
	Off Gas Pretreatment Monitor (mR/hr)	200	200	200	200	200	200	200	200	200	200	50	0
	Off Gas Posttreatment Monitor (cpm)	80	80	80	80	80	80	80	80	80	80	20	0
	Main Steam Line Rad. Monitor A (mR/hr)	800	800	800	800	800	800	800	800	800	800	1000	1000
	Main Steam Line Rad. Monitor B (mR/hr)	750	750	750	750	750	750	750	750	750	750	1000	1000
	Main Steam Line Rad. Monitor C (mR/hr)	750	750	750	750	750	750	50	750	750	750	1000	1000
	Main Steam Line Rad. Monitor D (mR/hr)	825	825	825	825	825	825	825	825	825	825	1000	1000



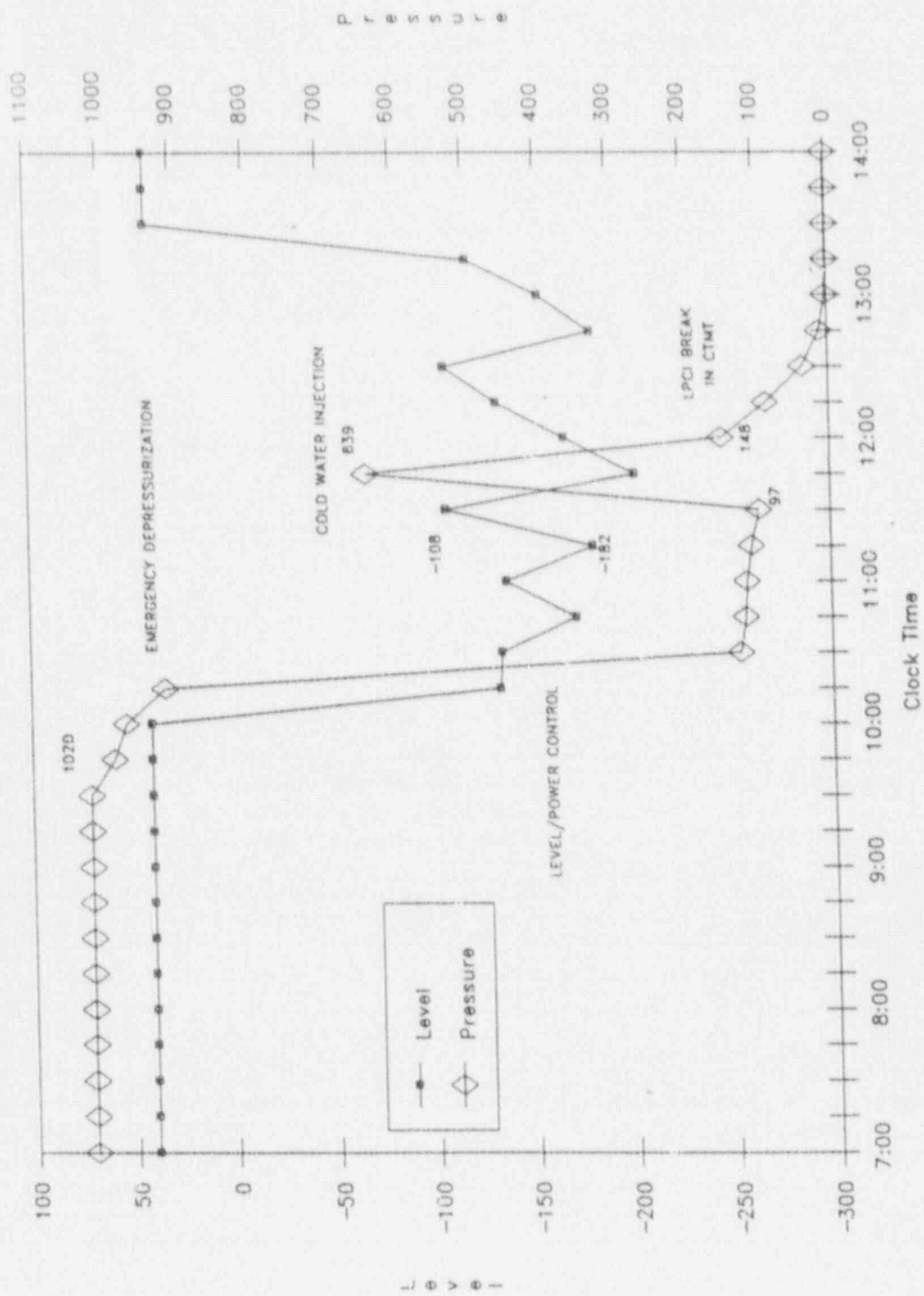
1991 RIVER BEND STATION PRACTICE EXERCISE  
 PROCESS MONITOR TREND DATA

Drill Time: 05/45 06/00 06/15 06/30  
 Clock Time: 1345 1400 1415 1430

ID Number	Location (Units)				
RE-5A,B	Fuel Bldg. Vent Exhaust ( $\mu\text{Ci}/\text{sec}$ )	1.3E+00	1.3E+00	1.3E+00	1.3E+00
RE-6A,B	Radwast Bldg. Vent Exh. ( $\mu\text{Ci}/\text{sec}$ )	5.7E-01	5.7E-01	5.7E-01	5.7E-01
1GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-05	5.6E-07	5.6E-07	5.6E-07
2GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	1.2E-04	1.2E-04	1.2E-04	1.2E-04
3GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-02	4.3E-02	4.3E-02	4.3E-02
4GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{sec}$ )	2.2E+03	3.4E+01	3.4E+01	3.4E+01
RE-110P	Aux. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-12	2.0E-12	2.0E-12	2.0E-12
RE-110G	Aux. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	3.0E-08	3.0E-08	3.0E-08	3.0E-08
RE-118F	Turbin Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	3.0E-11	3.0E-11	3.0E-11	3.0E-11
RE-118G	Turbin Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	1.0E-10	1.0E-10	1.0E-10	1.0E-10
RE-124P	C.D./O.G. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-10	2.0E-10	2.0E-10	2.0E-10
RE-124G	C.D./O.G. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-08	2.0E-08	2.0E-08	2.0E-08
RE-126P	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.0E-07	3.5E-10	6.0E-10	6.0E-10
RE-126G	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-05	5.6E-07	7.4E-07	7.4E-07
RE-111P	Cont. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	6.4E-01	6.4E-01	6.4E-01	6.4E-01
RE-111G	Cont. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	8.4E+00	8.4E+00	8.4E+00	8.4E+00
RE-112P	D.W. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	6.7E-07	6.7E-07	6.7E-07	6.7E-07
RE-112G	D.W. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	3.3E-05	3.3E-05	3.3E-05	3.3E-05
RE-103	SGTS Effluent ( $\mu\text{Ci}/\text{cc}$ )	1.1E-05	2.0E-06	2.0E-06	2.0E-06
RE-116	Cont. Purge ( $\mu\text{Ci}/\text{cc}$ )	3.0E-06	3.0E-06	3.0E-06	3.0E-06
RE-11A,B	Annulus Exhaust ( $\mu\text{Ci}/\text{cc}$ )	4.4E-04	6.8E-06	3.5E-06	1.9E-07
	Off Gas Pretreatment Monitor (mR/hr)	0	0	0	0
	Off Gas Posttreatment Monitor (cpm)	0	0	0	0
	Main Steam Line Rad. Monitor A (mR/hr)	1000	1000	1000	1000
	Main Steam Line Rad. Monitor B (mR/hr)	1000	1000	1000	1000
	Main Steam Line Rad. Monitor C (mR/hr)	1000	1000	1000	1000
	Main Steam Line Rad. Monitor D (mR/hr)	1000	1000	1000	1000

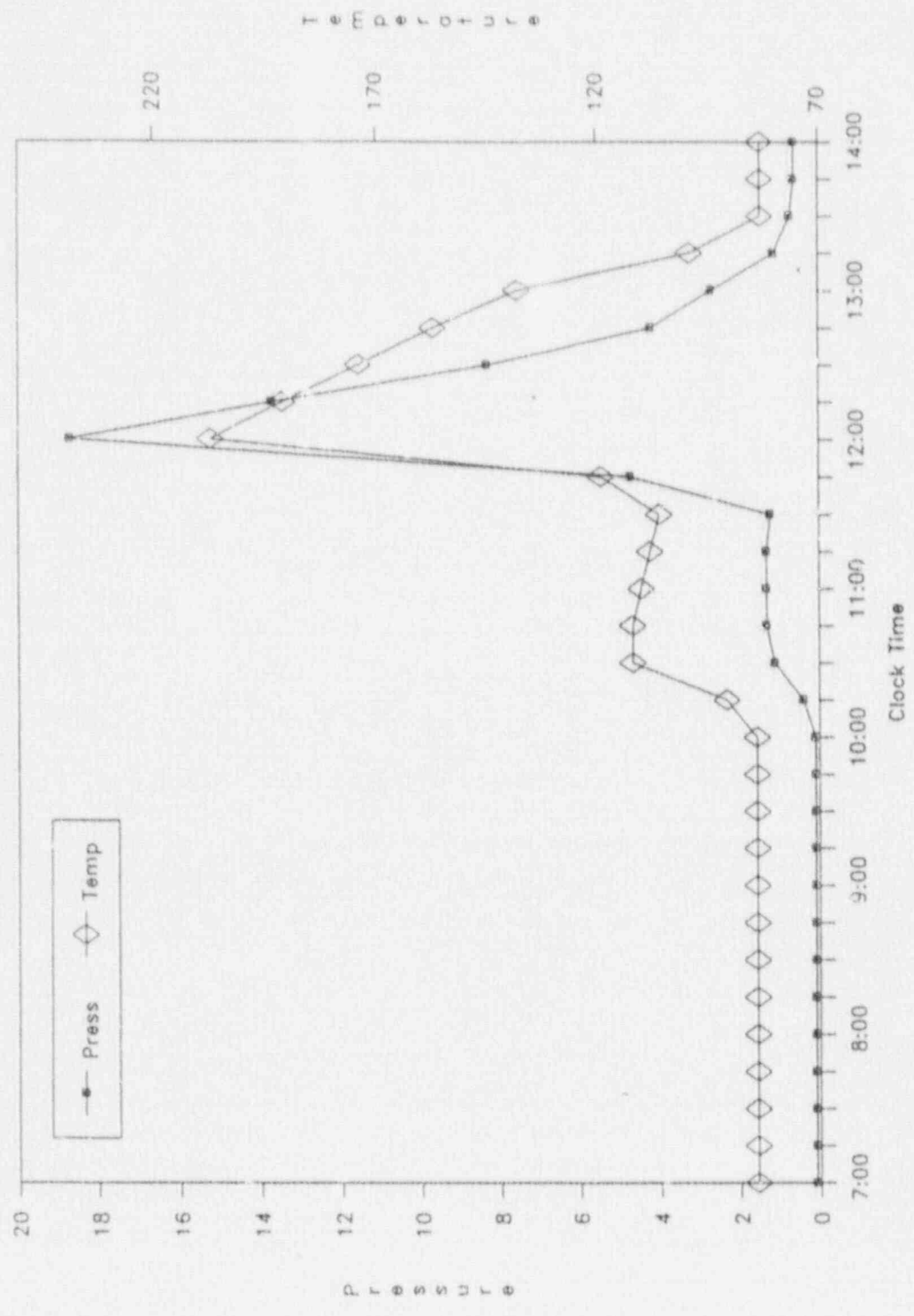
# RBS 1991 Practice Exercise

## Reactor Level and Pressure

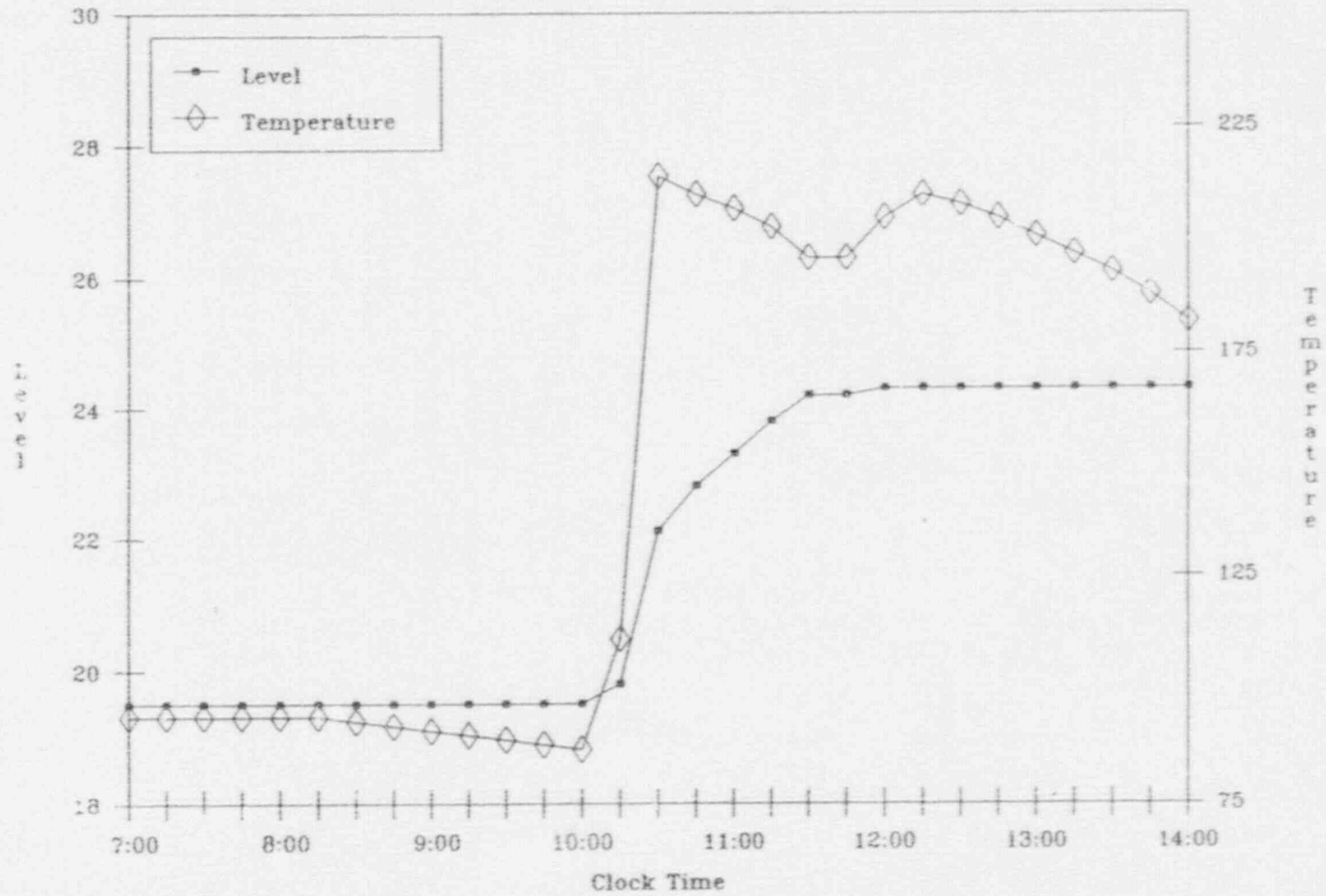


# RBS 1991 Practice Exercise

## Containment Temperature and Pressure

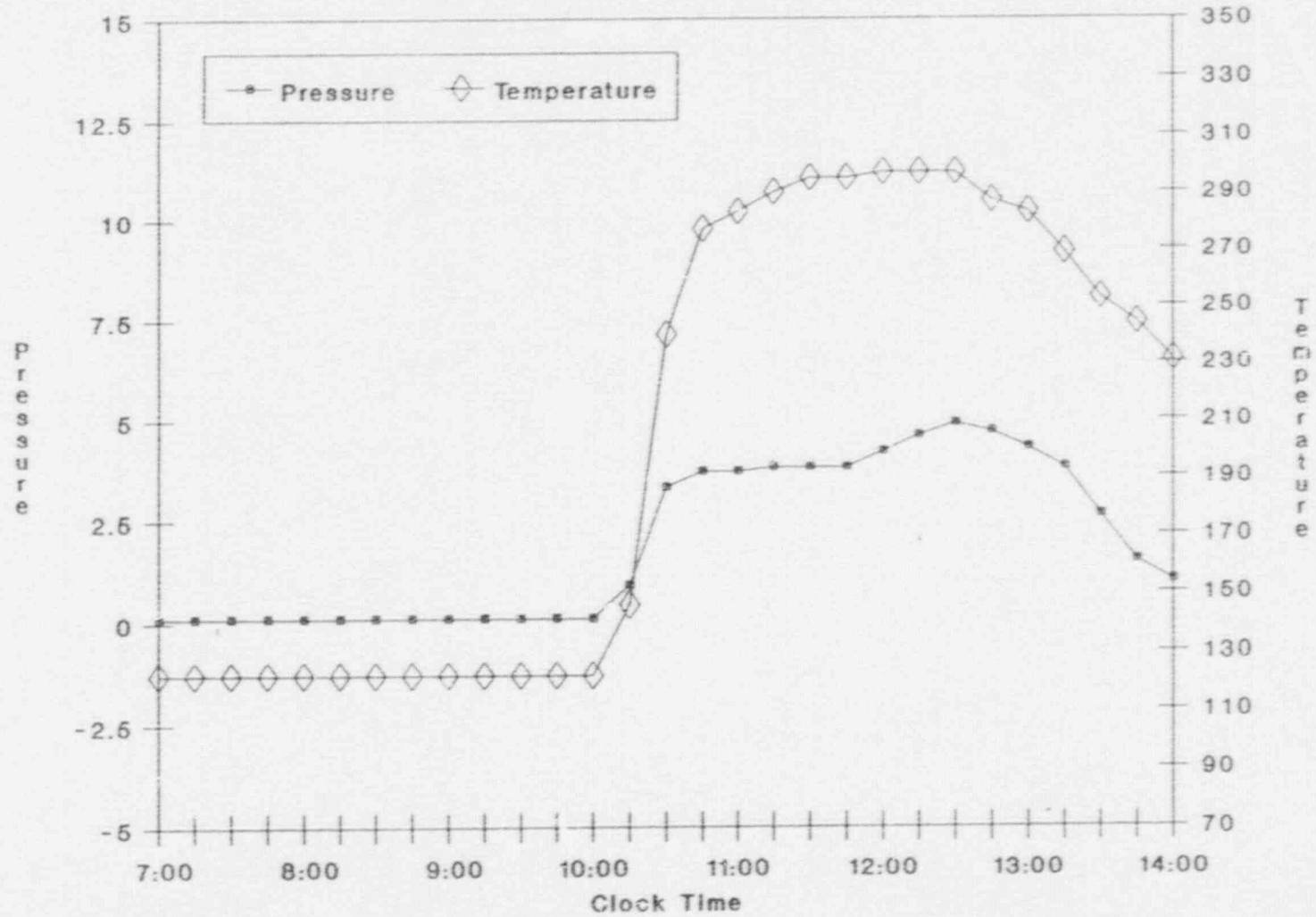


RBS 1991 Practice Exercise  
Suppression Pool  
Temperature and Level



# RBS 1991 Practice Exercise

## Drywell Temperature and Pressure





SECTION 7.4

ASSUMPTIONS

## CHEMISTRY AND RADIOLOGICAL SCENARIO ASSUMPTIONS

### A. Radiological Parameters

1. Radioactive material released (simulated) will consist primarily of noble gases and iodine.
2. The dispersion factors used to calculate offsite data are those derived for use with the EDP Class A Atmospheric Dispersion Model centerline values.
3. No filtering credit is allowed for noble gases. SBTG filter efficiency is assumed to be 99% for iodine and particulate removal.

### B. In-Plant Radiation Data

1. Dose rates due to airborne concentrations following the release were developed by calculating a centerpoint immersion dose in a semi-infinite cloud of noble gases utilizing the formula:

$$D_i = X_i * DF_i \quad (B-1)$$

where:

$D_i$  = gamma air dose of nuclide (i)

$X_i$  = concentration of nuclide (i)

$DF_i$  = dose factor for exposure to a semi-infinite cloud of nuclide (i)

Dose factors were obtained from REG Guide 1.109 Table B-1. The isotopic ratios for the various nuclides are those listed in the dose assessment model for a LOCA.

2. The dose rates due to contributions from various in-plant systems (j.e. piping, vent ducting, etc.) are calculated based on the Point Source/Line Source equations and "Radiological Health Handbook" thumbrules given as:

$$R/hr @ 1' = 6 * C * E * n \quad (B-2)$$

$$DR_i = DR_j * (r_j)^2 / (r_i)^2 \quad (B-3)$$

$$DR_i = DR_j * (r_j) / (r_i) \quad (B-4)$$

where:

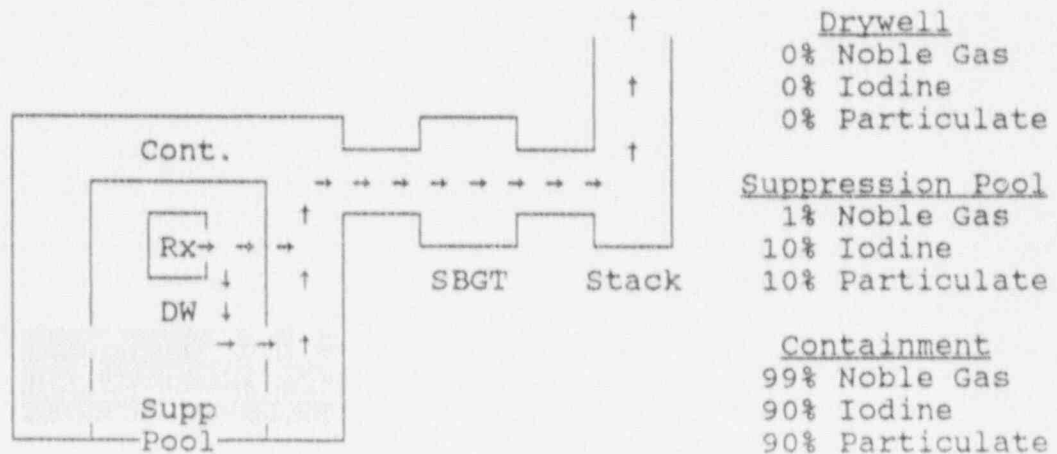
C = number of curies  
E = gamma ray energy (MeV)  
n = gamma quanta/dis  
DR<sub>1</sub> = dose rate at point 1  
DR<sub>2</sub> = dose rate at point 2  
r<sub>1</sub> = distance from source at point 1  
r<sub>2</sub> = distance from source at point 2

Consideration is given in areas of the plant where dose rates are due to a combination of airborne radioactivity and shine.

3. All area radiation monitors within an affected range reflect contributions from airborne radioactivity and/or shine.

### C. Chemistry Data

1. Post accident activity transportation assumptions are derived using the two methodologies given in NUREG-0737. Containment and Suppression pool activities increase slightly at 1015 due to minor cladding failures (<1.0%) caused by the ATWS and cycling of the SRVs. At 1145, cladding failure increases to approximately 6.0% due to the injection of relatively cold (~200°F) water. At this time, fission products are vented directly into Containment through the ruptured LPCI line, thereby bypassing the drywell and the Suppression Pool.



2. PASS samples at each location are isotopically decayed from time of reactor shutdown. Isotopic mix and ratios are derived from NEDO-22215 for a particular damage type and are corrected for plant specific power and volume. In addition, sample result activities account for system effects (i.e. dilution, leakage, etc.).
3. Postulated core damage is approximately 5% Fuel melt based on NEDO-22215 and corrected for plant specific power and volume.
4. Dose rates for PASS samples were calculated using the "Radiological Health Handbook" rule of thumb:

$$R/\text{hr @ } 1' = 5.64 * C * E \quad (\text{C-1})$$

where:

C = number of curies

E = gamma energy in MeV

Gamma energy was conservatively chosen as 0.5 for iodine and 0.7 for noble gases.

#### D. Field Survey Data

1. The downwind gamma doses were determined using the Class A atmospheric dispersion model centerline values. Open window meter readings are the summation of plume gamma dose, plume beta dose, and iodine deposition gamma dose. Iodine deposition beta dose is considered to be negligible at 3'.
2. Air sample results (CPM on silver zeolite cartridge) are back-calculated from airborne activity concentrations using plant and meter specific procedures.
3. The iodine deposition values were calculated as follows:
  - a. Total number of curies released for each iodine isotope was calculated using the stack sample analysis results and release flowrates.
  - b. Gross iodine deposition was determined by using the summation of each decay corrected isotope from the formula:

$$D_i = [(C_i * e^{-\lambda t}) * DF] / (X * .3927) \quad (\text{D-1})$$

where:

$D_i$  = deposition of isotope (i) in Ci/m<sup>2</sup>  
 $C_i$  = curies released of isotope (i)  
DF = deposition factor: REG Guide 1.111 Fig. 6-9  
X = distance from source in meters  
 $\lambda$  = .693/isotope half-life (hours)  
t = time since release occurred (hours)  
.3927 = arc length in radians of a 22.5° section

- c. The soil concentration was determined using a depth of 1" and a density of 2100 kg/m<sup>3</sup>.
  - d. The water concentration assumes the sample is drawn at a 1" depth.
  - e. The grass and vegetation samples were calculated using average deposition fractions and densities from NUREG/CR-3332 ORNL-5968 "Radiological Assessment" Table 5.1: "Fraction of Total Deposition Retained on Vegetation" pg. 5-15.
4. The concentration of radioiodine in milk was calculated based on the assumption that all downwind dairy herds were removed from the pasture prior to plume arrival and kept on stored feed. One herd was placed on pasture one day after plume passage for four hours.
- a. The I-131 activity in the milk sample was determined using the formula from NUREG/CR-3332 ORNL-5968 "Radiological Assessment" pg. 5-89,90:

$$C(t) = I * D_0 * 1.86E-2 * (e^{-.114t} - e^{-.9t}) \quad (D-2)$$

where:

C = concentration in milk  
I = daily forage consumption by the cow (kg/day)  
 $D_0$  = initial activity on the forage (pCi/kg)  
t = time (days)

- b. The PAG preventive and emergency levels are flagged when the concentration is above the target level given in U.S. Dept. of Health and Human Services "Preparedness and Response in Radiation Accidents", HHS Publication FDA 83-8211.

SECTION 8.0

MESSAGES AND PLANT DATA SHEETS

SECTION 8.1

MESSAGES

1991 PRACTICE EXERCISE  
Message Number = I.C.

Clock Time = 0730  
Scenario Time = -00/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Initial Conditions for the exercise are as follows:

1. RBS is currently operating at 100% power and has maintained 100% power for 84 consecutive days. The core is near the middle of core life with an exposure of 143 equivalent full power days.
2. SLC pump 'A' is out-of-service for mechanical repairs to the pump due to a scored cylinder sleeve. Pump repairs started yesterday morning. The pump is presently dismantled and repairs are expected to be completed by 1600 tomorrow.
3. SRV F051G has been weeping for approximately one week. Last night erratic indications on the acoustic monitor along with tailpipe temperature variations indicated that the SRV was chattering. These indications happened twice more during the midnight shift. It has been decided to follow the operator actions outlined in procedure AOP-0035, Safety Relief Valve Stuck Open, and reduce Reactor Power to 90% in an attempt to reseal the SRV and prevent further chattering.
4. Condenser air inleakage is suspected to be through the turbine gland seals. Gland sealing steam pressure was raised from 5.0 psig to 10.0 psig. Condenser vacuum has been stable at 27.3" Hg. for the past two days. Increased inleakage has resulted in increased offgas flow.
5. Fuel leakers are causing high airborne conditions in the Turbine and Auxiliary Buildings. Chemistry samples indicate that reactor coolant Dose Equivalent Iodine (DEI) is now 0.8 uCi/gm and Suppression Pool chemistry is elevated. Technical Specification 3/4.4.5 LCO will be entered at 0800 on January 31.
6. Meteorological conditions are: Clear today with a slight breeze from the Northwest, expected to increase to about 5 to 10 mph late this afternoon. Temperature is presently 42°F, with an expected high today of 58°F, with no precipitation likely for the next two days.



1991 PRACTICE EXERCISE  
Message Number = I.C.

Clock Time = 0730  
Scenario Time = -00/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Conduct Pre-Exercise briefing per sections 3.2 and 5.5 of the Exercise Manual. Deliver and discuss initial conditions.

Because of the potential for SRV F051G to open and then stick open, creating a loss-of-coolant accident, operators are preparing to decrease reactor power to 90% per AOP-0035, Safety Relief Valve Stuck Open, to attempt to reseal the SRV.

Air inleakage into the main condenser (suspected to be through the main turbine shaft seals), results in decreasing condenser vacuum. Even though gland sealing steam pressure was raised to about 7.0 psig, and condenser vacuum is stable at 27.3" Hg., it has not returned to its normal value of 28.5" Hg. Additional information concerning the air inleakage problem is found in Supplemental Scenario No. 1.

Due to microcracks in some of the fuel cladding, radioactive gases produced during the fission process are leaking out through the cracks into the reactor coolant system. Some of these gases then carry over into the Turbine and Auxiliary Buildings through other systems that interface with the reactor coolant system and reactor vessel. Suppression Pool activity increases because of the weeping safety/relief valve.

Expected Actions:

After the Control Room briefing is complete, the Shift Supervisor should inform the load dispatcher of the impending reduction in power and then direct the reactor operator to begin power reduction to 90%.

1991 PRACTICE EXERCISE  
 Message Number - I.C.

Clock Time - 0730  
 Scenario Time - 00/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SR</u>		<u>0</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SR</u>		<u>0</u>
LPCS	<u>SR</u>		<u>0</u>
RCIC	<u>SR</u>	<u>0</u>	<u>0</u>
HPCS	<u>SR</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>

	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>2000</u>
SLC B	<u>LT ON</u>	<u>0</u>	

	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>1020</u>	<u>40"</u>	<u>WR</u>

DIV I DIESEL SR  
 DIV II DIESEL SR  
 DIV III DIESEL SR

SRV	<u>RED</u>	<u>GRN</u>	<u>AC, MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051G	<u>OFF</u>	<u>ON</u>	<u>ON</u>

MSIV	<u>RED</u>	<u>GRN</u>
F022A	<u>ON</u>	<u>OFF</u>
F022B	<u>ON</u>	<u>OFF</u>
F022C	<u>ON</u>	<u>OFF</u>
F022D	<u>ON</u>	<u>OFF</u>
F028A	<u>ON</u>	<u>OFF</u>
F028B	<u>ON</u>	<u>OFF</u>
F028C	<u>ON</u>	<u>OFF</u>
F028D	<u>ON</u>	<u>OFF</u>

POWER 100% APRM LEVEL 40" NR

CNS P1A	<u>OP</u>	FWS P1A	<u>OP</u>
CNS P1B	<u>OP</u>	FWS P1B	<u>OP</u>
CNS P1C	<u>OP</u>	FWS P1C	<u>OP</u>

Total Feedwater Flow 12.4 Mlbs./hr

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>0.1</u>	<u>122°</u>	
CTMT	<u>0.1</u>	<u>84°</u>	
SPR PL		<u>94°</u>	<u>19'6"</u>

PANEL 870/601

SWP P2A	<u>SR</u>	SWP P2C	<u>SR</u>
SWP P2B	<u>SR</u>	SWP P2D	<u>SR</u>

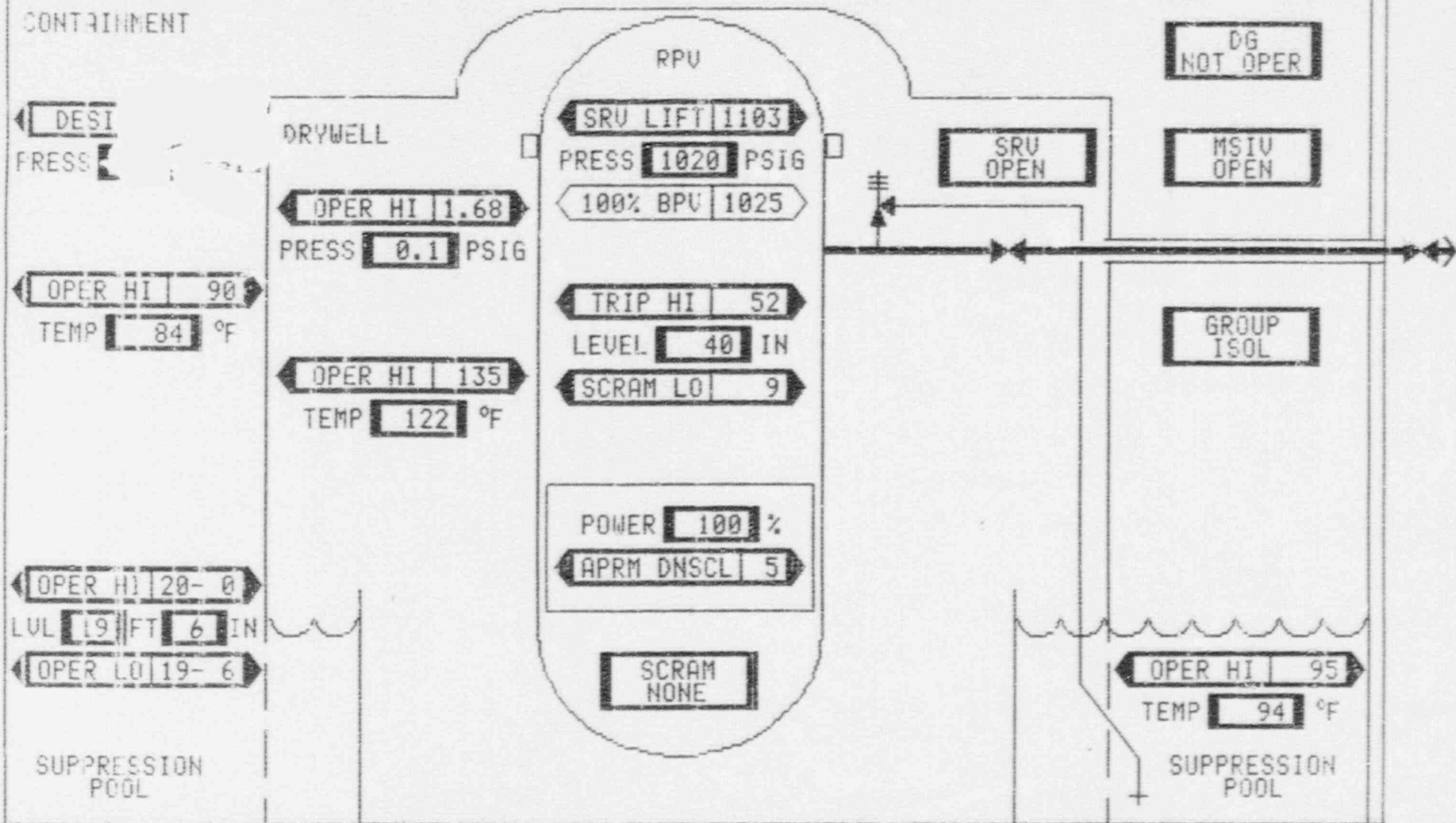
PANEL 863

SGTS A	<u>SR</u>	SGTS B	<u>SR</u>
D/W COOLERS OPERATING			<u>B C D E</u>
CTMT COOLERS OPERATING			<u>A B</u>

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

011 [RPU CAUTION] CRITICAL PLANT VARIABLES [CNTMT CAUTION]



013

# RPU CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

RCIC

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

HPCS

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCS

WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCI

WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

SHTDN COOLING

CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RMCU

COOLING AVAIL	POWER AVAIL	PUMP RUN
---------------	-------------	----------

TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
-----------	-----------	--------------	------------

TURBINE BYPASS

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
-----------	-----------	--------------	------------

MSL DRAINS

COOLING AVAILABLE	U. PWR AVAIL	VALVE SHUT
-------------------	--------------	------------

SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP OFF
------------------	-------------	----------

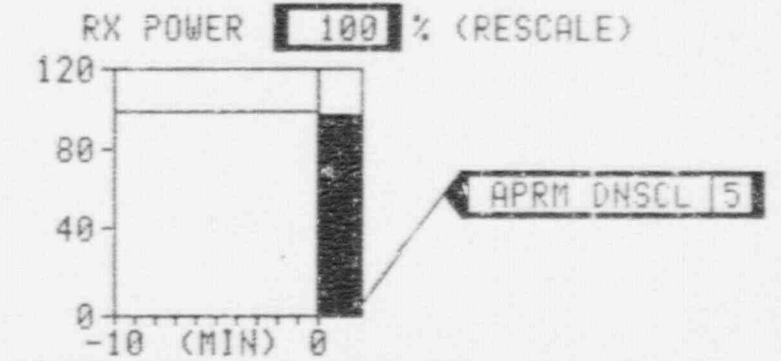
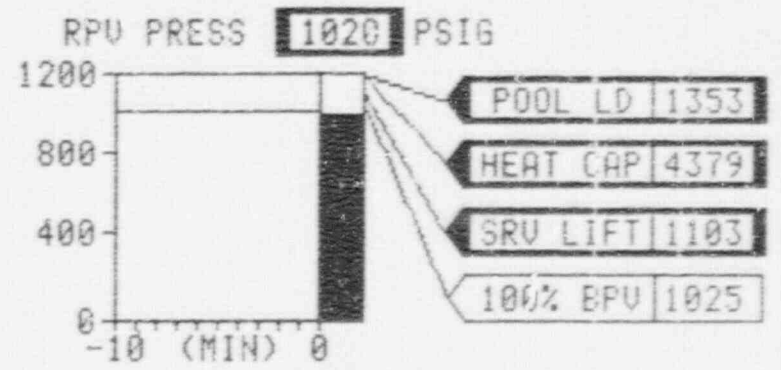
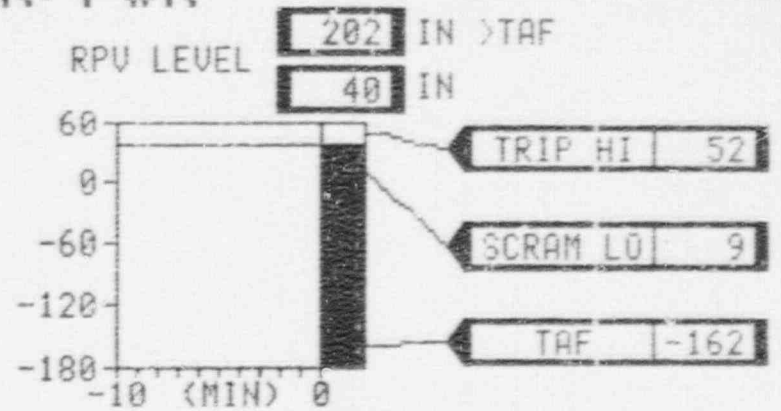
DG NOT OPER

SRV OPEN

MSIV OPEN

GROUP ISOL

SCRAM NONE



RIVER BEND 000 30-JAN-1991 7:30

# 027 RPU CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

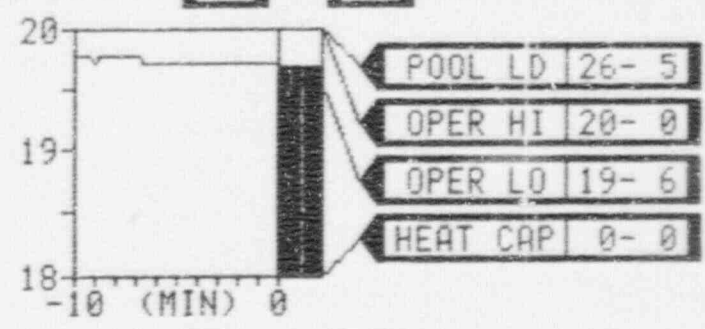
DG NOT OPER

SRV OPEN

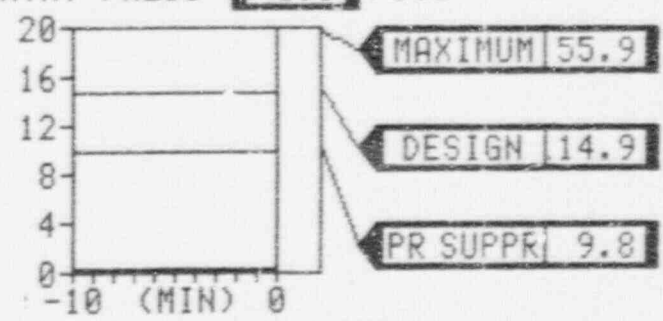
GROUP ISOL

SCRAM NONE

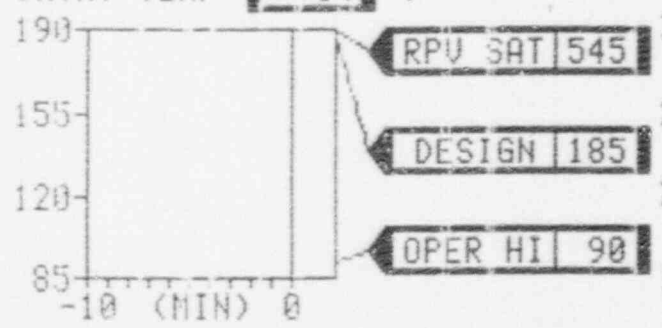
POOL LEVEL 19 FT 6 IN (RESCALE)



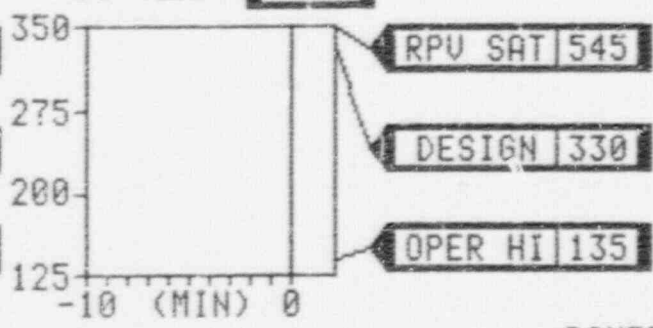
CNTMT PRESS 0.1 PSIG



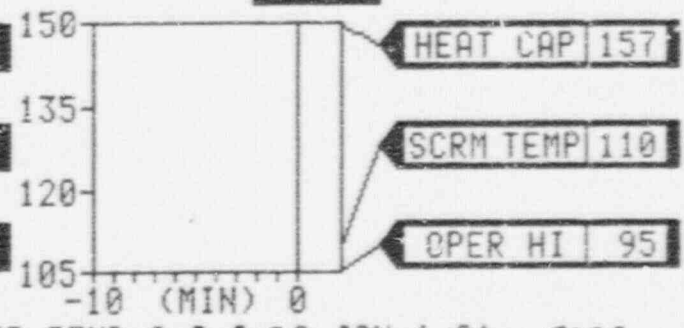
CNTMT TEMP 84 °F



DW TEMP 122 °F



POOL TEMP 94 °F



1991 PRACTICE EXERCISE

Message Number = 1

Clock Time = 0800

Scenario Time = 00/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

ADSORBER TRAIN "A" FLOW HI/LOW - P845-B/G03  
OFF GAS SYS AFTER FILTER DISCH FLOW HI/LO - P845-B/D02  
PREFILTER DIFF PRESS HIGH - P845-B/C04  
ADS/SRV VALVE LEAKING - P601-19A/B09

Indications in Control Room include:

Condenser vacuum is 27.3" Hg, and slowly decreasing.

Adsorber flow meter N64-R6111 (A' Train) indicates 28 scfm.

After Filter discharge flow recorder (N64-R620) is indicating 62 scfm with the blue pen.

Prefilter differential pressure meter (N64-R611) indicates 8" water.

1991 PRACTICE EXERCISE

Message Number: I.C.

Clock Time = 0730  
 Scenario Time = -00/30

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu\text{Ci/cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu\text{Ci/cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci/cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci/cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu\text{Ci/cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci/cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci/cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci/cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci/cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci/cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu\text{Ci/sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci/cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci/cc}$		Off Gas Pre-treatment Monitor	200 mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci/cc}$		Off Gas Post-treatment Monitor	80 cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci/cc}$		Main Steam Line Radiation Monitor	800 mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci/cc}$		Main Steam Line Radiation Monitor	750 mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu\text{Ci/cc}$		Main Steam Line Radiation Monitor	750 mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu\text{Ci/cc}$		Main Steam Line Radiation Monitor	825 mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10 $\mu\text{Ci/cc}$			
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci/cc}$			

■ - Indicates Alarming


OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number: I.C.Clock Time = 0730Scenario Time = -00/30RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

 - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"



1991 PRACTICE EXERCISE

Message Number = 1

Clock Time = 0800

Scenario Time = 00/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Air inleakage has caused Offgas System flow to increase to the alarm point. Condenser vacuum is slowly decreasing.

See Supplemental Scenario No. 1, and provide condenser vacuum data from the attached graph as requested by the operators.

When operators request information about hydrogen recombiner operation, provide them with the following values:

- o Recombiner temperature - 538°F
- o Recombiner pressure - 1.3 psig
- o Recombiner hydrogen concentration - 0.4%

Expected Actions:

The Shift Supervisor should dispatch an operator to inspect for signs of additional inleakage or malfunction of equipment used to maintain vacuum (air ejectors, vacuum pump seals, water and loop seals), per AOP-005, Loss of Main Condenser Vacuum.

Control Room operators should carefully check the Offgas System to ensure the recombiner is functioning properly.

1991 PRACTICE EXERCISE  
 Message Number - 1

Clock Time - 0800  
 Scenario Time - 00/00

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

<u>PANEL 601/877</u>				<u>PANEL 601</u>			<u>PANEL 680</u>				
RHR A	<u>Status</u>	<u>Press</u>	<u>Flow</u>	SRV	<u>RED</u>	<u>GRN</u>	<u>AC, MN</u>	POWER	<u>100% APRM</u>	LEVEL	<u>40" NR</u>
RHR B	<u>SR</u>		<u>0</u>	F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CNS P1A	<u>OP</u>	FWS P1A	<u>OP</u>
RHR C	<u>SPC</u>		<u>5200</u>	F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CNS P1B	<u>OP</u>	FWS P1B	<u>OP</u>
LPCS	<u>SR</u>		<u>0</u>	F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CNS P1C	<u>OP</u>	FWS P1C	<u>OP</u>
RCIC	<u>SR</u>	<u>0</u>	<u>0</u>	F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	Total Feedwater Flow			<u>12.4</u> Mlbs./hr
HPCS	<u>SR</u>	<u>0</u>	<u>0</u>	F041E	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 808</u>			
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>	F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>		<u>Press</u>	<u>Temp</u>	<u>Level</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>	F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	DRYWELL	<u>0.1</u>	<u>122°</u>	
	<u>Squib</u>	<u>Press</u>	<u>Level</u>	F041H	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CTMT	<u>0.1</u>	<u>84°</u>	
SLC A	<u>OOS</u>	<u>0</u>	<u>2000</u>	F041I	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SPR PL		<u>94°</u>	<u>19'6"</u>
SLC B	<u>LT ON</u>	<u>0</u>		F041J	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 870/601</u>			
RPV	<u>Press</u>	<u>Level</u>	<u>Range</u>	F041K	<u>OFF</u>	<u>ON</u>	<u>ON</u>	SWP P2A	<u>SR</u>	SWP P2C	<u>SR</u>
DIV I	<u>DIESEL</u>	<u>SR</u>		F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2B	<u>SR</u>	SWP P2D	<u>SR</u>
DIV II	<u>DIESEL</u>	<u>SR</u>		F041M	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 863</u>			
DIV III	<u>DIESEL</u>	<u>SR</u>		F041N	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SGTS A	<u>SR</u>	SGTS B	<u>SR</u>
				F022A	<u>ON</u>	<u>OFF</u>		D/W COOLERS OPERATING	<u>B C D E</u>		
				F022B	<u>ON</u>	<u>OFF</u>		CTMT COOLERS OPERATING	<u>A B</u>		
				F022C	<u>ON</u>	<u>1/FL</u>					
				F022D	<u>ON</u>	<u>OFF</u>					
				F028A	<u>ON</u>	<u>OFF</u>					
				F028B	<u>ON</u>	<u>OFF</u>					
				F028C	<u>ON</u>	<u>OFF</u>					
				F028D	<u>ON</u>	<u>OFF</u>					

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE

SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

011 [RPU CAUTION] CRITICAL PLANT VARIABLES [CNTMT CAUTION]

CONTAINMENT

DESIGN 14.9  
PRESS 0.1 PSIG

DRYWELL

OPER HI 1.68  
PRESS 0.1 PSIG

OPER HI 90  
TEMP 84 °F

OPER HI 135  
TEMP 122 °F

OPER HI 20-0  
LVL 19 FT 6 IN  
OPER LO 19-6

SUPPRESSION  
POOL

RPU

SRV LIFT 1103  
PRESS 1020 PSIG  
100% BPU 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 100 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

SRV  
OPEN

MSIV  
OPEN

GROUP  
ISOL

OPER HI 95  
TEMP 94 °F

SUPPRESSION  
POOL

013

# RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER <i>AVAIL</i>	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE OPEN
TURBINE EYPAES	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V.PWR <i>AVAIL</i>	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

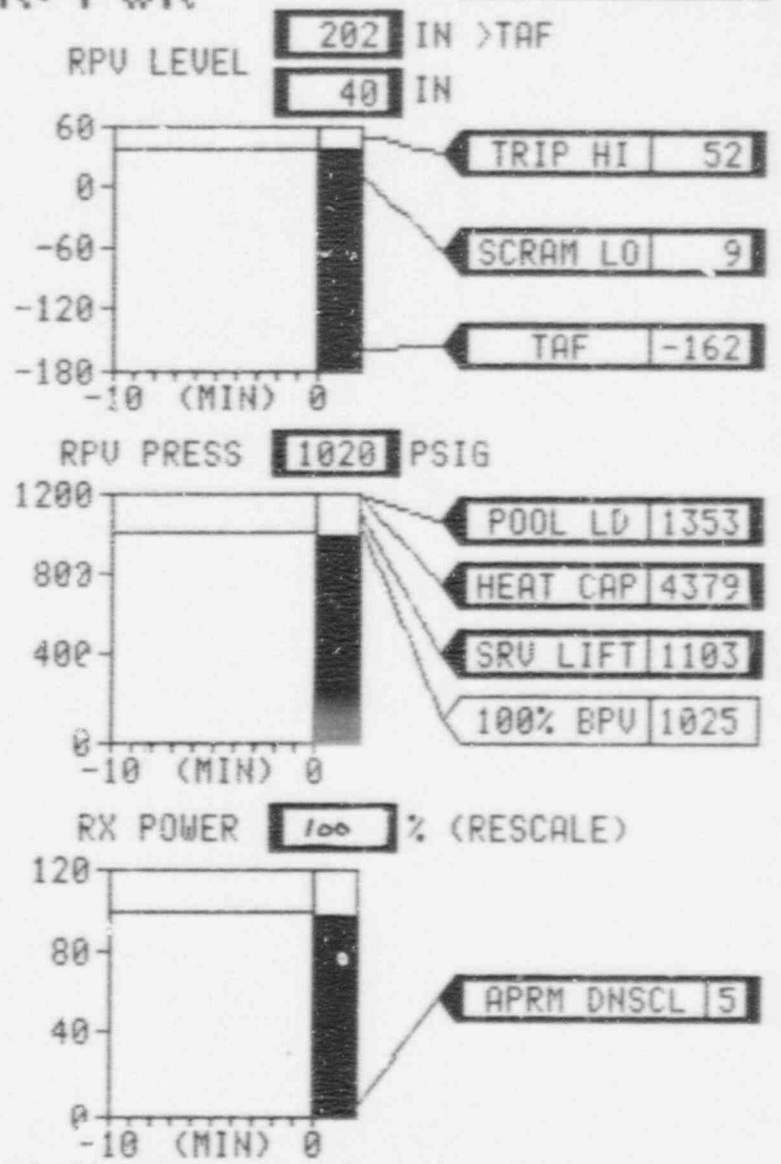
DG NOT OPER

SRV OPEN

MSIU OPEN

GROUP ISOL

SCRAM NONE



# 027 RPU CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

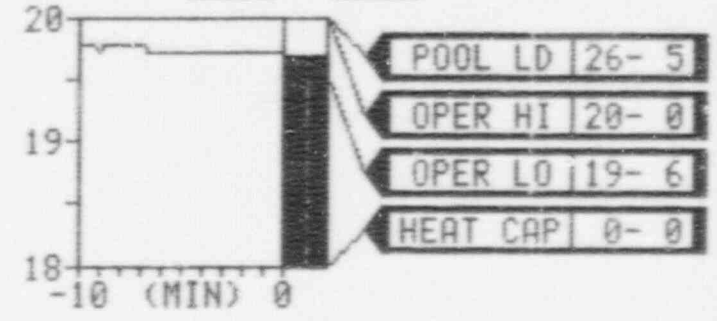
DG NOT OPER

SRV OPEN

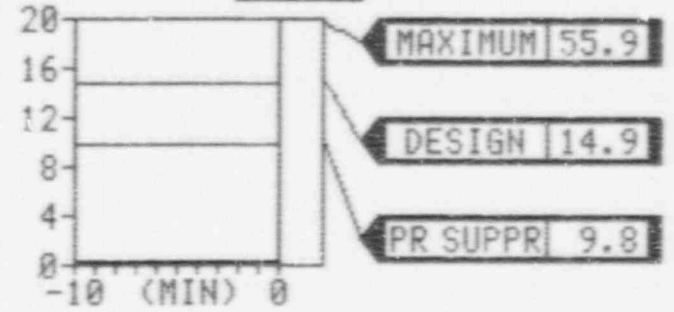
GROUP ISOL

SCRAM NONE

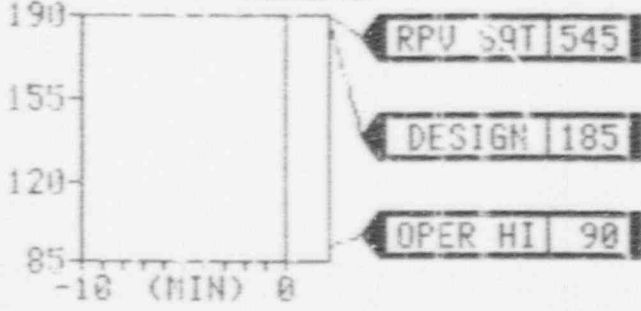
POOL LEVEL 19 FT 6 IN (RESCALE)



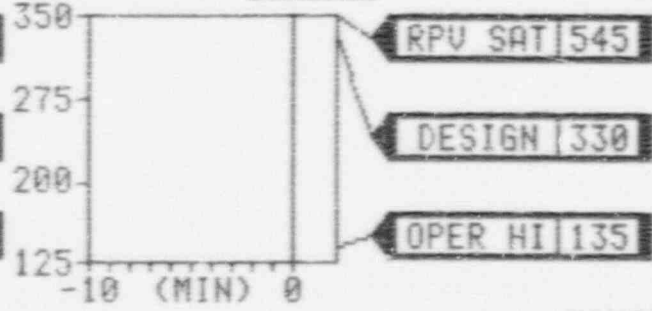
CNTMT PRESS 0.1 PSIG



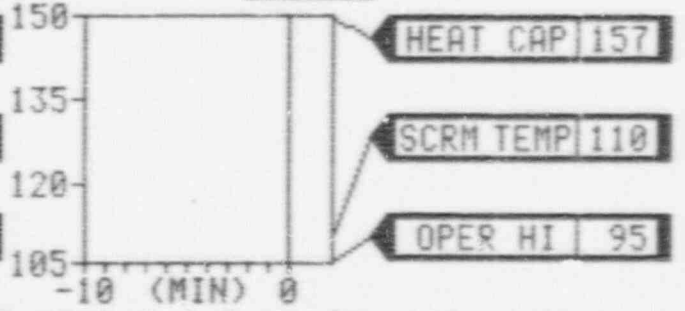
CNTMT TEMP 84 °F



DW TEMP 122 °F



POOL TEMP 94 °F



RIVER BEND 30-JAN-1991 8:00

1991 PRACTICE EXERCISE

Message Number: 1

Clock Time = 0800

Scenario Time = 00/00

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tub ; F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 76' (ARM)	0.5 mR/hr
RE-139	Annul. Neat Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.P. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Reg. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 1

Clock Time = 0800

Scenario Time = 00/00

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07	µCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06	µCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	µCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	µCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07	µCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-06	µCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	µCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	µCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	µCi/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08	µCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01	µCi/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08	µCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	µCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	µCi/cc				
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	µCi/cc	Off Gas Pre-treatment Monitor		200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	µCi/cc	Off Gas Post-treatment Monitor		80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09	µCi/cc	Main Steam Line Radiation Monitor		800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07	µCi/cc	Main Steam Line Radiation Monitor		750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10	µCi/cc	Main Steam Line Radiation Monitor		750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07	µCi/cc	Main Steam Line Radiation Monitor		825	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 1.1

Clock Time = 0805

Scenario Time = 00/05

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

LOOP SEAL BLOWN WATER LEVEL LOW - P845-B/F06

Indications in Control Room include:

Prefilter inlet drain valve (N64-F054) red/green lights off.

Prefilter loop seal drain valve (N64-F048) red light lit.



1991 PRACTICE EXERCISE  
Message Number = 1.1

Clock Time = 0805  
Scenario Time = 00/05

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Control room operators are unable to close valve N04-F054 from control panel P-845. The loop seal must be isolated locally.

Main condenser vacuum continues to slowly decrease.

Refer to Supplemental Scenario No. 2 for system valve arrangements and radiological information.

Data indicate that monitors RE-118P and RE-118G (Turbine Bldg. ventilation) have increased by a factor of more than  $10^3$ .

Expected Actions:

Evacuate all unnecessary personnel from the Turbine Building per Alarm Response Procedure 1H13-P845-B/F05, Loop Seal down Water Level Low.

The Offgas System parameters should continue to be checked, and condenser vacuum to be monitored.

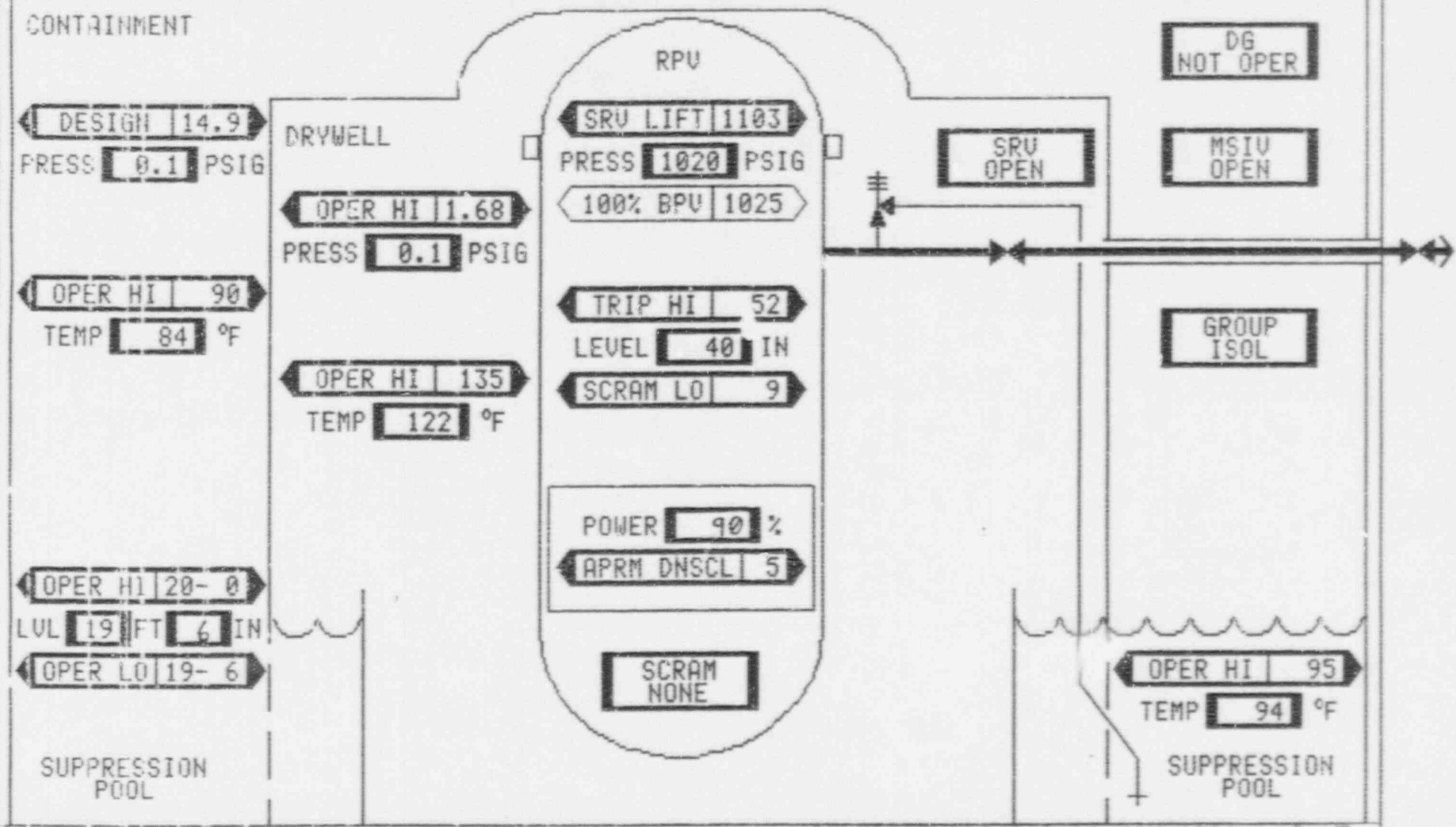
Radiation Protection is notified, and should begin to take samples of the Turbine Building atmosphere, and Offgas areas. Sample results are shown on Tables 9.2.15 and 9.2.16.

Once it is determined that the loop seal is potentially unisclated and still blowing through, an NEO should be notified to go to the Offgas Building to check the condition of the loop seal, and isolate it if possible.

The Control Room crew should recognize that the Turbine Bldg. ventilation monitors have increased by more than 1000 times the previous "normal" level, and declare an ALERT, per EIP-2-001, EAL 4, Initiating Condition 4: "Alarm of DRMS airborne ventilation monitors and confirmation of readings greater than 1000 times normal levels".



011 [RPV CAUTION] CRITICAL PLANT VARIABLES [CNTMT CAUTION]



013

# RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

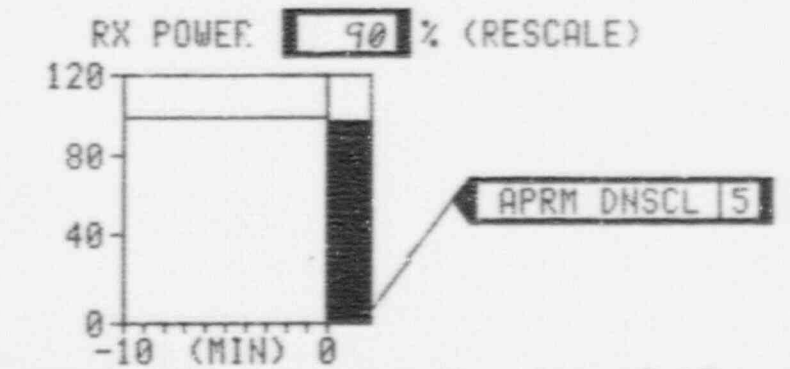
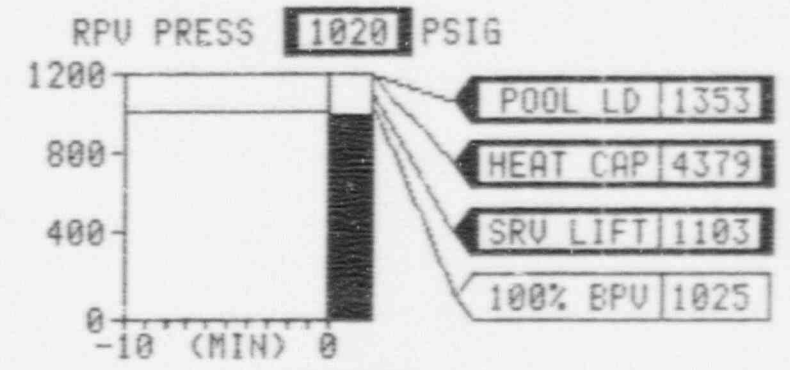
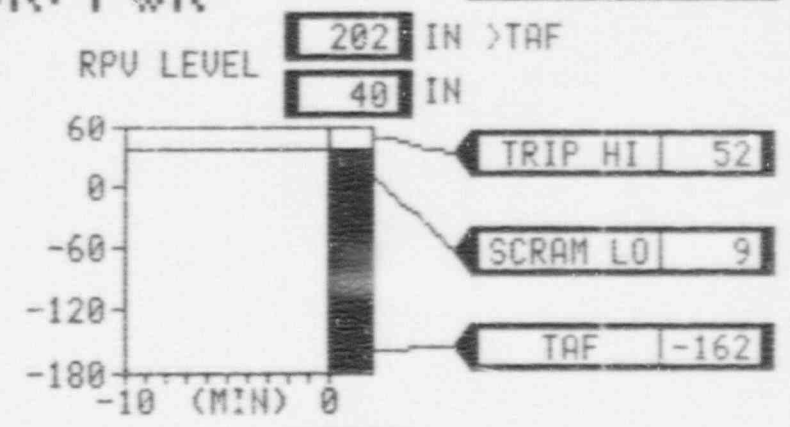
DG NOT OPER

SRU OPEN

MSIV OPEN

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 8:05

# 027 RPU CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

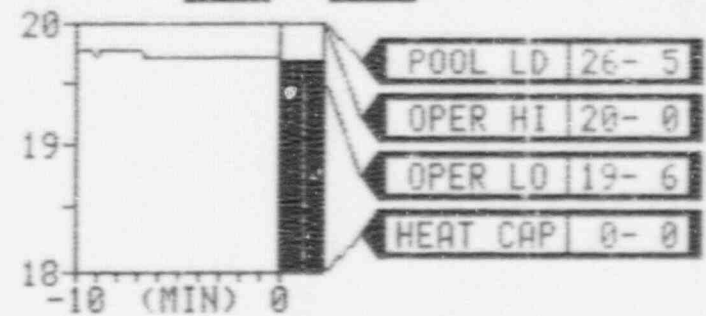
DG NOT OPER

SRU OPEN

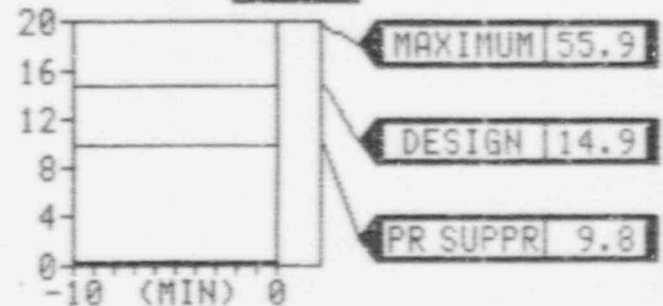
GROUP ISOL

SCRAM NONE

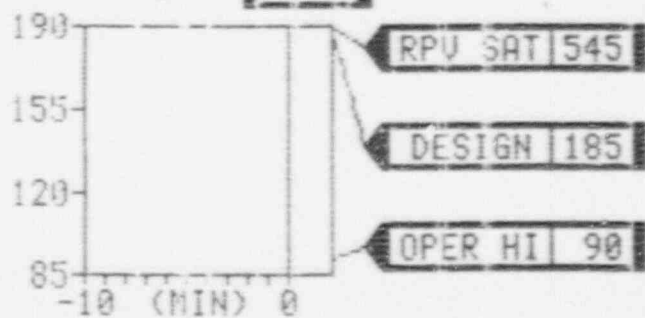
POOL LEVEL 19 FT 6 IN (RESCALE)



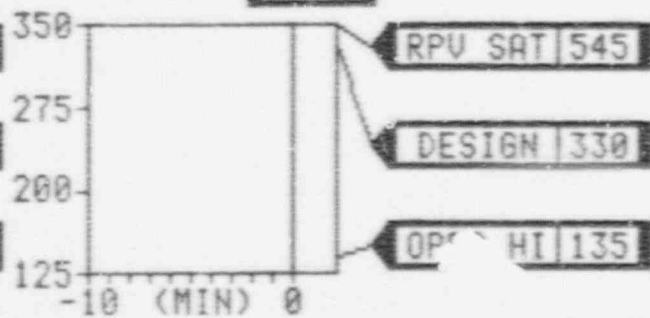
CNTMT PRESS 0.1 PSIG



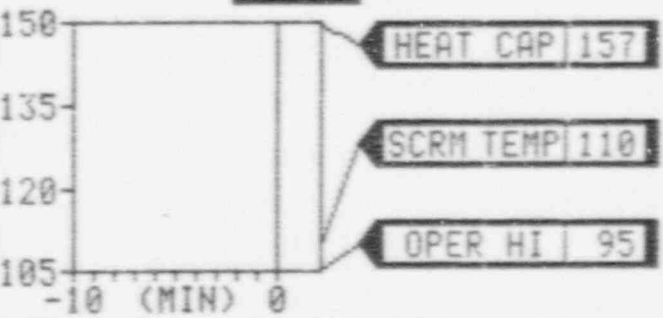
CNTMT TEMP 84 °F



DW TEMP 122 °F



POOL TEMP 94 °F



1991 PRACTICE EXERCISE

Message Number: 1.1

Clock Time = 0805

Scenario Time = 00/05

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	0.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

 - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 1.1

Clock Time = 0805

Scenario Time = 06/05

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07	µCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06	µCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	µCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	µCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06	µCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-05	µCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	µCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	µCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	µCi/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08	µCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02	µCi/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08	µCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	µCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	µCi/cc				
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08	µCi/cc	Off Gas Pre-treatment Monitor		200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	6.0E-07	µCi/cc	Off Gas Post-treatment Monitor		80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09	µCi/cc	Main Steam Line Radiation Monitor		800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07	µCi/cc	Main Steam Line Radiation Monitor		750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10	µCi/cc	Main Steam Line Radiation Monitor		750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06	µCi/cc	Main Steam Line Radiation Monitor		825	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 1.2

Clock Time = 0810

Scenario Time = 00/10

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

MAIN PLANT EXH RADN ALARM - P863-71A/E07  
CHANNEL ALERT ALARM - DRMS

Indications in Control Room include:

As shown on attached DRMS data sheets.



1991 PRACTICE EXERCISE

Message Number = 1.2

Clock Time = 0810

Scenario Time = 00/10

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Expected Actions:

Gases from the main condenser are now blowing into the Turbine Building through the dirty waste sump (1CND-TK12) vent. This gaseous activity, combined with the already elevated activity levels due to the fuel leakers, puts the main plant exhaust monitor into an alarm condition.

Operators should check the various building/area exhaust monitors to determine the area causing the increased activity, and set the DRMS to trend every 10 minutes to monitor the activity levels.

Vacuum continues to slowly decrease as a result of air inleakage past the turbine shaft seals.

Radiation Protection should be notified of existing conditions.

The NEO sent to check the loop seal should be notified by H.P. not to enter any Offgas areas prior to Health Physics conducting a survey.

Chemistry is notified to draw samples to ensure Technical Specification 3.11.2.1 (Dose Rates of Gaseous Effluents) are not exceeded. Results indicate Technical Specification limits are not exceeded.

The Offgas Pretreatment monitors record no increase in radiation levels on recorder R604 located on the process radiation recorder panel P-600 in the Control Room. Increased radiation levels on these monitors would indicate possible fuel damage, or damage to equipment in the Offgas System.

Condenser vacuum should continue to be monitored. Once entry conditions are established, operators should be directed to re-enter the Turbine Building and continue to inspect for other signs of inleakage or equipment malfunctions which may be causing low vacuum conditions.

1991 PRACTICE EXERCISE  
 Message Number - 1.2

Clock Time - 0810  
 Scenario Time - 00/10

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	Status	Press	Flow
RHR B	SR	0	0
RHR C	SFC	5200	0
LPCS	SR	0	0
RCIC	SR	0	0
HPCS	SR	0	0
CRD A	OP	1900	75
CRD B	AV	0	0
SLC A	Squib	Press	Level
SLC B	OOS	0	2000
	LI ON	0	
RPV	Press	Level	Range
	1020	40"	WR
DIV I	DIESEL	SR	
DIV II	DIESEL	SR	
DIV III	DIESEL	SR	

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE  
 SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

PANEL 601

SRV	RED	GRN	AC, MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF
MSIV	RED	GRN	
F022A	ON	OFF	
F022B	ON	OFF	
F022C	ON	OFF	
F022D	ON	OFF	
F028A	ON	OFF	
F028B	ON	OFF	
F028C	ON	OFF	
F028D	ON	OFF	

PANEL 680

POWER	90% APRM	LEVEL	40" NR
CNS P1A	OP	FWS P1A	OP
CNS P1B	OP	FWS P1B	OP
CNS P1C	OP	FWS P1C	OP

Total Feedwater Flow 11.2 Mlbs./hr

PANEL 808

DRYWELL	Press	Temp	Level
	0.1	122°	
CTMT	0.1	84°	
SPR PL		94°	19'6"

PANEL 870/601

SWP F2A	SR	SWP F2C	SR
SWP F2B	SR	SWP F2D	SR

PANEL 863

SGTS A	SR	SGTS B	SR
B/W	COOLERS OPERATING		B C D E
CTMT	COOLERS OPERATING		A B

011 [RPV CAUTION] CRITICAL PLANT VARIABLES [CNTMT CAUTION]

CONTAINMENT

DESIGN 14.9  
PRESS 0.1 PSIG

DRYWELL

OPER HI 1.68  
PRESS 0.1 PSIG

OPER HI 90  
TEMP 84 °F

OPER HI 135  
TEMP 122 °F

OPER HI 20-0  
LVL 19 FT 6 IN  
OPER LO 19-6

SUPPRESSION POOL

RPV

SRV LIFT 1103  
PRESS 1020 PSIG  
100% BPU 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 90 %  
APRM DNSCL 5

SCRAM NONE

DG NOT OPER

MSIV OPEN

SRV SHUT

GROUP ISOL

OPER HI 95  
TEMP 94 °F

SUPPRESSION POOL

013

# RPU CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE OPEN
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U.PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

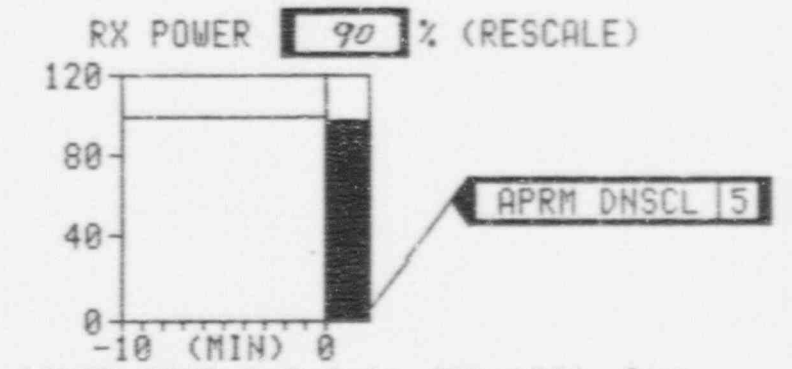
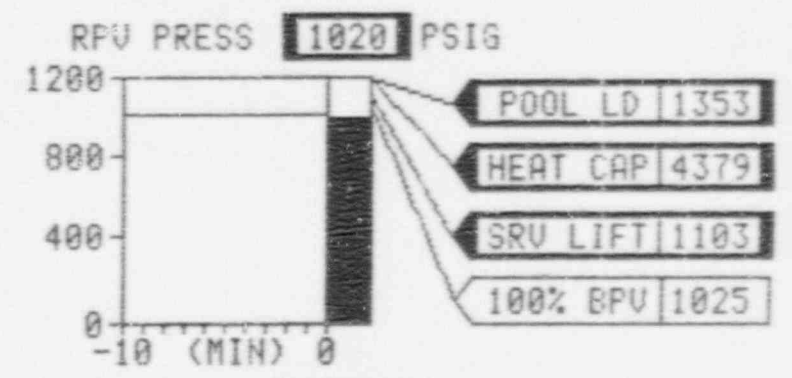
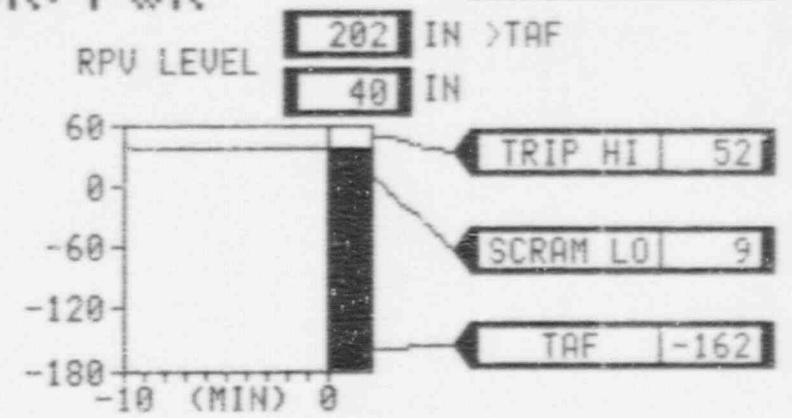
DG NOT OPER

SRU SHUT

MSIV OPEN

GROUP ISOL

SCRAM NONE



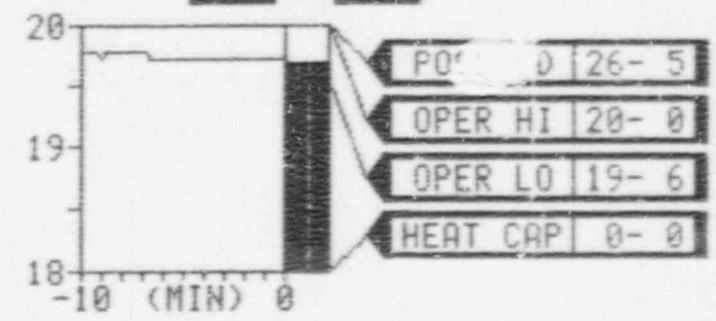
RIVER BEND ●●● 30-JAN-1991 8:10

# 027 **RPU CAUTION** CONTAINMENT CONTROL--UPSET/MR

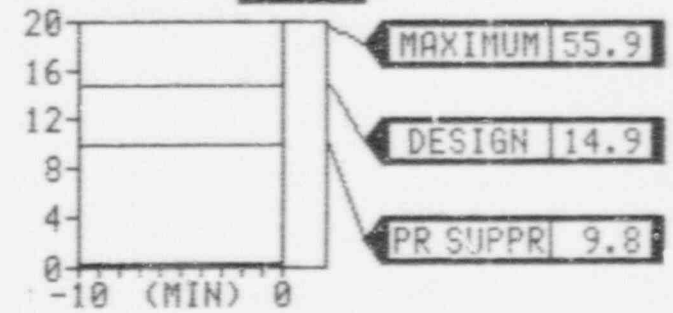
POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

- DG NOT OPER**
- SRV SHUT**
- GROUP ISOL**
- SCRAM NONE**

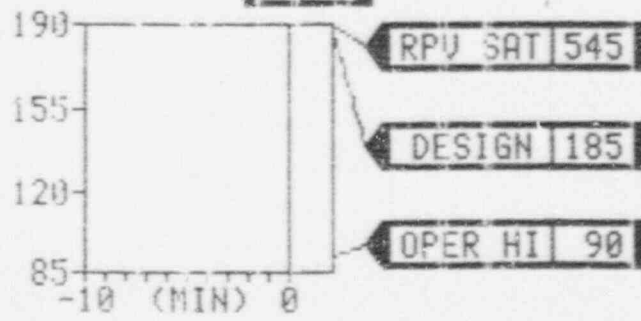
POOL LEVEL **19** FT **6** IN (RESCALE)



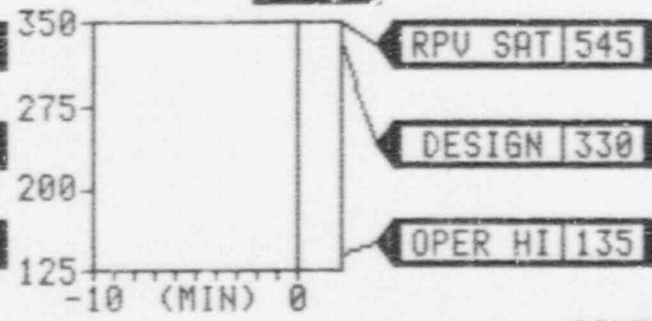
CNTMT PRESS **0.1** PSIG



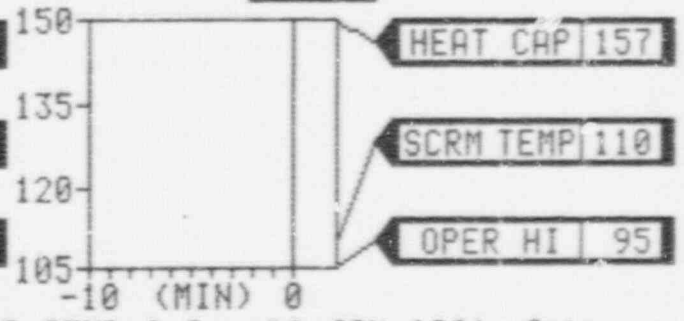
CNTMT TEMP **84** °F



DW TEMP **122** °F



POOL TEMP **94** °F



1991 PRACTICE EXERCISE

Message Number: 1.2Clock Time = 0810Scenario Time = 00/10

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Anal. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 173' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE  
 Message Number: 1.2

Clock Time = 0810  
 Scenario Time = 00/10

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor		200 mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08 $\mu$ Ci/cc	Off Gas Post-treatment Monitor		80 cpm
RE-118G	Turbine Bldg. Vent (GAS)	6.0E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		800 mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		750 mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		750 mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		825 mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06 $\mu$ Ci/cc			

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 2

Clock Time = 0815

Scenario Time = 09/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1981 PRACTICE EXERCISE

Message Number = 2

Clock Time = 0815

Scenario Time = 00/15

REPER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

DRMS data sheets show trends increasing. See Supplemental Scenario No. 2.

Condenser vacuum is 26" Hg., and decreasing with time. See Supplemental Scenario No. 1.

Expected Actions:

Health Physics personnel are sent to Offgas building to assess radiological conditions, and establish entry conditions for areas within the Offgas building.

An NEO is dispatched to enter the Offgas Building and attempt to isolate the loop seal.

Operators continue to monitor the Offgas System and condenser vacuum.

1991 PRACTICE EXERCISE  
 Message Number - 2

Clock Time - 0815  
 Scenario Time - 00/15

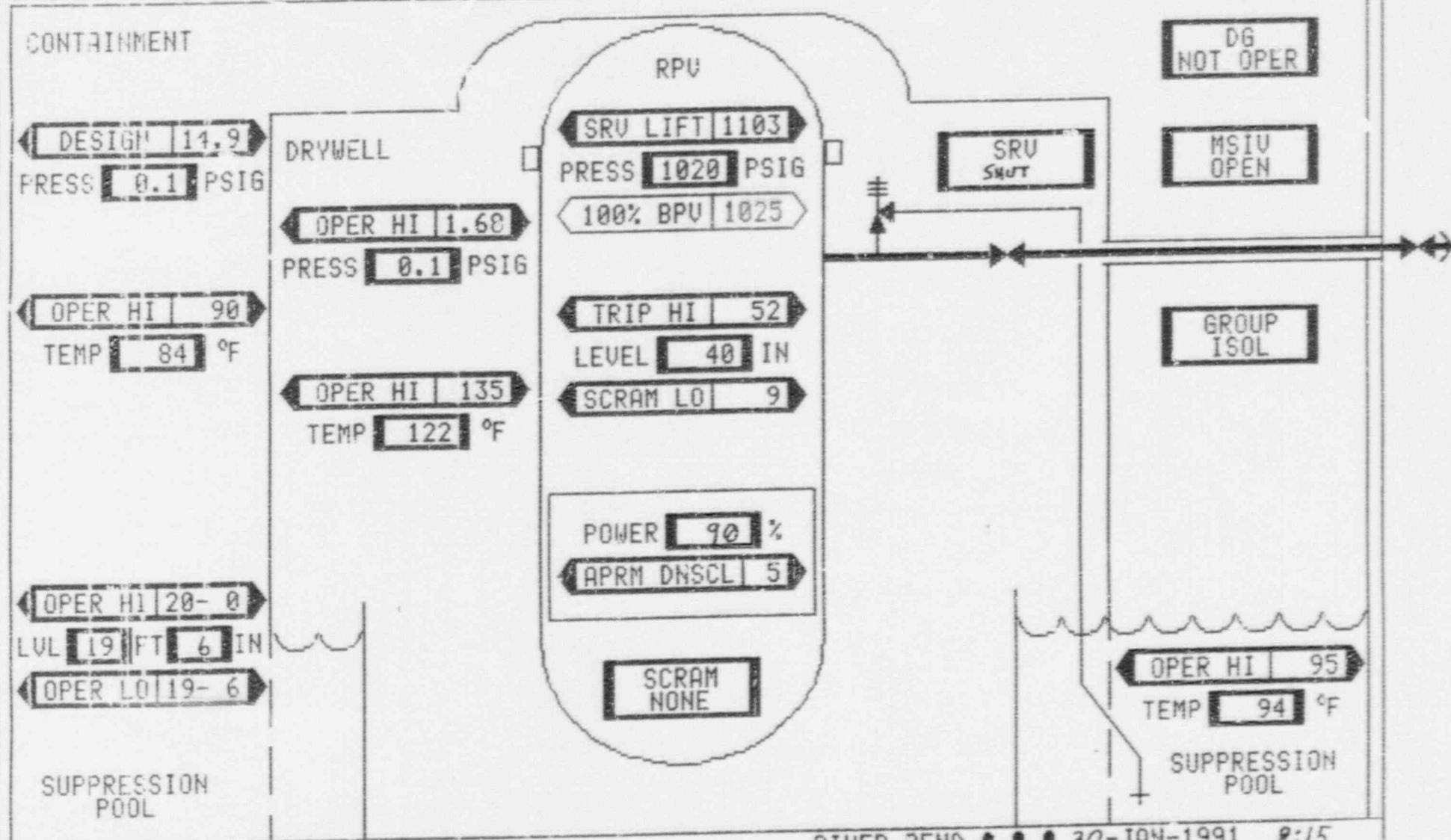
RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877				PANEL 601			PANEL 680								
	Status	Press	Flow	SRV	RED	GRN	AC.MN	POWER	90% APRM	LEVEL	40" NR				
RHR A	SR		0	F041A	OFF	ON	OFF								
RHR B	SPC		5200	F041B	OFF	ON	OFF	CNS P1A	OP	FWS P1A	OP				
RHR C	SR		0	F041C	OFF	ON	OFF	CNS P1B	OP	FWS P1B	OP				
LPCS	SR		0	F041D	OFF	ON	OFF	CNS P1C	OP	FWS P1C	OP				
RCIC	SR	0	0	F041F	OFF	ON	OFF	Total Feedwater Flow <u>11.2</u> Mlbs./hr.							
HPCS	SR	0	0	F041G	OFF	ON	OFF	PANEL 808							
CRD A	OP	1900	75	F041L	OFF	ON	OFF						Press	Temp	Level
CRD B	AV	0	0	F047A	OFF	ON	OFF					DRYWELL	0.1	122°	
	Squib	Press	Level	F047B	OFF	ON	OFF	CTMT	0.1	84°					
SLC A	OOS	0	2000	F047C	OFF	ON	OFF	SPR PL		94°	19'6"				
SLC B	LI ON	0		F047D	OFF	ON	OFF	PANEL 870/601							
	Press	Level	Range	F047F	OFF	ON	OFF	SWP P2A	SR	SWP P2C	SR				
RPV	1020	40"	WR	F051B	OFF	ON	OFF	SWP P2B	SR	SWP P2D	SR				
DIV I	DIESEL	SR		F051C	OFF	ON	OFF	PANEL 863							
DIV II	DIESEL	SR		F051D	OFF	ON	OFF	SGTS A	SR	SGTS B	SR				
DIV III	DIESEL	SR		F051G	OFF	ON	OFF	D/W COOLERS OPERATING			B C D E				
				MSIV	RED	GRN		CTMT COOLERS OPERATING			A B				
				F022A	ON	OFF									
				F022B	ON	OFF									
				F022C	ON	OFF									
				F022D	ON	OFF									
				F028A	ON	OFF									
				F028B	ON	OFF									
				F028C	ON	OFF									
				F028D	ON	OFF									

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AV E

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

011 RPU CAUTION CRITICAL PLANT VARIABLES CNTMT CAUTION



013

# RPU CONTROL--WR/PWR

CNTMT CAUTION

CNDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCE	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U. PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

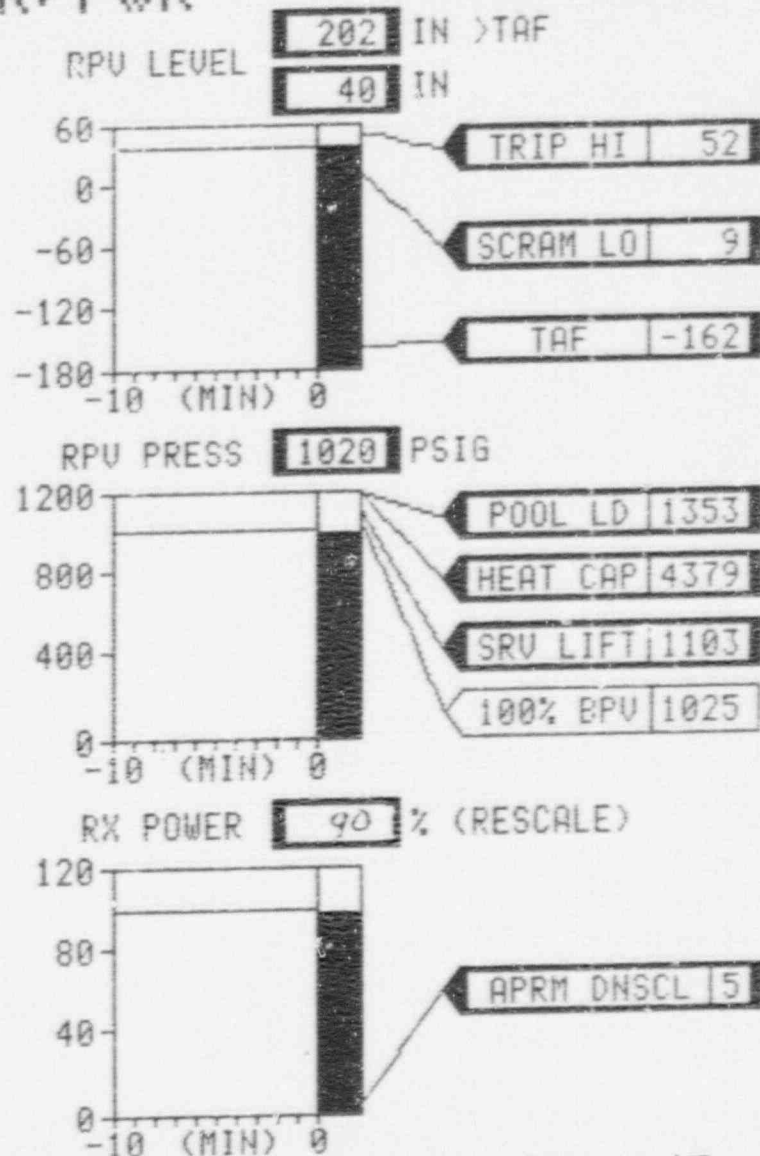
DG NOT OPER

SRV SHUT

MSIV OPEN

GROUP ISOL

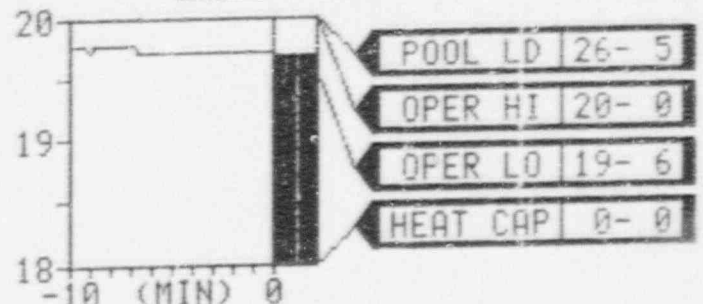
SCRAM NONE



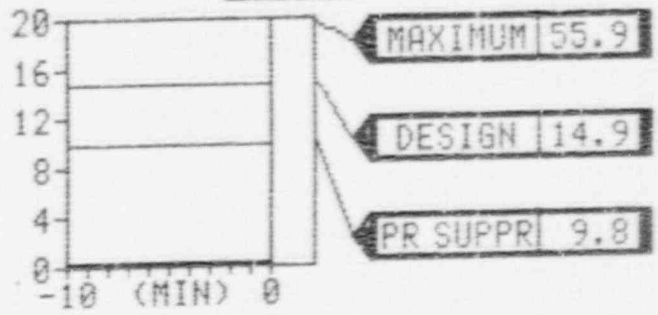
# 027 RPU CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	SRV SHUT
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	GROUP ISOL
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF	

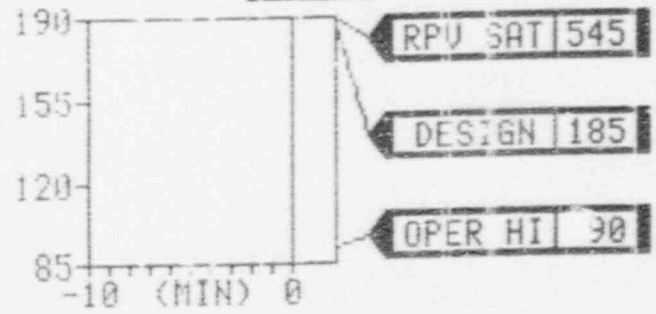
POOL LEVEL **19** FT **6** IN (RESCALE)



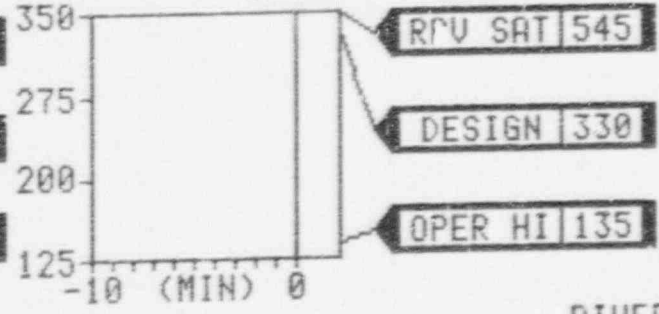
CNTMT PRESS **0.1** PSIG



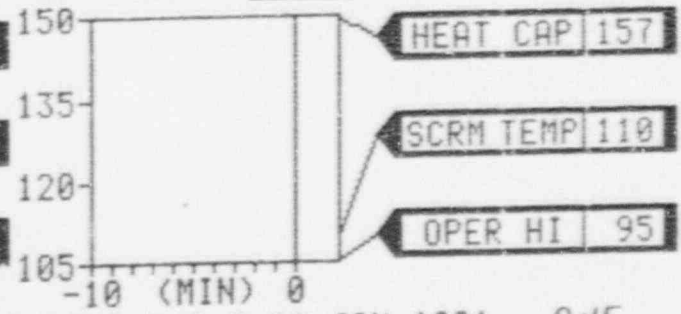
CNTMT TEMP **84** °F



DW TEMP **122** °F



POOL TEMP **94** °F



RIVER BEND 30-JAN-1991 8:15

1991 PRACTICE EXERCISE

Message Number: 2Clock Time = 0815Scenario Time = 00/15RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	6.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

- Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 2

Clock Time = 0815

Scenario Time = 00/15

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06	μCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-06	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02	μCi/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	μCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc				
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08	μCi/cc	Off Gas Pre-treatment Monitor		200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	6.0E-07	μCi/cc	Off Gas Post-treatment Monitor		80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09	μCi/cc	Main Steam Line Radiation Monitor		800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07	μCi/cc	Main Steam Line Radiation Monitor		750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10	μCi/cc	Main Steam Line Radiation Monitor		750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06	μCi/cc	Main Steam Line Radiation Monitor		825	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE  
Message Number = 3

Clock Time = 0830  
Scenario Time = 00/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

MAIN PLANT EXH RADN ALARM - P863-71A/E07  
CHANNEL HIGH ALARM - DRMS

Indications in Control Room include:

As shown on attached DRMs data sheets.



1991 PRACTICE EXERCISE  
Message Number = 3

Clock Time = 0830  
Scenario Time = 00/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Condenser vacuum has stabilized at 25.8" Hg., which is quite low and should continue to be of concern to the operators.

DRMS trends continue to show increasing airborne activity.

Shift Supervisor confirms the radiological release from the Turbine Building is below EAL Initiating Conditions.

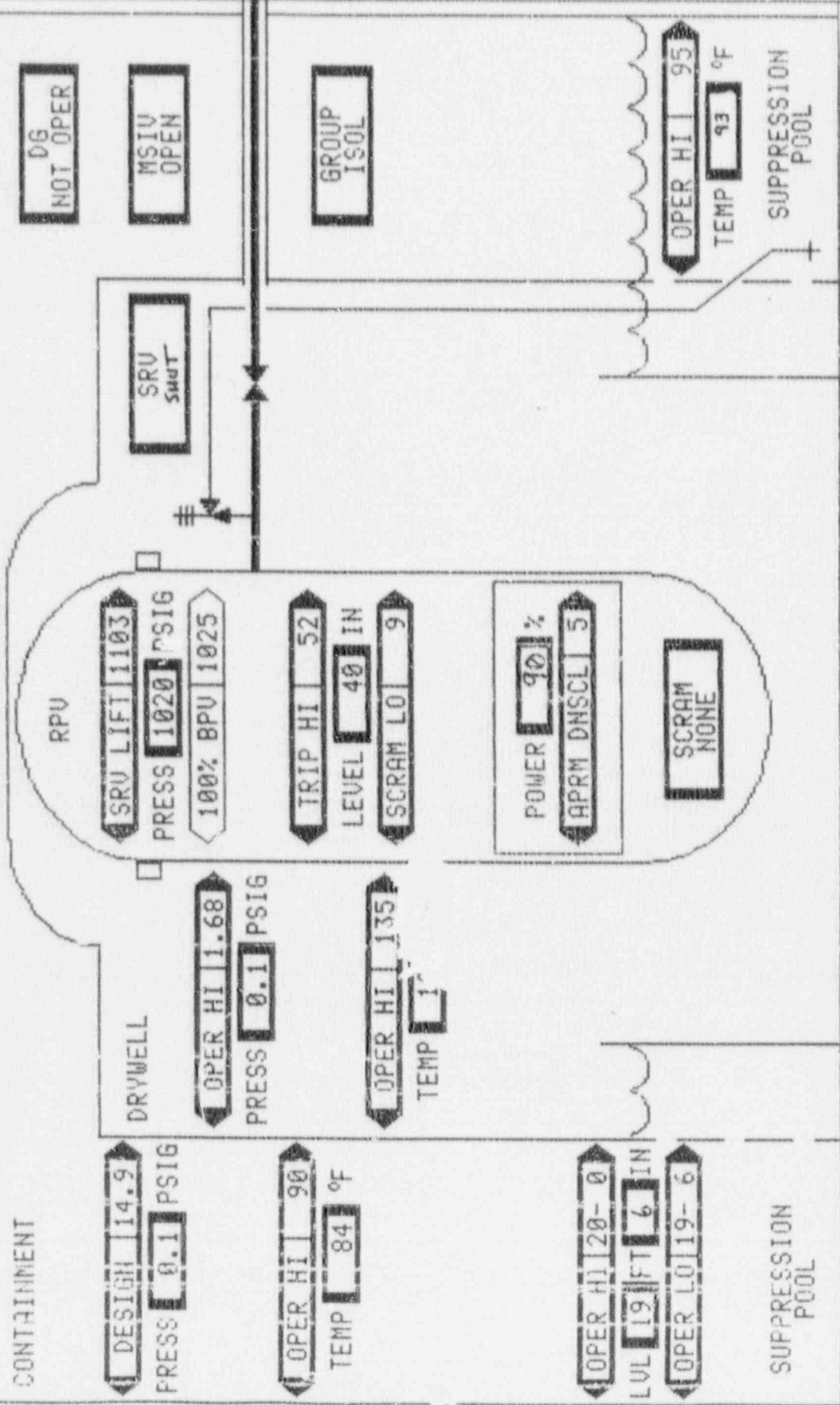
Expected Actions:

Operators continue to monitor the Offgas System, DRMS trends, and condenser vacuum.

The Shift Supervisor, or someone he has designated, should be determining that the activity associated with the gases being released through the main plant exhaust are below Technical Specification limits.



011 [RPV CAUTION] CRITICAL PLANT VARIABLES [CNTMT CAUTION]



RIVER BEND ●●● 30-JAN-1991 8:30

013

# RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

DG NOT OPER

RCIC

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

HPCE

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCE

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

SRV SHUT

LPCI

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

MSIV OPEN

SHTDH COOLING

CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

GROUP ISOL

RWCU

COOLING AVAIL	POWER AVAIL	PUMP RUN
---------------	-------------	----------

TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
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TURBINE BYPASS

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
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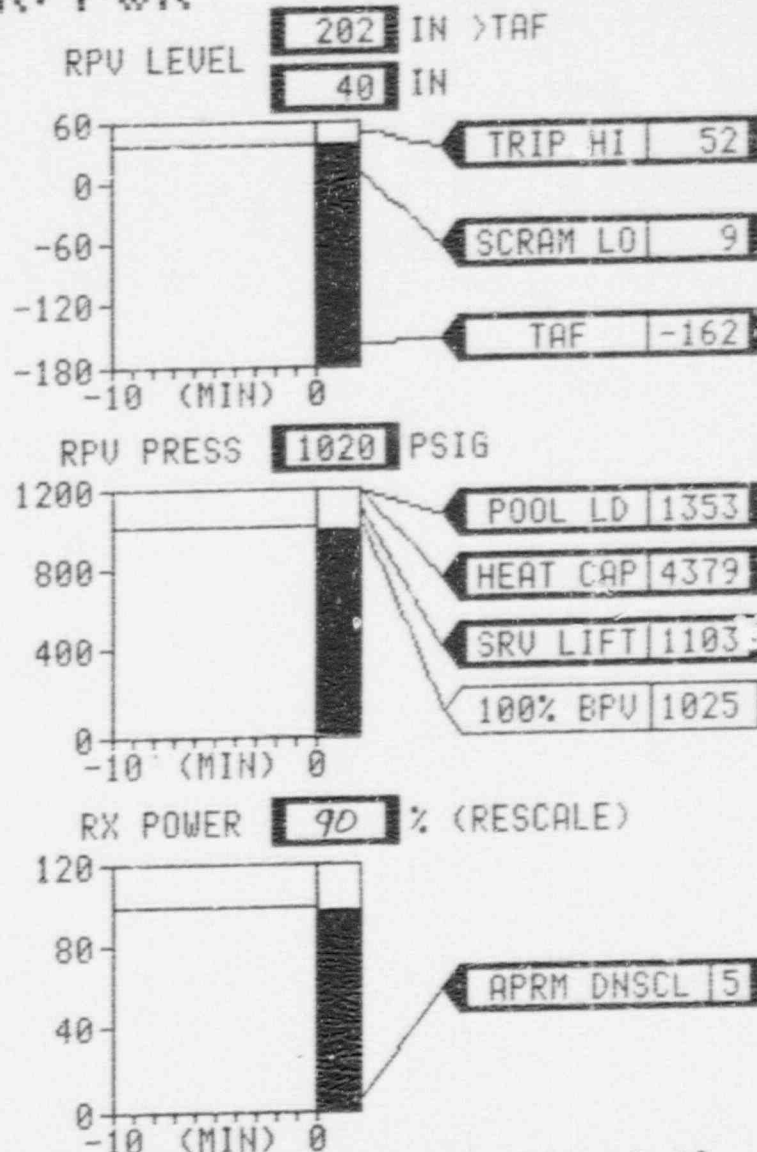
MSL DRAINS

COOLING AVAILABLE	V. PWR AVAIL	VALVE SHUT
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SCRAM NONE

SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP OFF
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RIVER BEND 30-JAN-1991 8:30

# 027 RPV CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

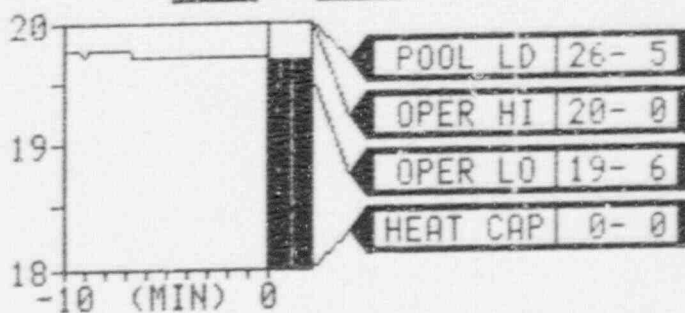
DG HOT OPER

SRV SHUT

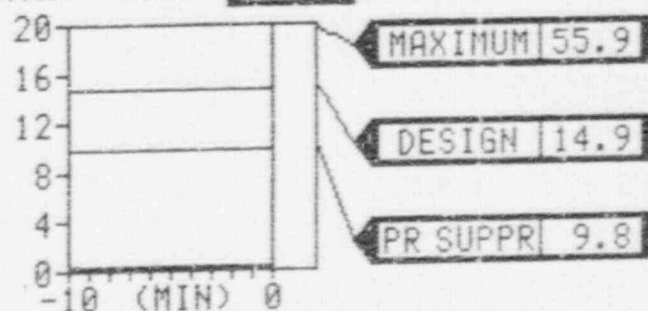
GROUP ISOL

SCRAM NONE

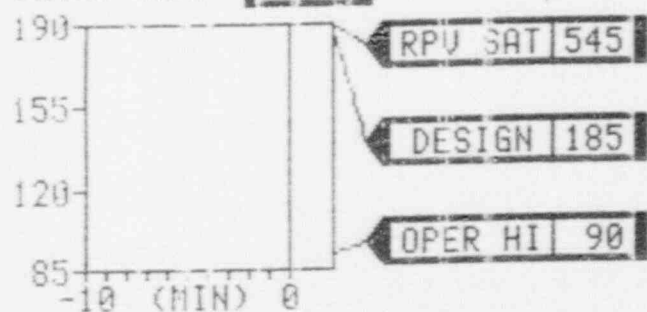
POOL LEVEL 19 FT 6 IN (RESCALE)



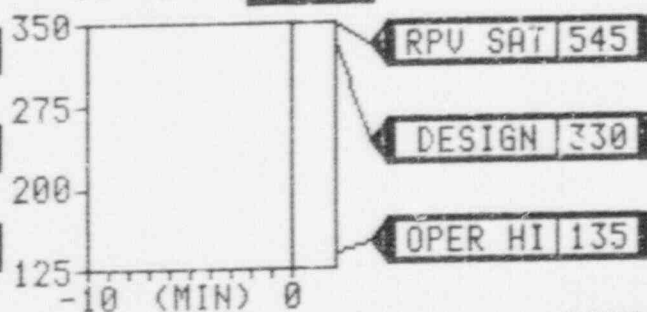
CNTMT PRESS 0.1 PSIG



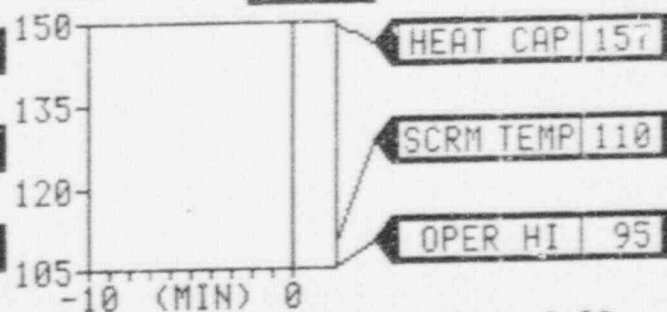
CNTMT TEMP 84 °F



DW TEMP 122 °F



POOL TEMP 93 °F



RIVER BEND ●●● 30-JAN-1991 8:30

1991 PRACTICE EXERCISE


Message Number: 3

Clock Time = 0830

Scenario Time = 00/30

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0 mR/hr	RE-204	Cond. Demin Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.F. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area East A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

 - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other ARMs are "as read"

## 1991 PRACTICE EXERCISE

Message Number: 3Clock Time = 0830  
Scenario Time = 00/30RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu\text{Ci/cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu\text{Ci/cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci/cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci/cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06 $\mu\text{Ci/cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci/cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci/cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci/cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci/cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci/cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02 $\mu\text{Ci/sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci/cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci/cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci/cc}$	Off Gas Pre-treatment Monitor	200	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08 $\mu\text{Ci/cc}$	Off Gas Post-treatment Monitor	80	cpm
RE-118G	Turbine Bldg. Vent (GAS)	6.0E-07 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	800	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	750	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	825	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06 $\mu\text{Ci/cc}$			

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 4

Clock Time = 0845

Scenario Time = 00/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 4

Clock Time = 0845

Scenario Time = 00/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Condenser vacuum is holding steady at 25.8" Hg.

DRMS trends of the Turbine Building Exhaust and Condensate Demin/  
Offgas Building Vent are still increasing, but at a slower rate.

Health Physics analysis indicates that airborne radioactivity in the  
vicinity of dirty waste sump 1CND-TK12 is  $5.0E-8\mu\text{Ci/cc}$ .

NOTE: Through discussions with Health Physics, the Shift Supervisor  
should be able to confirm that this airborne activity level is 1000 times  
normal.

Use Contingency Message 5.3x if the Shift Supervisor has not  
declared an ALERT by 0900.

Expected Actions:

Operators continue to monitor the Offgas System, and continue to  
investigate the low condenser vacuum situation.

Expected Actions: (Continued)

If he has not already done so, when the Shift Supervisor is notified that  
airborne radioactivity levels in the vicinity of the dirty waste sump  
exceed 1000 times normal, he should declare an ALERT in accordance  
with EIP-2-001, "Classification of Emergencies", EAL 4, Initiating  
Condition 2, "Alarm of DRMS Airborne Ventilation Monitors and  
Confirmation of Readings Greater Than 1,000 Times Normal Levels."

The Shift Supervisor should direct the implementation of the following  
emergency procedures:

EIP-2-003, "Alert"

EIP-2-006, "Notifications"

EIP-2-012, "Radiation Exposure Controls"

EIP-2-013, "Onsite Radiological Monitoring"

EIP-2-016, "Operations Support Center - Activation"

EIP-2-017, "Operations Support Center - Support Functions"

EIP-2-018, "Technical Support Center - Activation"

EIP-2-019, "Technical Support Center - Support Functions"

EIP-2-023, "Joint Information Center Staff Activation and Support"

EIP-2-026, "Evacuation"

EIP-2-027, "Personnel Accountability"

1991 PRACTICE EXERCISE  
 Message Number - 4

Clock Time - 0845  
 Scenario Time - 00/45

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	Status	SR	Press	Flow	SRV	RED	GRN	AC. MN
RHR B	SPC			0	F041A	OFF	ON	OFF
RHR C	SR			5200	F041B	OFF	ON	OFF
				0	F041C	OFF	ON	OFF
LPCS	SR			0	F041D	OFF	ON	OFF
					F041F	OFF	ON	OFF
					F041G	OFF	ON	OFF
RCIC	SR		0	0	F041L	OFF	ON	OFF
HPCS	SR		0	0	F047A	OFF	ON	OFF
					F047B	OFF	ON	OFF
CRD A	OP		1900	75	F047C	OFF	ON	OFF
CRD B	AV		0	0	F047D	OFF	ON	OFF
					F047F	OFF	ON	OFF
SIC A	Squib		Press	Level	F051B	OFF	ON	OFF
	OOS		0	2000	F051C	OFF	ON	OFF
SIC B	LT ON		0		F051D	OFF	ON	OFF
					F051G	OFF	ON	OFF

RPV	Press	Level	Range
	1020	40"	WR
DIV I	DIESEL	SR	
DIV II	DIESEL	SR	
DIV III	DIESEL	SR	

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

	SRV	RED	GRN	AC. MN
	F041A	OFF	ON	OFF
	F041B	OFF	ON	OFF
	F041C	OFF	ON	OFF
	F041D	OFF	ON	OFF
	F041F	OFF	ON	OFF
	F041G	OFF	ON	OFF
	F041L	OFF	ON	OFF
	F047A	OFF	ON	OFF
	F047B	OFF	ON	OFF
	F047C	OFF	ON	OFF
	F047D	OFF	ON	OFF
	F047F	OFF	ON	OFF
	F051B	OFF	ON	OFF
	F051C	OFF	ON	OFF
	F051D	OFF	ON	OFF
	F051G	OFF	ON	OFF

	MSIV	RED	GRN
	F022A	ON	OFF
	F022B	ON	OFF
	F022C	ON	OFF
	F022D	ON	OFF
	F028A	ON	OFF
	F028B	ON	OFF
	F028C	ON	OFF
	F028D	ON	OFF

PANEL 680

POWER	90% APRM	LEVEL	40" NR
CNS PIA	OP	FWS PIA	OP
CNS PIB	OP	FWS PIB	OP
CNS PIC	OP	FWS PIC	OP

Total Feedwater Flow 11.2 Mlbs./hr

PANEL 808

DRYWELL	Press	Temp	Level
	0.1	122°	
CTMT	0.1	84°	
SRP PL		92°	19'6"

PANEL 870/601

SWP P2A	SR	SWP P2C	SR
SWP P2B	SR	SWP P2D	SR

PANEL 863

SGTS A	SR	SGTS B	SR
D/W COOLERS	OPERATING		B C D E
CTMT COOLERS	OPERATING		A B

# 011 RPU CAUTION CRITICAL PLANT VARIABLES

CNTMT CAUTION

CONTAINMENT

DESIGN 14.9  
PRESS 0.1 PSIG

DRYWELL

OPER HI 1.68  
PRESS 0.1 PSIG

OPER HI 90  
TEMP 84 °F

OPER HI 135  
TEMP 122 °F

OPER HI 20-0  
LVL 19 FT 6 IN

OPER LO 19-6

SUPPRESSION  
POOL

RPU

SRV LIFT 1103  
PRESS 1020 PSIG  
100% BPU 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 90 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

MSIV  
OPEN

SRV  
SHUT

GROUP  
ISOL

OPER HI 95  
TEMP 92 °F

SUPPRESSION  
POOL

013

# RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

DG NOT OPER

RCIC

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

SRV SHUT

HPCE

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

MSIV OPEN

LPCE

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

GROUP ISOL

LPCI

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

SCRAM NONE

SHTDN COOLING

CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RWCU

COOLING AVAIL	POWER AVAIL	PUMP RUN
---------------	-------------	----------

TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE OPEN
-----------	-----------	-------------	------------

TURBINE BYPASS

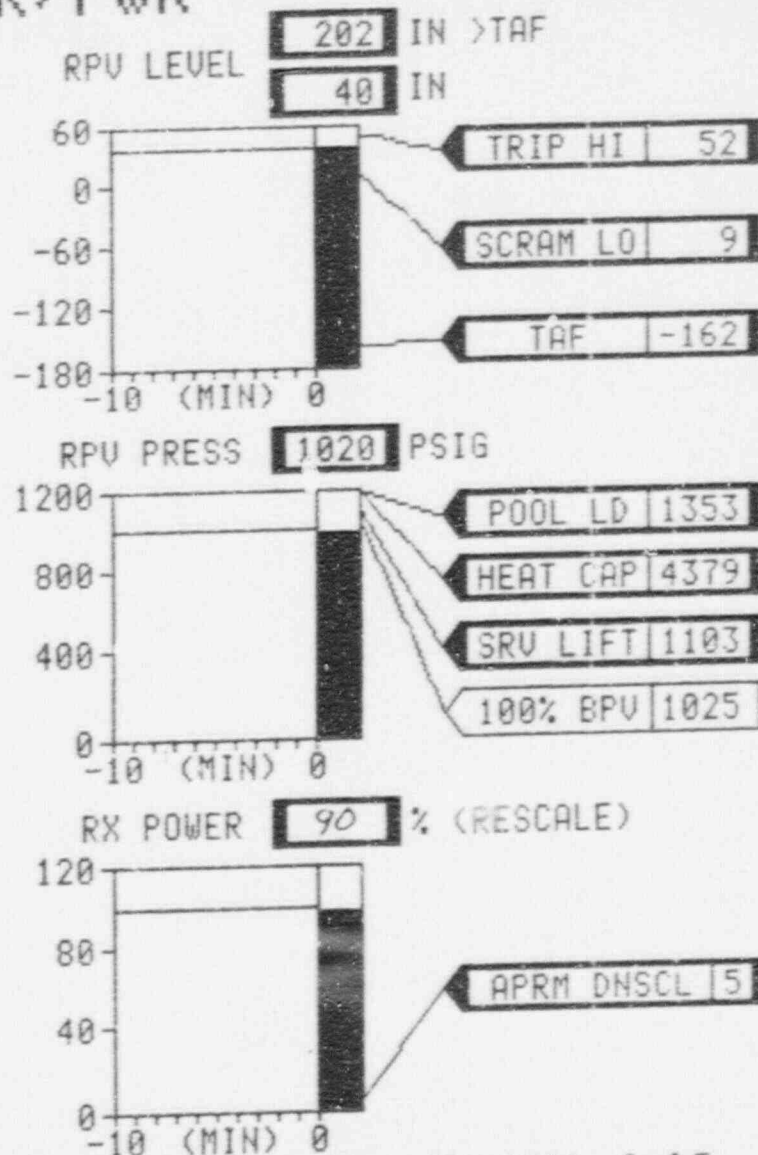
CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
-----------	-----------	-------------	------------

MSL DRAINS

COOLING AVAILABLE	U.PWR AVAIL	VALVE SHUT
-------------------	-------------	------------

SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP OFF
------------------	-------------	----------

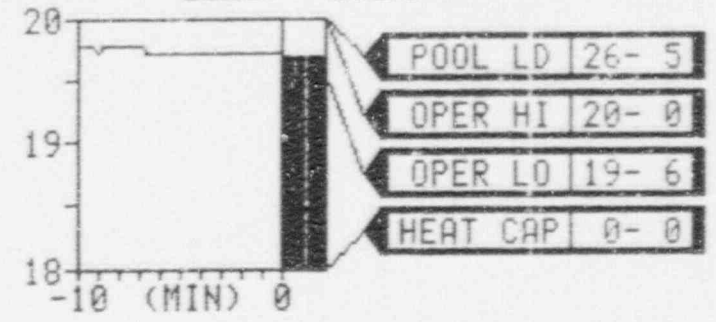


RIVER BEND ●●● 30-JAN-1991 8:45

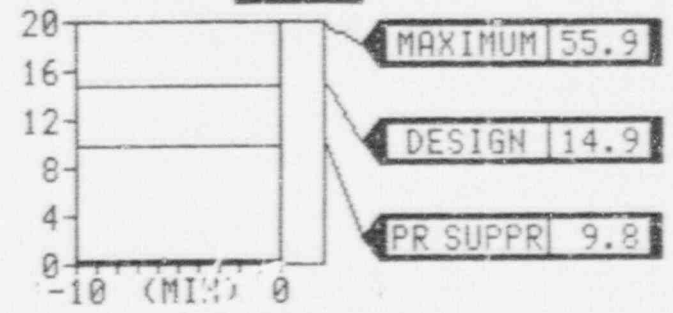
# 027 RPU CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	SRV SHUT
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	GROUP ISOL
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF	

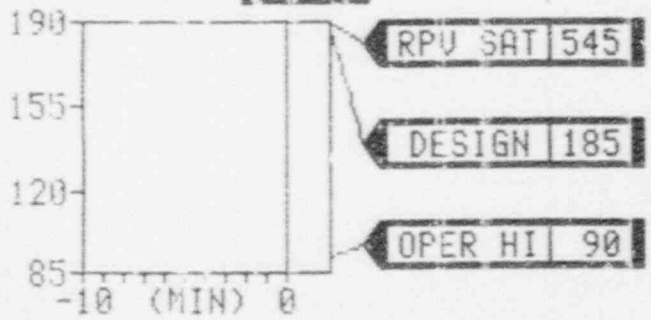
POOL LEVEL **19** FT **6** IN (RESCALE)



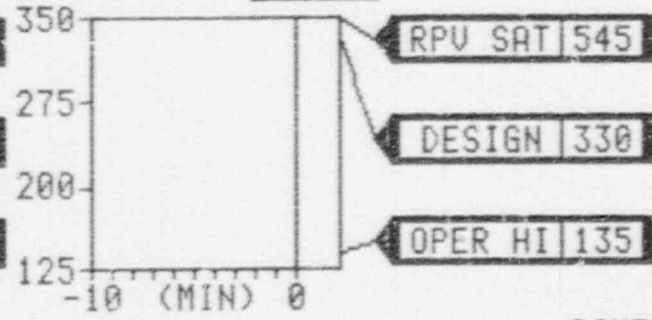
CNTMT PRESS **0.1** PSIG



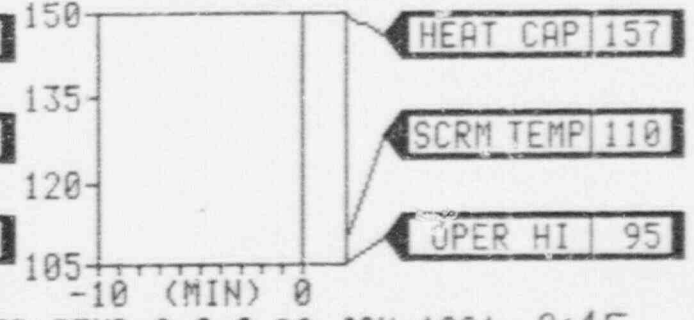
CNTMT TEMP **84** °F



DW TEMP **122** °F



POOL TEMP **92** °F



1991 PRACTICE EXERCISE

Message Number: 4Clock Time = 0845Scenario Time = 00/45

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/nr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 4

Clock Time = 0845  
Scenario Time = 00/45

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor		200 mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08 $\mu$ Ci/cc	Off Gas Post-treatment Monitor		80 cpm
RE-118G	Turbine Bldg. Vent (GAS)	6.0E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		800 mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		750 mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		750 mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		825 mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06 $\mu$ Ci/cc			

■ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 5

Clock Time = 0900

Scenario Time = 01/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 5

Clock Time = 0900

Scenario Time = 01/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Use Contingency Message 5.1x if Health Physics has not provided the analysis results to the Control Room in order for them to determine if airborne radioactivity levels have exceeded 1000 times normal.

Deliver Contingency Message 5.2x if the Shift Supervisor does not recognize that airborne activity levels are above 1000 times normal.

Expected Actions:

Operators continue their efforts to restore the loop seal.

Health Physics continue to monitor the affected areas of the Turbine Building and Offgas areas.

Continue to monitor condenser vacuum.

1991 PRACTICE EXERCISE  
 Message Number - 5

Clock Time - 0900  
 Scenario Time - 01/00

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SR</u>		<u>0</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SR</u>		<u>0</u>
LPCS	<u>SR</u>		<u>0</u>
RCIC	<u>SR</u>	<u>0</u>	<u>0</u>
HPCS	<u>SR</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>2000</u>
SLC B	<u>LT ON</u>	<u>0</u>	
	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>1020</u>	<u>40"</u>	<u>WR</u>
DIV I	<u>DIESEL</u>	<u>SR</u>	
DIV II	<u>DIESEL</u>	<u>SR</u>	
DIV III	<u>DIESEL</u>	<u>SR</u>	

	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
	<u>RED</u>	<u>GRN</u>		
MSIV	<u>ON</u>	<u>OFF</u>		
F022A	<u>ON</u>	<u>OFF</u>		
F022B	<u>ON</u>	<u>OFF</u>		
F022C	<u>ON</u>	<u>OFF</u>		
F022D	<u>ON</u>	<u>OFF</u>		
F028A	<u>ON</u>	<u>OFF</u>		
F028B	<u>ON</u>	<u>OFF</u>		
F028C	<u>ON</u>	<u>OFF</u>		
F028D	<u>ON</u>	<u>OFF</u>		

POWER 90% APRM LEVEL 40" NR

CNS P1A OP FWS P1A OP  
 CNS P1B OP FWS P1B OP  
 CNS P1C OP FWS P1C OP

Total Feedwater Flow 11.2 Mlbs./hr

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>0.1</u>	<u>122°</u>	
CTMT	<u>0.1</u>	<u>84°</u>	
SPR PL		<u>91°</u>	<u>19'6"</u>

PANEL 870/601

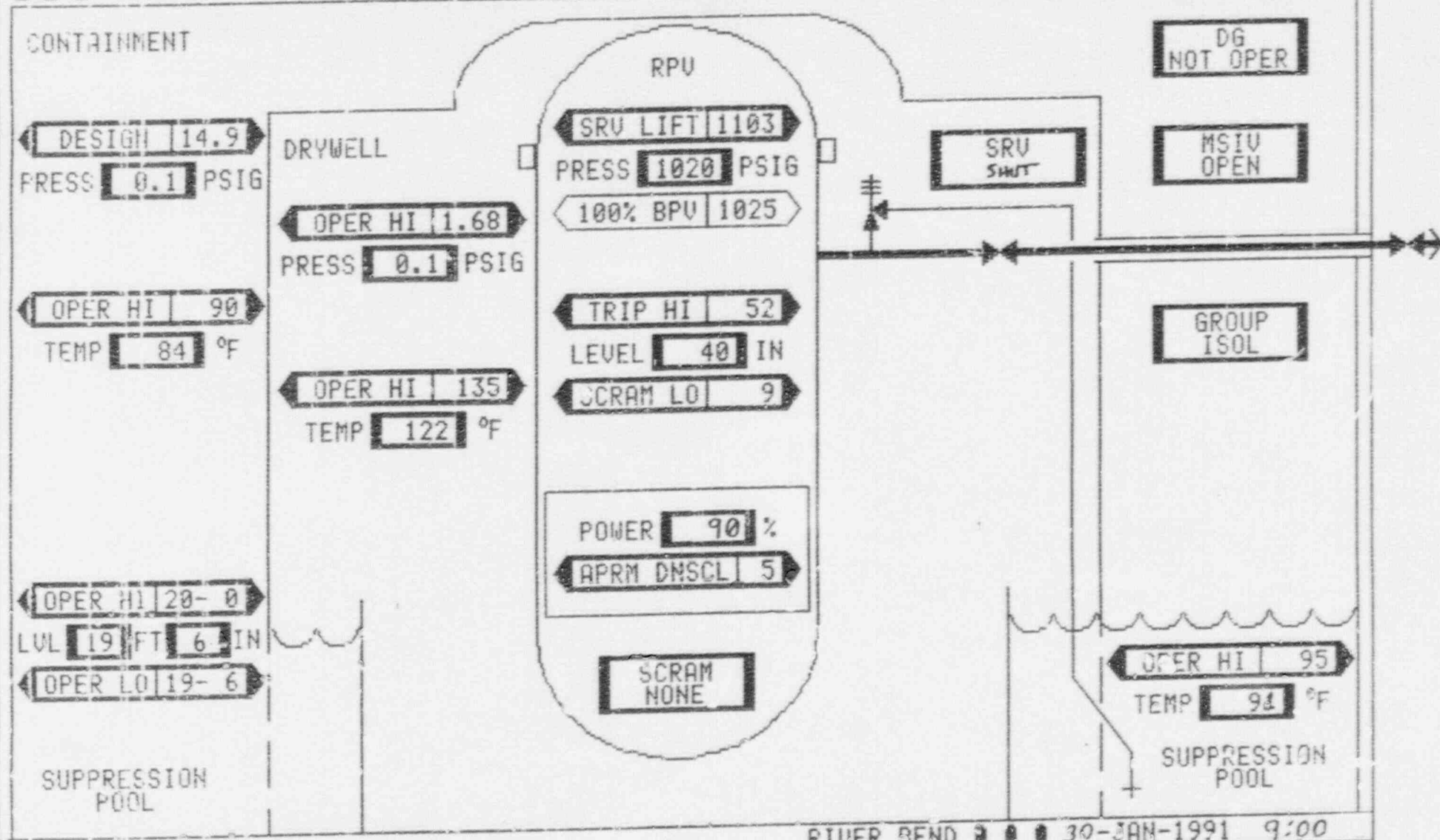
SWP P2A SR SWP P2C SR  
 SWP P2B SR SWP P2D SR

PANEL 863

SGTS A SR SGTS B SR  
 D/W COOLERS OPERATING B C D E  
 CTMT COOLERS OPERATING A B

OP=OPERATING SR=STANDBY READY  
 OOS=OUT OF SERVICE SS=SECURED STATUS  
 AV=AVAILABLE ISOL=ISOLATED

011 RPU CAUTION CRITICAL PLANT VARIABLES CNTMT CAUTION



013

# RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

RCIC

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

HPCE

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCE

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCI

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

SHTDN COOLING

CLG AVAIL	RPV PP HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RWCU

COOLING AVAIL	POWER AVAIL	PUMP RUN
---------------	-------------	----------

TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
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TURBINE BYPASS

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
-----------	-----------	--------------	------------

MSL DRAINS

COOLING AVAILABLE	V. PWR AVAIL	VALVE SHUT
-------------------	--------------	------------

SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP OFF
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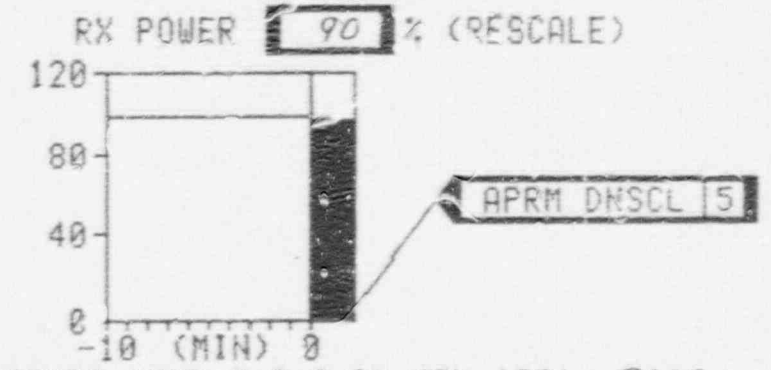
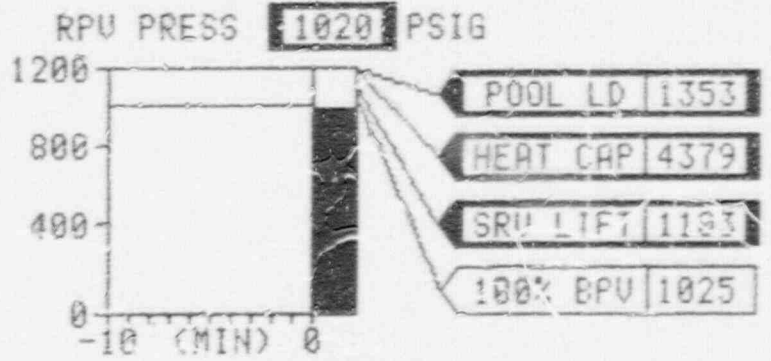
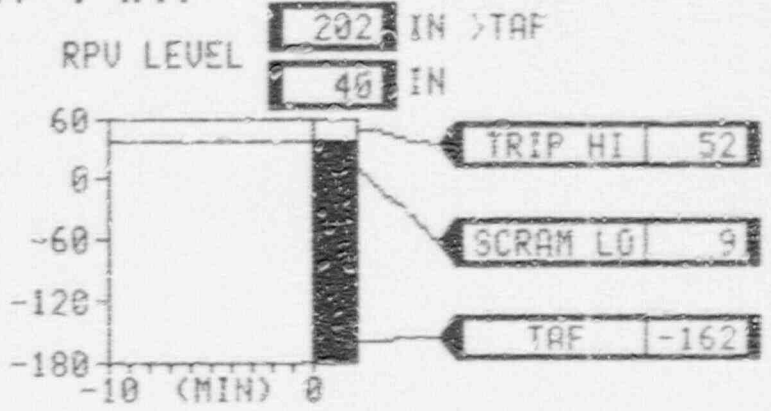
DG NOT OPER

SRU SHUT

MSIV OPEN

GROUP ISOL

SCRAM NONE



RIVER BEND 30-JAN-1991 9:00

# 027 **RPV CAUTION** CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

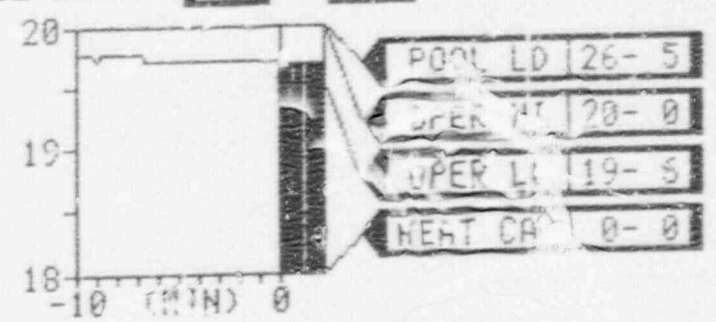
**DG NOT OPER**

**SRV SHUT**

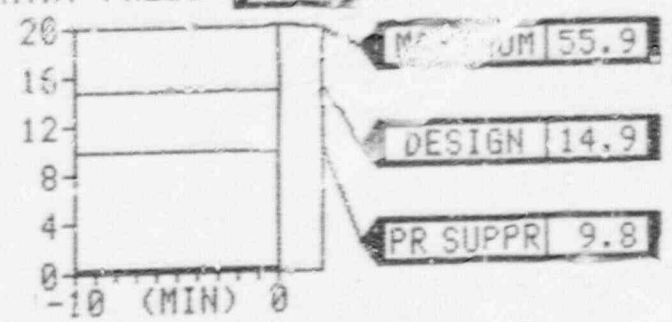
**GROUP ISOL**

**SCRAM NONE**

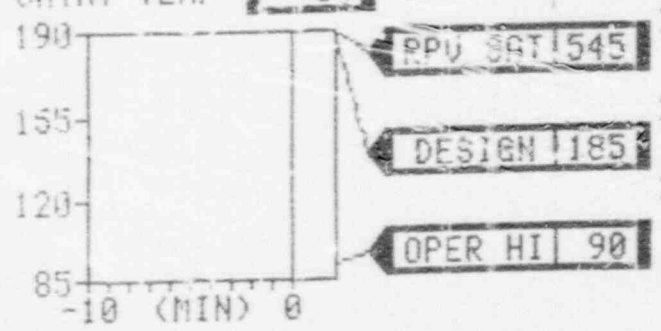
POOL LEVEL **19** FT **6** IN (RESCALE)



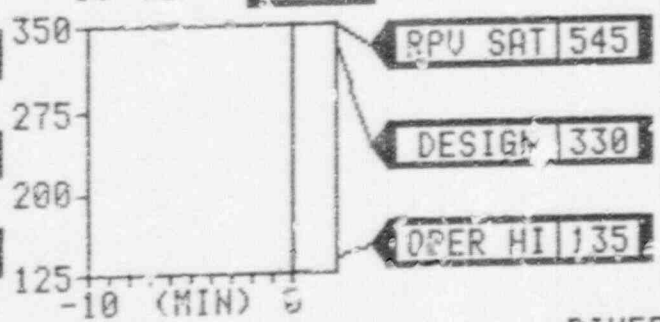
CNTMT PRESS **0.1** PSIG



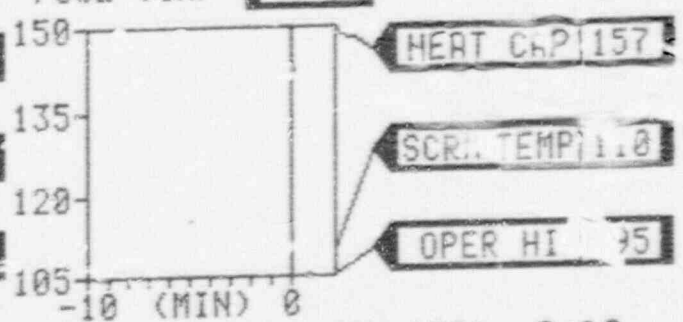
CNTMT TEMP **84** °F



DM TEMP **122** °F



POOL TEMP **91** °F



RIVER BEND ●●● 30-JAN-1991 9:00

1991 PRACTICE EXERCISE

Message Number: 5

Clock Time = 0900

Scenario Time = 01/00

RIVER END STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	UNIT	ID NUMBER	LOCATION (TYPE)	READING	UNIT
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8	R/hr	RE-194	Supt. Box Trans. Tube F.B. 123' (ARM)	0.2	R/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0	R/hr	RE-195	Sample Tank Area F.B. 95' (ARM)	0.2	R/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.4	mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5	mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2	mR/hr	RE-199	North Hoist Area F.B. 123' (ARM)	0.4	mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2	mR/hr	RE-200	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2	mR/hr
RE-146	Containment Stack F.B. 114' (ARM)	0.3	mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2	mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0	mR/hr	RE-202	Residual Water Pump Area T.B. 67' (ARM)	1.5	mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0	mR/hr	RE-203	Trans. Bldg. Sample Rm. T.B. 67' (ARM)	0.1	mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0	mR/hr	RE-204	Cond. Demin. Sample Stack T.B. 95' (ARM)	0.1	mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35	mR/hr	RE-210	PASS Portal A.B. 114' (ARM)	0.2	mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20	mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1	mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28	mR/hr	RE-212	PHR A Area East A.B. 70' (ARM)	0.09	mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4	mR/hr	RE-213	PHR A Area West A.B. 70' (ARM)	2.0	mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2	mR/hr	RE-214	PHR B Area East A.B. 70' (ARM)	2.0	mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5	mR/hr	RE-215	PHR C Area A.B. 70' (ARM)	1.0	mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	9.3	mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3	mR/hr
RE-192	Refuel Floor South F.B. 114' (ARM)	0.5	mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7	mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5	mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3	mR/hr
				RE-219	RCIC Area West A.B. 70' (ARM)	0.5	mR/hr

[ ] - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"


1991 PRACTICE EXERCISE

Message Number: 5

Clock Time = 0900  
 Scenario Time = 01/00

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor	200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	5.0E-07 $\mu$ Ci/cc	Off Gas Post-treatment Monitor	80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	825	mR/hr

 - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

1391 PRACTICE EXERCISE

Message Number = 5.1x

Clock Time = -0900

Scenario Time = 01/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Health Physics

Health Physics analysis shows that airborne radioactivity in the vicinity of the dirty waste sump 1CND-TK12 is  $5.0E-8\mu\text{Ci/cc}$ .



1991 PRACTICE EXERCISE

Message Number = 5.1x

Clock Time = -0900

Scenario Time = 01/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver this message to Health Physics if they have not notified the Shift Supervisor that airborne radioactivity levels in the vicinity of the dirty waste sump indicates  $5.0E-3\mu\text{Ci/cc}$ .

Expected Actions:

The Shift Supervisor declares an ALERT.

1991 PRACTICE EXERCISE

Message Number = 5.2x

Clock Time = -0905

Scenario Time = 01/05

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Shift Supervisor

Health Physics analysis shows that airborne radioactivity in the vicinity of the dirty waste sump 1CND-TK12 exceeds 1,000 times normal levels.

1991 PRACTICE EXERCISE

Message Number = 5.2x

Clock Time = -0905

Scenario Time = 01/05

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver this message if the Shift Supervisor has not recognized that airborne radioactivity levels in the vicinity of the dirty waste sump exceed 1000 times normal.

Expected Actions:

The Shift Supervisor declares an ALERT.

1991 PRACTICE EXERCISE

Message Number = 5.3x

Clock Time = 0910

Scenario Time = 01/10

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: S. H. Supervisor

Declare an ALERT in accordance with EIP-2-001 "Classification of Emergencies", EAL 4, Initiating Condition 2, "Alarm of DRMS Airborne Ventilation Monitors and Confirmation of Readings Greater Than 1,000 Times Normal Levels."

1991 PRACTICE EXERCISE  
Message Number = 5.3x

Clock Time = -0910  
Scenario Time = 01/10

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver this message only if an ALERT has not been declared, and the Shift Supervisor has not recognized that events have occurred which require the declaration of an ALERT, and no actions are being taken which would result in the declaration of an ALERT.

Expected Actions:

Shift Supervisor declares an ALERT.

1991 PRACTICE EXERCISE

Message Number = 6

Clock Time = 0915

Scenario Time = 01/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE  
Message Number = 6

Clock Time = 0915  
Scenario Time = 01/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver Contingency Message 6.1x when operator has isolated the loop seal, and blowdown to the dirty waste sump has stopped.

Expected Actions:

Operators continue their efforts to restore the loop seal.

Health Physics continue to monitor the affected areas of the Turbine Building and Offgas areas.

Continue to monitor condenser vacuum.

1991 PRACTICE EXERCISE  
 Message Number - 6

Clock Time - 0915  
 Scenario Time - 01/15

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

RHR A	Status	SR	Press	Flow	SRV	RED	GRN	AC, MN
RHR B	SPC			0	F041A	OFF	ON	OFF
RHR C	SR			5200	F041B	OFF	ON	OFF
				C	F041C	OFF	ON	OFF
LPCS	SR			0	F041D	OFF	ON	OFF
					F041F	OFF	ON	OFF
RCIC	SR		0	0	F041G	OFF	ON	OFF
HPCS	SR		0	0	F041L	OFF	ON	OFF
					F047A	OFF	ON	OFF
CRD A	OP		1900	75	F047B	OFF	ON	OFF
CRD B	AV		0	0	F047C	OFF	ON	OFF
					F047D	OFF	ON	OFF
SIC A	Squib	OOS	Press	Level	F047F	OFF	ON	OFF
SIC B	LT ON		0	2000	F051B	OFF	ON	OFF
					F051C	OFF	ON	OFF
					F051D	OFF	ON	OFF
					F051G	OFF	ON	OFF
RPV	Press	1020	Level	Range	MSIV	RED	GRN	
			40"	WR	F022A	ON	OFF	
DIV I	DIESEL		SR		F022B	ON	OFF	
DIV II	DIESEL		SR		F022C	ON	OFF	
DIV III	DIESEL		SR		F022D	ON	OFF	

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE

SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

POWER	90% APRM	LEVEL	40" NR
CNS P1A	OP	FWS P1A	OP
CNS P1B	OP	FWS P1B	OP
CNS P1C	OP	FWS P1C	OP

Total Feedwater Flow 11.2 Mlbs./hr

PANEL 808

DRYWELL	I.ess	Temp	Level
CTMT	0.1	122°	
	0.1	84°	
SPR PL		90°	19'6"

PANEL 870/601

SWP P2A	SR	SWP P2C	SR
SWP P2B	SR	SWP P2D	SR

PANEL 863

SGTS A	SR	SGTS B	SR
D/W COOLERS	OPERATING		B C D E
CTMT COOLERS	OPERATING		A B



# 011 [RPV CAUTION] CRITICAL PLANT VARIABLES

[CNTMT CAUTION]

CONTAINMENT

DESIGN 14.9  
PRESS 0.1 PSIG

DRYWELL

OPER HI 1.68  
PRESS 0.1 PSIG

OPER HI 90  
TEMP 84 °F

OPER HI 135  
TEMP 122 °F

OPER HI 20-0  
LVL 19 FT 6 IN

OPER LO 19-6

SUPPRESSION  
POOL

RPV

SRV LIFT 1103  
PRESS 1020 PSIG  
100% BPU 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 90 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

SRV  
SHUT

MSIV  
OPEN

GROUP  
ISOL

OPER HI 95  
TEMP 90 °F

SUPPRESSION  
POOL

RIVER BEND ● ● ● 30-JAN-1991 9:15

013

# RPU CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U. PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

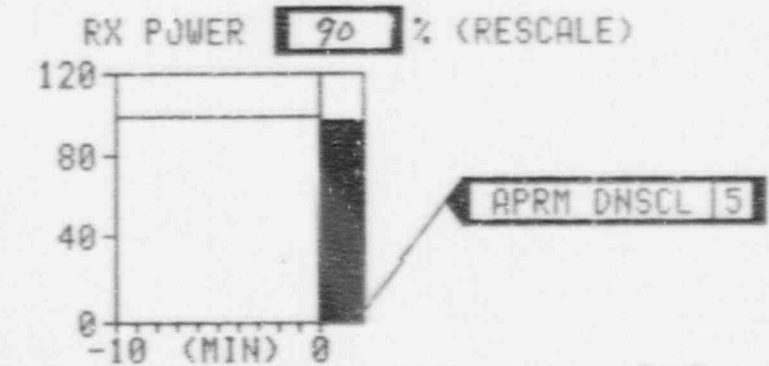
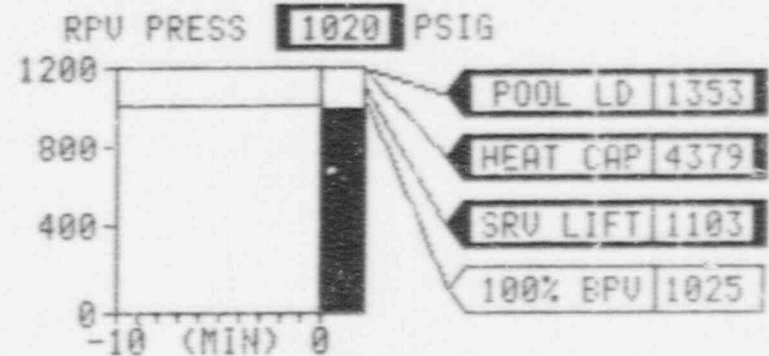
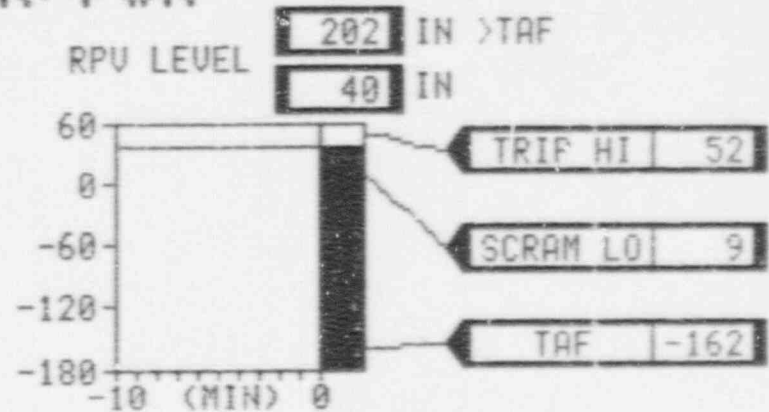
DG NOT OPER

SRU SHUT

MSIV OPEN

GROUP ISOL

SCRAM NONE



# 027 RPU CAUTION CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAIL	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF

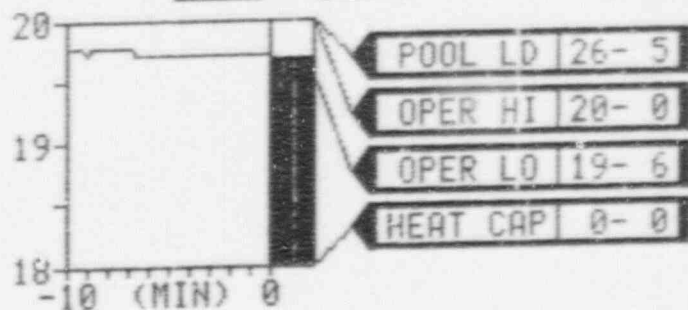
DG NOT OPER

SRU SHUT

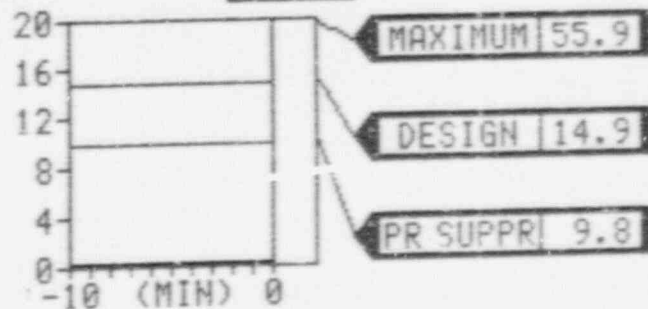
GROUP ISOL

SCRAM NONE

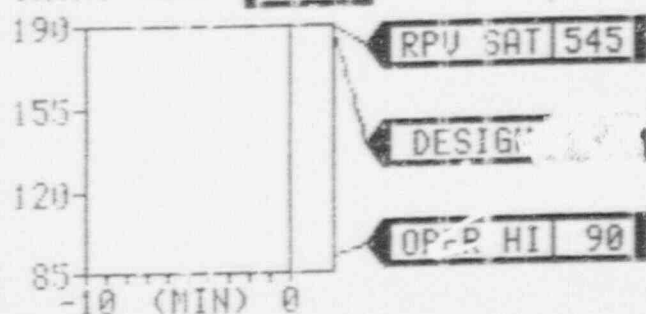
POOL LEVEL 19 FT 6 IN (RESCALE)



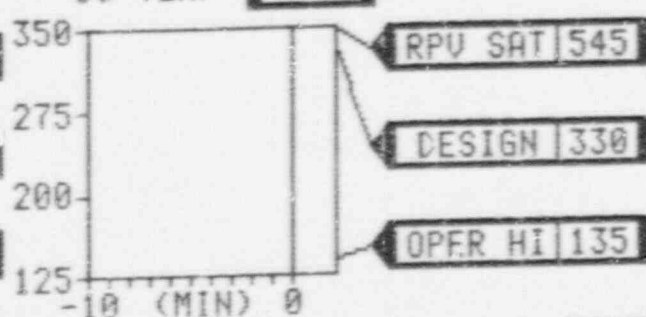
CNTMT PRESS 0.1 PSIG



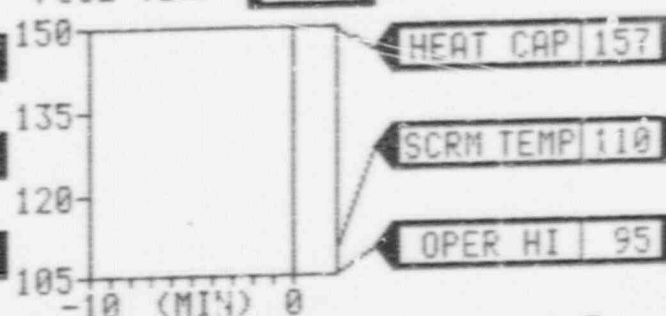
CNTMT TEMP 84 °F



DW TEMP 122 °F



POOL TEMP 90 °F



RIVER BEND 30-JAN-1991 9:15

1991 PRACTICE EXERCISE

Message Number: 6

Clock Time = 0915

Scenario Time = 01/15

**RIVER BEND STATION  
DRMS MONITORS**

<u>ID NUMBER</u>	<u>LOCATION (TYPE)</u>	<u>READING</u>		<u>ID NUMBER</u>	<u>LOCATION (TYPE)</u>	<u>READING</u>	
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8	R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (APM)	0.2	mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0	R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2	mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0	mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5	mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2	mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4	mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2	mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2	mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3	mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5	mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0	mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1	mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	5.0	mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1	mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0	mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2	mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	35	mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1	mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	20	mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09	mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28	mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0	mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4	mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0	mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2	mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0	mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5	mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3	mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3	mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7	mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5	mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3	mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5	mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5	mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 6

Clock Time = 0915

Scenario Time = 01/15

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu\text{Ci}/\text{cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu\text{Ci}/\text{cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci}/\text{cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci}/\text{cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	5.0E-06 $\mu\text{Ci}/\text{cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci}/\text{cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci}/\text{cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci}/\text{cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci}/\text{cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	2.3E+02 $\mu\text{Ci}/\text{sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci}/\text{cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci}/\text{cc}$			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-08 $\mu\text{Ci}/\text{cc}$	Off Gas Pre-treatment Monitor	200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	6.0E-07 $\mu\text{Ci}/\text{cc}$	Off Gas Post-treatment Monitor	80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.5E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.0E-06 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	825	mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 6.1x

Clock Time = -0915

Scenario Time = -01/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

Indications in Control Room include:

Prefilter loop seal drain valve (N64-FO48) green light lit.

1991 PRACTICE EXERCISE

Message Number = 6.1x

Clock Time = -0915

Scenario Time = -01/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

The radiological release to the Turbine Building has ceased.

Condenser vacuum is holding at 25.8" Hg.

Deliver when NEO has closed valve N64-F048, and informed the Control Room that the loop seal is isolated.

Expected Actions:

Operators continue their efforts to restore the loop seal per Offgas System procedure SOP-0092.

Health Physics continues to monitor the affected areas of the Offgas Building and Turbine Building.

Operators monitor the Offgas System, condenser vacuum, and continue in their attempts to discover the source of inleakage to the main condenser.

1991 PRACTICE EXERCISE  
Message Number = 7

Clock Time = 0930  
Scenario Time = 01/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room  
Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 7

Clock Time = 0930

Scenario Time = 01/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver Contingency Message 7.1x when operator has refilled the loop seal and returned the valve lineup to normal.

Expected Actions:

Operators continue their efforts to fill and restore the loop seal per procedure SOP-0092.

Health Physics continue to monitor the affected areas of the Turbine Building and Offgas areas.

Continue to monitor condenser vacuum.

1991 PRACTICE EXERCISE  
 Message Number - 7

Clock Time - 0930  
 Scenario Time - 01/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/811

RHR A	Status	Press	Flow
	SR		<u>0</u>
RHR B	SPC		<u>5200</u>
RHR C	SR		<u>0</u>
LPCS	SR		<u>0</u>
RCIC	SR	<u>0</u>	<u>0</u>
HPCS	SR	<u>0</u>	<u>0</u>
CRD A	OP	<u>1900</u>	<u>75</u>
CRD B	UV	<u>0</u>	<u>0</u>
SLC A	Squib	Press	Level
	OCS	<u>0</u>	<u>2000</u>
SLC B	LT ON	<u>0</u>	
RPV	Press	Level	Range
	<u>1020</u>	<u>40"</u>	<u>WR</u>
DIV I	DIESEL	SR	
DIV II	DIESEL	SR	
DIV III	DIESEL	SR	

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE  
 SR-STARTUP READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

PANEL 601

SRV	RED	GRN	AC MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF
MSIV	RED	GRN	
F022A	ON	OFF	
F022B	ON	OFF	
F022C	ON	OFF	
F022D	ON	OFF	
F028A	ON	OFF	
F028B	ON	OFF	
F028C	ON	OFF	
F028D	ON	OFF	

PANEL 630

POWER	<u>90%</u>	APRM	LEVEL	<u>40"</u>	NR
CNS P1A	<u>OP</u>		FWS P1A	<u>OP</u>	
CNS P1B	<u>OP</u>		FWS P1B	<u>OP</u>	
CNS P1C	<u>OP</u>		FWS P1C	<u>OP</u>	

Total Feedwater Flow 11.2 Mlbs./hr

PANEL 808

DRYWE/L	Press	Temp	Level
<u>0.1</u>	<u>0.1</u>	<u>122°</u>	
CTMT	<u>0.1</u>	<u>84°</u>	
SPR PL		<u>89°</u>	<u>19'6"</u>

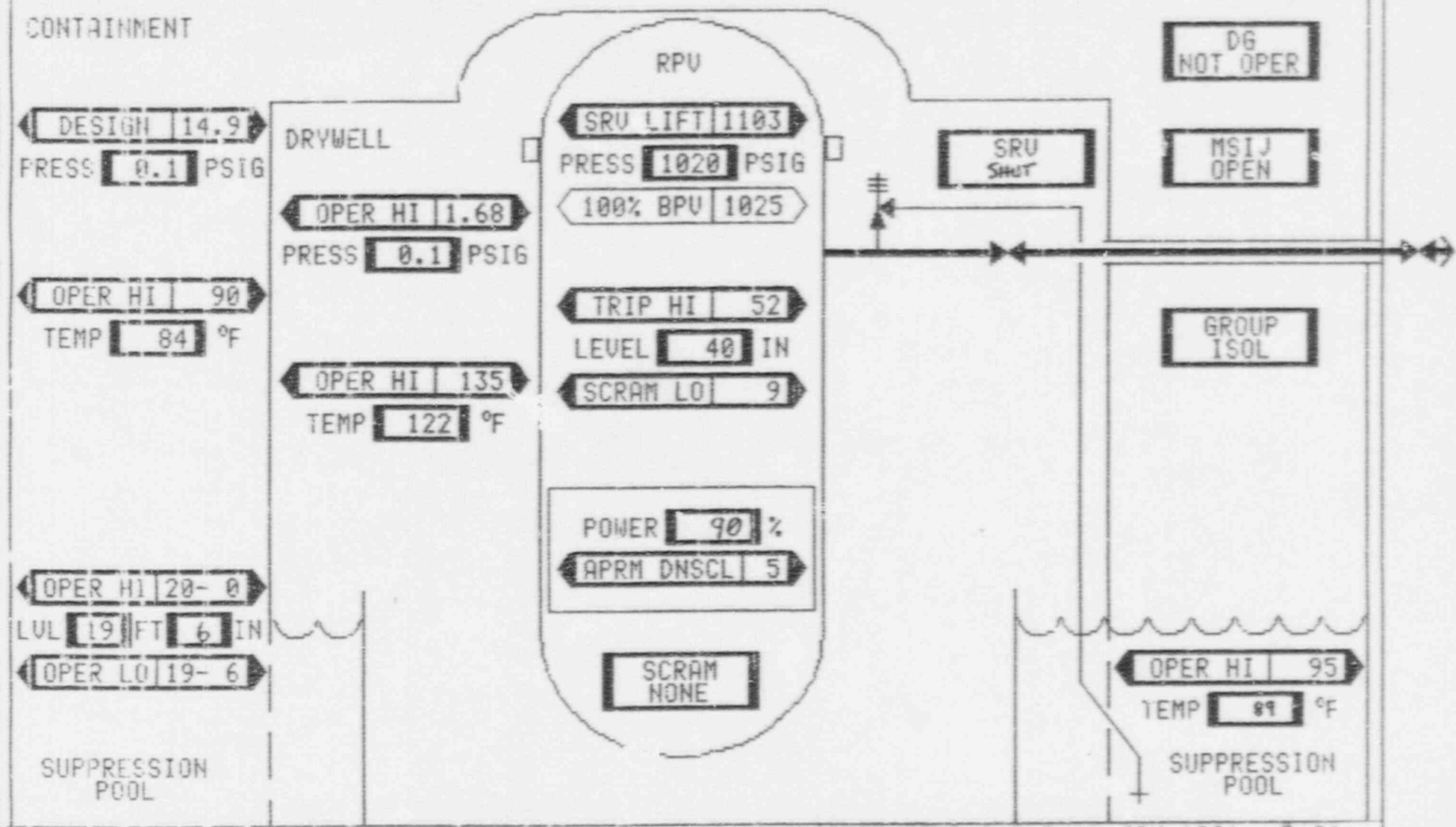
PANEL 870/601

SWP P2A	SR	SWP P2C	SR
SWP P2B	SR	SWP P2D	SR

PANEL 863

SGTS A	SR	SGTS B	SR
D/W COOLERS	OPERATING	B C D E	
CTMT COOLERS	OPERATING	A B	

011 RPV CAUTION CRITICAL PLANT VARIABLES CNTMT CAUTION



013

# RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U. PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

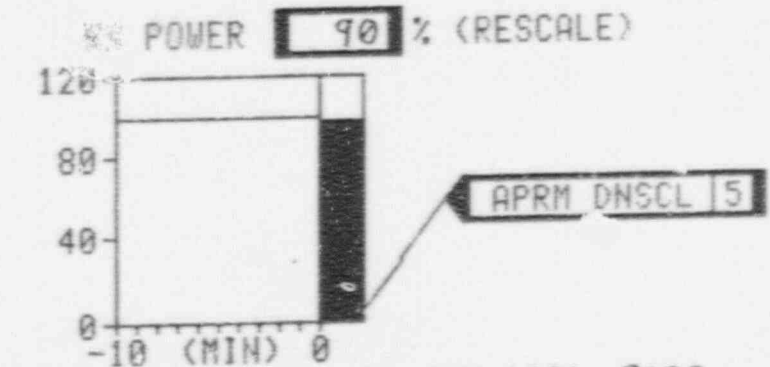
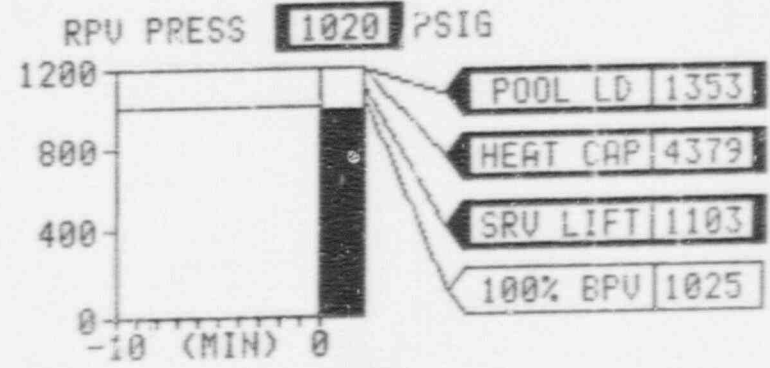
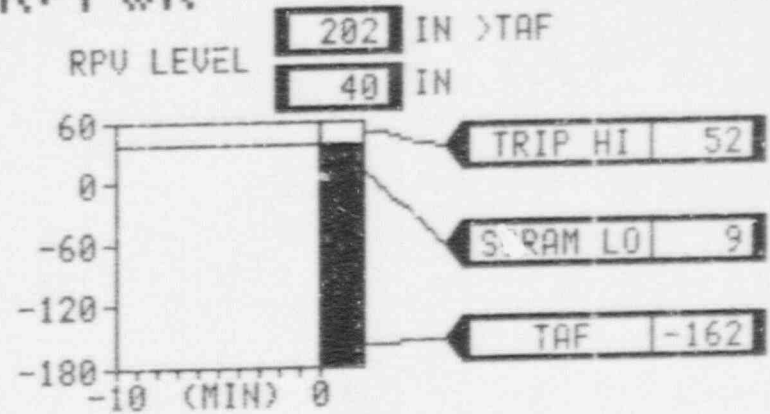
DG NOT OPER

SRV SHUT

MSIV OPEN

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 9:30

# 027 **RPV CAUTION** CONTAINMENT CONTROL--UPSET/MR

POOL COOLING

COOLING AVAIL	POWER AVAIL	PUMP RUN
---------------	-------------	----------

**DG NOT OPER**

DRYWELL COOLING

COOLING AVAILABLE	POWER AVAIL	FAN RUN
-------------------	-------------	---------

**SRV SHUT**

CNTMT COOLING

COOLING AVAILABLE	POWER AVAIL	FAN RUN
-------------------	-------------	---------

**GROUP ISOL**

PRESS CONTROL

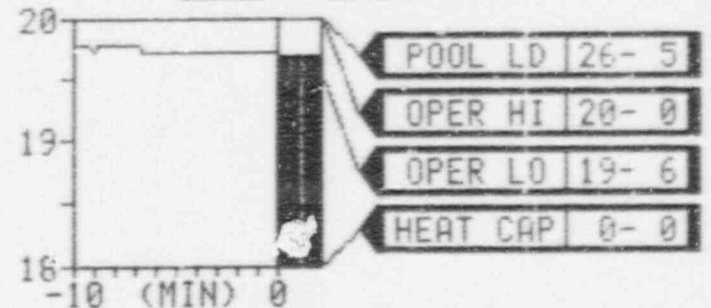
VALVE SHUT	POWER AVAIL	FAN OFF
------------	-------------	---------

**SCRAM NONE**

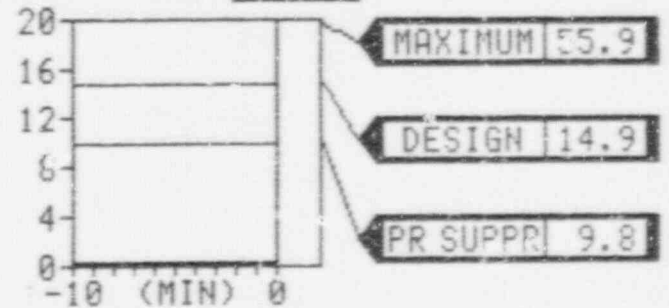
SBGT

VALVE SHUT	POWER AVAIL	FAN OFF
------------	-------------	---------

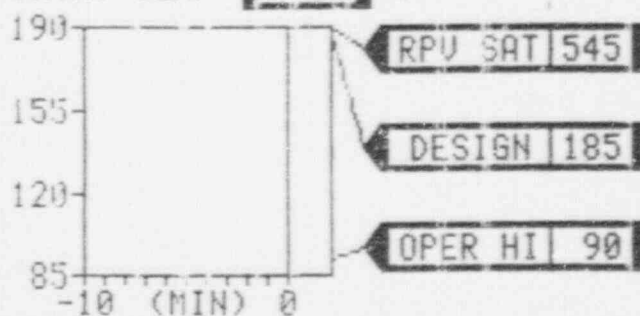
POOL LEVEL **19 FT 6 IN** (RESCALE)



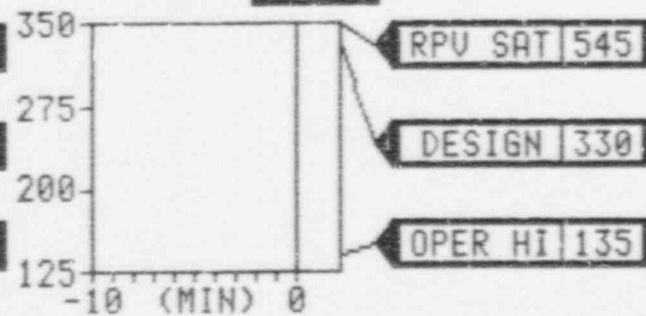
CNTMT PRESS **0.1** PSIG



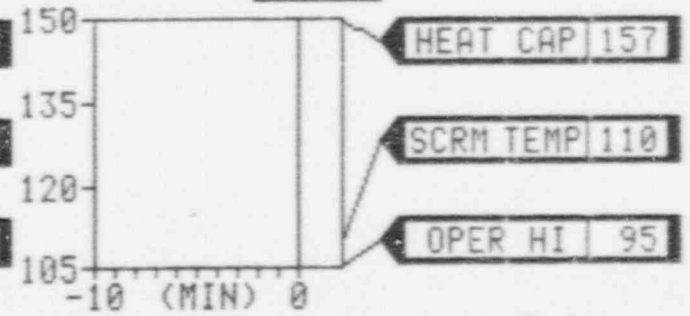
CNTMT TEMP **84** °F



DW TEMP **122** °F



POOL TEMP **89** °F



RIVER BEND ●●● 30-JAN-1991 9:30

1991 PRACTICE EXERCISE

Message Number: 7

Clock Time = 0930

Scenario Time = 01/30

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 7

Clock Time = 0930

Scenario Time = 01/30

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc			
RE-118P	Turbine Bldg. Vent (PART)	8.0E-10 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor	200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	2.0E-06 $\mu$ Ci/cc	Off Gas Post-treatment Monitor	80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	825	mR/hr

 - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "at risk"

1991 PRACTICE EXERCISE

Message Number = 7.1x

Clock Time = -0935

Scenario Time = -01/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

Indications in Control Room include:

Prefilter inlet drain valve (N64-FC54) red light on.



1991 PRACTICE EXERCISE

Message Number = 7.1x

Clock Time = 0935

Scenario Time = 01/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

This isolated loop seal is now filled and reopened per procedure SOP-0092.

Deliver when the NEO refills the loop seal and report to the Control Room that the loop seal is refilled and the valve lineup is returned to normal.

Condenser vacuum holding steady.

Radiation levels are decreasing.

Expected Actions:

Refill the loop seal and place back in service in accordance with procedure SOP-0092.

Continue to monitor condenser vacuum and attempt to restore to its normal level.

1991 PRACTICE EXERCISE  
Message Number = 8

Clock Time = 0945  
Scenario Time = 01/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

CONDENSER VACUUM LOW - P680-02A/B01

Indications in Control Room include:

Condenser vacuum is 25" Hg. and slowly decreasing.

1991 PRACTICE EXERCISE

Message Number = 8

Clock Time = 0945

Scenario Time = 01/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Turbine seals have further deteriorated, and condenser vacuum is decreasing. Since the main condenser is the primary heat sink, actions will center around stabilizing and restoring vacuum. See Supplemental Scenario No. 1.

The Alarm Response Procedure for condenser low vacuum (ARP 1H13-P680-02A/B01) immediately refers the operator to procedure AOP-005, Loss of Main Condenser Vacuum. Operator actions should be implemented from the latter procedure.

Data indicates reduced power as a result of operator action per AOP-005.

Expected Actions:

Operators rapidly reduce power by decreasing reactor recirculation flow and driving control rods in order to attempt to maintain condenser vacuum at or above 25" Hg.

Operators continue to determine and isolate the source of in-leakage.

Operators may consider placing the standby SJAE in service.

1991 PRACTICE EXERCISE

Message Number - 8

Clock Time - 0945

Scenario Time - 01/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS EXERCISE  
CONTROL ROOM DATA

PANEL 601/877

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SR</u>		<u>0</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SR</u>		<u>0</u>
LPCS	<u>SR</u>		<u>0</u>
RCIC	<u>SR</u>	<u>0</u>	<u>0</u>
HPCS	<u>SR</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>2000</u>
SLC B	<u>LT ON</u>	<u>0</u>	
	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>987</u>	<u>40"</u>	<u>WR</u>
DIV I	<u>DIESEL</u>	<u>SR</u>	
DIV II	<u>DIESEL</u>	<u>SR</u>	
DIV III	<u>DIESEL</u>	<u>SR</u>	

PANEL 601

	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
	<u>RED</u>	<u>GRN</u>		
MSIV	<u>ON</u>	<u>OFF</u>		
F022A	<u>ON</u>	<u>OFF</u>		
F022B	<u>ON</u>	<u>OFF</u>		
F022C	<u>ON</u>	<u>OFF</u>		
F022D	<u>ON</u>	<u>OFF</u>		
F028A	<u>ON</u>	<u>OFF</u>		
F028B	<u>ON</u>	<u>OFF</u>		
F028C	<u>ON</u>	<u>OFF</u>		
F028D	<u>ON</u>	<u>OFF</u>		

PANEL 680

POWER 78% APBW LEVEL 40" NR

CNS P1A OP FWS P1A OP

CNS P1B OP FWS P1B OP

CNS P1C OP FWS P1C OP

Total Feedwater Flow 9.6 Mlbs./hr

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>0.1</u>	<u>122°</u>	
CTMT	<u>0.1</u>	<u>84°</u>	
SPR PL		<u>88°</u>	<u>19'6"</u>

PANEL 870/601

SWP P2A SR SWP P2C SR

SWP P2B SR SWP P2D SR

PANEL 863

SGTS A SR SGTS B SR

D/W COOLERS OPERATING B C D E

CTMT COOLERS OPERATING A B

OP=OPERATING  
OOS=OUT OF SERVICE  
AV=AVAILABLE

SR=STANDBY READY  
SS=SECURED STATUS  
ISOL=ISOLATED

# 011 RPU ALARM CRITICAL PLANT VARIABLES

CNTMT CAUTION

CONTAINMENT

DESIGN 14.9  
PRESS 0.2 PSIG

DRYWELL

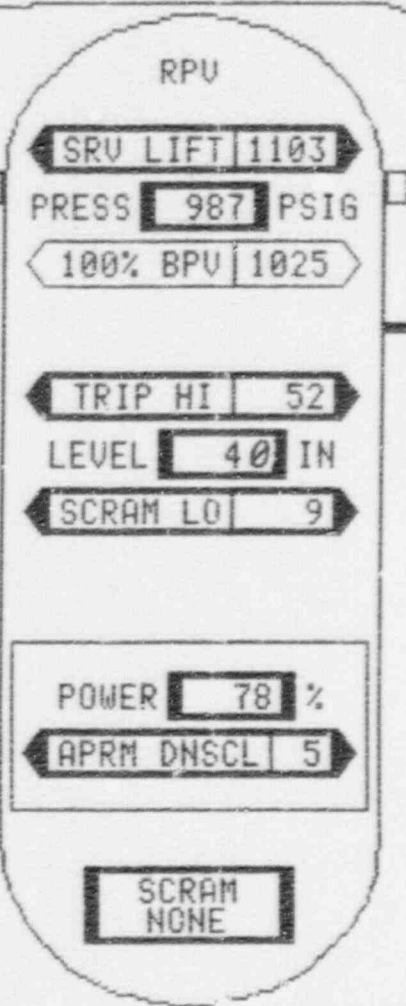
OPER HI 1.68  
PRESS 0.1 PSIG

OPER HI 90  
TEMP 84 °F

OPER HI 135  
TEMP 122 °F

OPER HI 20-0  
LVL 19 FT 6 IN  
OPER LO 19-6

SUPPRESSION  
POOL



DG  
NOT OPER

MSIU  
OPEN

SEV  
SHUT

GROUP  
ISOL

OPER HI 95  
TEMP 88 °F

SUPPRESSION  
POOL

013

## RPV CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

RCIC

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

HPCS

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCS

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCI

WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
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SHTDN COOLING

CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RWCU

COOLING AVAIL	POWER AVAIL	PUMP RUN
---------------	-------------	----------

TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE OPEN
-----------	-----------	-------------	------------

TURBINE EYPASS

CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
-----------	-----------	-------------	------------

MSL DRAINS

COOLING AVAILABLE	V.PWR AVAIL	VALVE SHUT
-------------------	-------------	------------

SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP OFF
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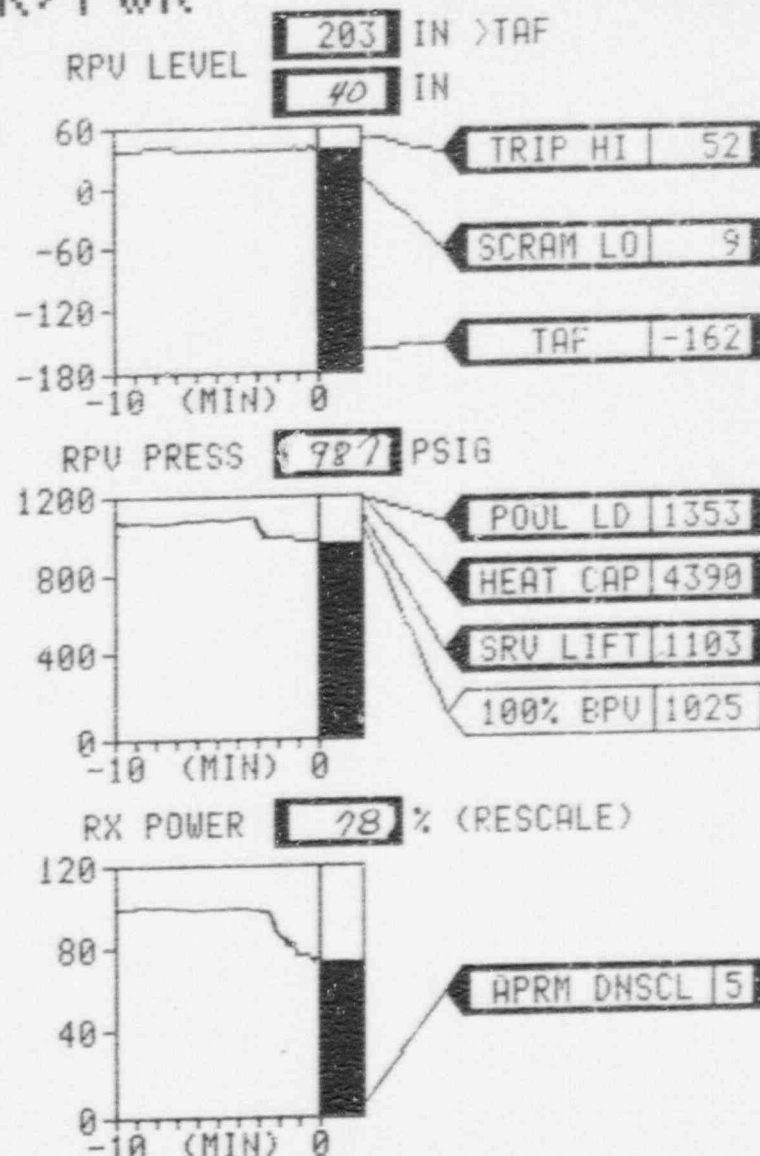
DG NOT OPER

SRU SHUT

MSIU OPEN

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 9:45

# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING    COOLING NOT AVAIL    POWER AVAIL    PUMP RUN

DG NOT OPER

DRYWELL COOLING    COOLING AVAILABLE    POWER AVAIL    FAN RUN

SRV SHUT

CNTMT COOLING    COOLING AVAILABLE    POWER AVAIL    FAN RUN

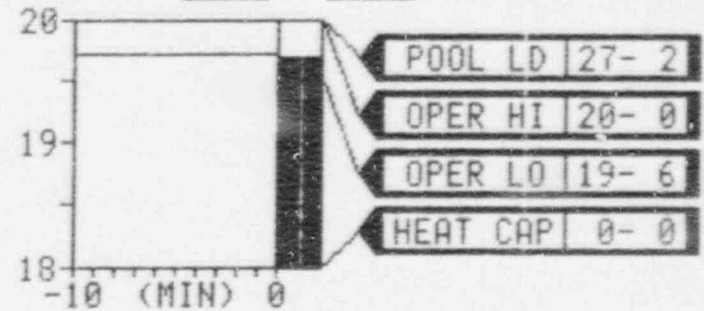
GROUP ISOL

PRESS CONTROL    VALVE SHUT    POWER AVAIL    FAN OFF

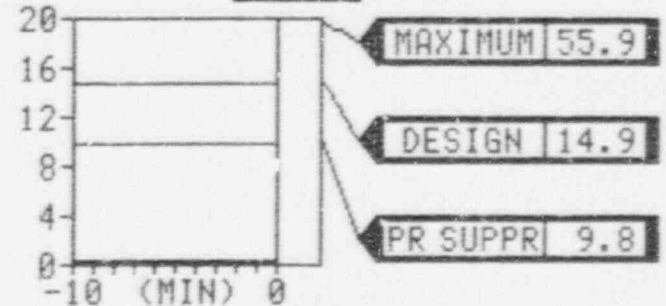
SCRAM NONE

SBGT    VALVE SHUT    POWER AVAIL    FAN OFF

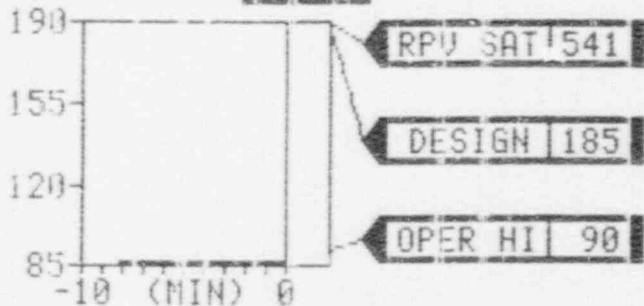
POOL LEVEL **19** FT **6** IN (RESCALE)



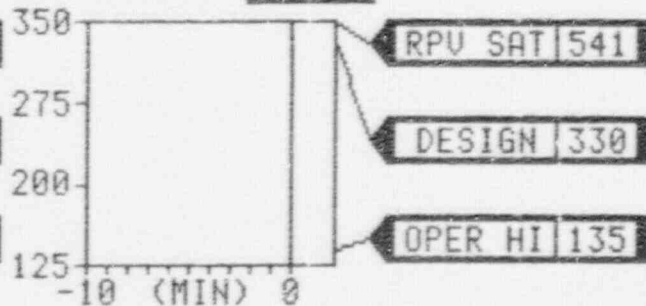
CNTMT PRESS **0.2** PSIG



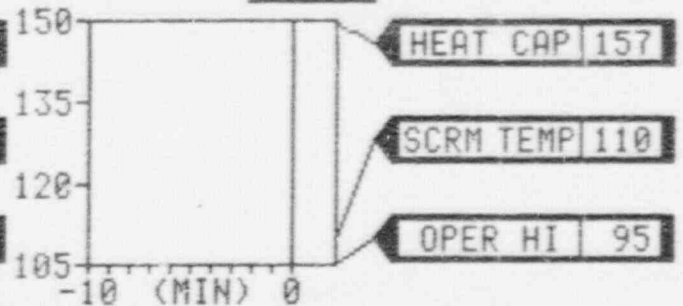
CNTMT TEMP **84** °F



DW TEMP **122** °F



POOL TEMP **88** °F



RIVER BEND ●●● 30-JAN-1991 9:45

1991 PRACTICE EXERCISE

Message Number: 8

Clock Time = 0945

Scenario Time = 01/45

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (AF.M)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCiC Area West A.B. 70' (ARM)	0.5 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"



1991 PRACTICE EXERCISE

Message Number: 8

Clock Time = 0945  
 Scenario Time = 01/45

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu\text{Ci}/\text{cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu\text{Ci}/\text{cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci}/\text{cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci}/\text{cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu\text{Ci}/\text{cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci}/\text{cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci}/\text{cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci}/\text{cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci}/\text{cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu\text{Ci}/\text{sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci}/\text{cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci}/\text{cc}$			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci}/\text{cc}$	Off Gas Pre-treatment Monitor		200 mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci}/\text{cc}$	Off Gas Post-treatment Monitor		80 cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor		800 mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor		750 mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor		750 mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor		825 mR/hr

■ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

1991 PRACTICE EXERCISE  
Message Number = 9

Clock Time = 1000  
Scenario Time = 02/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 9

Clock Time = 1000  
Scenario Time = 02/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

At the operators request, inform them that condenser vacuum has leveled out at approximately 24" Hg. and, as power is reduced further, starts to increase. See Supplemental Scenario No. 1 for a graph of vacuum.

If the standby SJAЕ is placed in service, condenser vacuum will increase at a slightly faster rate as power is reduced, but still not reach 25" Hg. See Supplemental Scenario No. 1 for a vacuum graph.

Expected Actions:

Operators continue to reduce power and monitor condenser vacuum, while attempting to locate the source of inleakage.

1991 PRACTICE EXERCISE  
 Message Number - 9

Clock Time - 1000  
 Scenario Time - 02/00

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	SR		Flow	0
RHR B	SPC			5200
RHR C	SR			0
LPCS	SR			0
RCIC	SR	0		0
HPCS	SR	0		0
CRD A	OP	1900		75
CRD B	AV	0		0
SIC A	Squib	Press	Level	
	OOS	0	2000	
SIC B	LT ON	0		
RPV	Press	Level	Range	
	971	40"	WR	
DIV I	DIESEL	SR		
DIV II	DIESEL	SR		
DIV III	DIESEL	SR		

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

SRV	RED	GRN	AC.MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF
MSIV	RED	GRN	
F022A	ON	OFF	
F022B	ON	OFF	
F022C	ON	OFF	
F022D	ON	OFF	
F028A	ON	OFF	
F028B	ON	OFF	
F028C	ON	OFF	
F028D	ON	OFF	

PANEL 680

POWER 64% AFRM LEVEL 40" NR  
 CNS P1A OP FWS P1A OP  
 CNS P1B OP FWS P1B OP  
 CNS P1C OP FWS P1C OP

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

Press Itemp Level  
 DRYWELL 0.1 122°  
 CTMT 0.1 84°  
 SPR PL 87° 19'6"

PANEL 870/601

SWP P2A SR SWP P2C SR  
 SWP P2B SR SWP P2D SR

PANEL 863

SGTS A SR SGTS B SR  
 D/W COOLERS OPERATING B C D E  
 CTMT COOLERS OPERATING A B

# 011 RPU ALARM CRITICAL PLANT VARIABLES

CNTMT CAUTION

CONTAINMENT

DESIGN 14.9  
PRESS 0.1 PSIG

DRYWELL

OPER HI 1.68  
PRESS 0.1 PSIG

OPER HI 90  
TEMP 84 °F

OPER HI 135  
TEMP 122 °F

OPER HI 20-0  
LVL 19 FT 6 IN

OPER LO 19-6

SUPPRESSION  
POOL

RPU

SRV LIFT 1103  
PRESS 971 PSIG  
100% BPU 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 64 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

MSIV  
OPEN

SRV  
SHUT

GROUP  
ISOL

OPER HI 95  
TEMP 87 °F

SUPPRESSION  
POOL

RIVER BEND ●●● 30-JAN-1991 10:00

013

# RPU CONTROL--WR/PWR

CNTMT CAUTION

CHDS/FW	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING AVAIL	POWER AVAIL	PUMP RUN	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U. PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

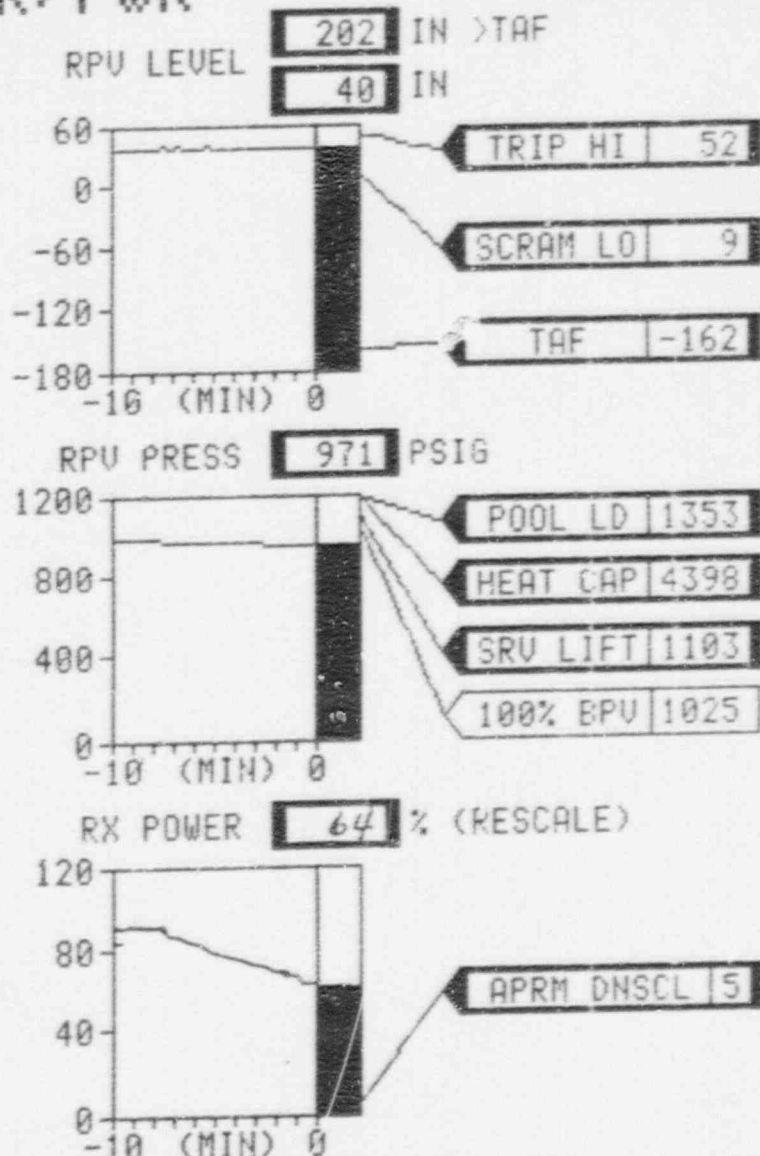
DG NOT OPER

SRV SHUT

MSIV OPEN

GROUP ISOL

SCRAM NONE

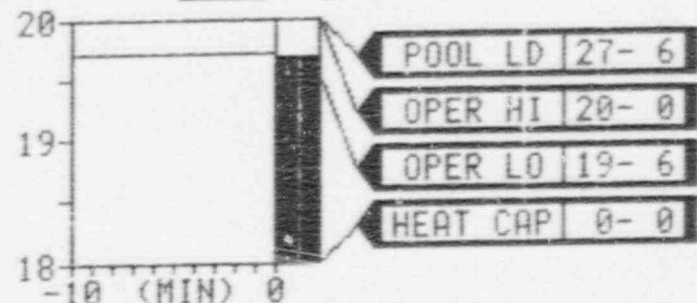


RIVER BEND ●●● 30-JAN-1991 10:00:00

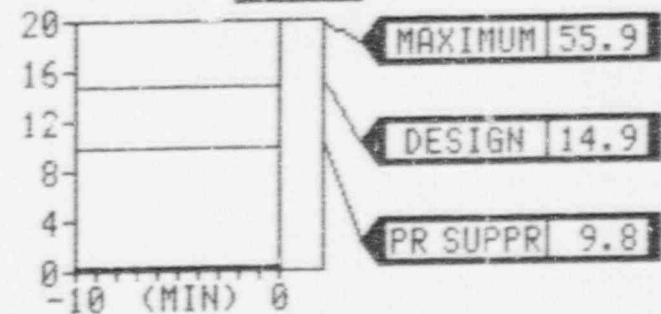
# 027 **RPV ALARM** CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING NOT AVAIL	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	SRV SHUT
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	GROUP ISOL
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE SHUT	POWER AVAIL	FAN OFF	

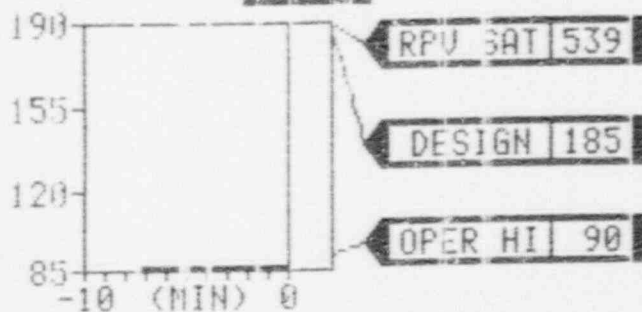
POOL LEVEL **19 FT 6 IN** (RESCALE)



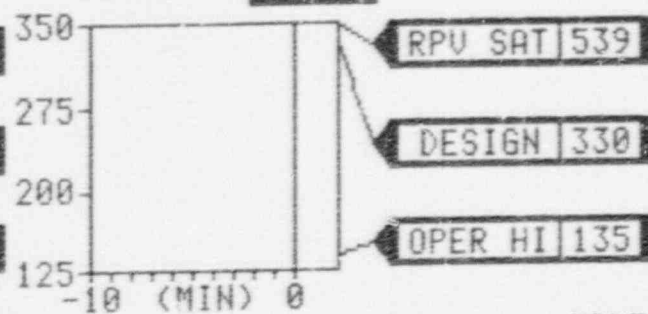
CNTMT PRESS **0.1** PSIG



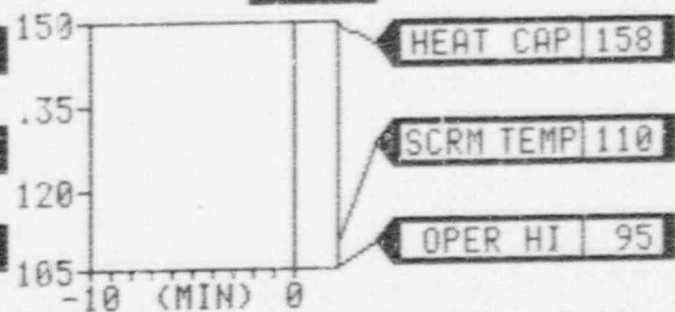
CNTMT TEMP **84** °F



DW TEMP **122** °F



POOL TEMP **87** °F



RIVER BEND ●● 30-JAN-1991 10:00

## 1991 PRACTICE EXERCISE

Message Number: 9Clock Time = 1000  
Scenario Time = 02/00RIVER BEND STATION  
DRMS MONITORS

<u>ID NUMBER</u>	<u>LOCATION (TYPE)</u>	<u>READING</u>	<u>ID NUMBER</u>	<u>LOCATION (TYPE)</u>	<u>READING</u>
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	0.8 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	0.2 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	3.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	0.2 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	9.0 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	0.5 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	0.2 mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.4 mR/hr
RE-141	Refuel. Floor South R.B. 136' (ARM)	0.2 mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	0.3 mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	5.0 mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	0.2 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	0.1 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	0.09 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	1.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	0.3 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	0.7 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	0.5 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	0.3 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	0.5 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	0.5 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"



1991 PRACTICE EXERCISE

Message Number: 9

Clock Time = 1000  
 Scenario Time = 02/00

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111P	Cont. Atmosphere (PART)	1.0E-07 $\mu\text{Ci}/\text{cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111G	Cont. Atmosphere (GAS)	5.0E-06 $\mu\text{Ci}/\text{cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci}/\text{cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci}/\text{cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu\text{Ci}/\text{cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci}/\text{cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci}/\text{cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci}/\text{cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci}/\text{cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu\text{Ci}/\text{sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci}/\text{cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci}/\text{cc}$			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci}/\text{cc}$	Off Gas Pre-treatment Monitor	200	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci}/\text{cc}$	Off Gas Post-treatment Monitor	80	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-09 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	800	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-07 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	750	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	750	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	825	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 10

Clock Time = 1015  
Scenario Time = 02/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

TURBINE CONTROL VALVE FAST CLOSURE - P680-06A/B07  
TURBINE STOP VALVE CLOSURE - P680-06A/A07  
GENERATOR TRIP - P680-09A/D01  
1NPS-SWG1A SPLY BRKR AUTO TRIP - P808-86A/A09  
1NPS-SWG1B SPLY BRKR AUTO TRIP - P808-86A/A07  
RPS TRIP LOGIC A OR C ACTIVATED - P680-05A/A09  
RPS TRIP LOGIC B OR D ACTIVATED - P680-05A/A10  
NEUTRON MONITORING SYSTEM - P680-06A/A02  
REACTOR HIGH PRESSURE - P680-03A/A09  
MAIN STEAM SAFETY RELIEF VALVE OPEN P601-19A/A09  
SUPPRESSION POOL HIGH HIGH TEMPERATURE LIMIT P808-83A/E03  
DIV I NSSSS INIT LOW RX WATER LEVEL 2 - P601-19A/A04  
RCIC SYSTEM INOPERATIVE - P601-21A/G03  
HPCS INITIATION LOW RX WATER LEVEL 2 - P601-16A/A04  
DIV III D/G ENGINE RUNNING - P601-16A/C02

Annunciators in Control Room include: (Continued)

DIV I LPCS INIT LOW RX WATER LEVEL 1 - P601-21A/E08  
LPCI AND DIV II DG INITIATION LOW RX WTR LVL 1 - P601-17A/E02  
MAIN STEAM ISOLATION VLVS CLCSURE - P680-06A/B06  
RECIRC PUMP A ATWS TRIP INITIATED - P680-04A/A02  
RECIRC PUMP B ATWS TRIP INITIATED - P680-04A/A08

1991 PRACTICE EXERCISE  
Message Number = 10

Clock Time = 1015  
Scenario Time = 02/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Indications in Control Room include:

Transfer of plant loads to alternate power sources is successful.

Division I/II containment isolations are successful.

HPCS injection valve (E22\*F004) red light lit.

LPCS pump and RHR pumps 'A','B','C' red lights lit.

Division I, II, and III diesel generators are running with their output breakers open.

1991 PRACTICE EXERCISE  
Message Number = 10

Clock Time = 1015  
Scenario Time = 02/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

With the reactor approaching 40% power, main condenser vacuum suddenly drops below 22.3" Hg. initiating a turbine trip. A main generator trip will follow, causing a transfer of the electrical buses to their alternate sources of power.

Since reactor power is still above 40% power, a reactor scram signal will take place, and the control rods will start to automatically insert into the reactor core. The reactor fails to fully scram, and remains at approximately 30% power.

Reactor steam production is beyond the capacity of the bypass valves, which causes the SRV's to open in an attempt to control pressure. The sudden pressure increase, coupled with the partial insertion of the control rods, causes level to drop dramatically to about -180", then recover to approximately -120".

The MSIV's close (Level I) causing a loss of the primary heat sink. SRV's are open and blowing directly into the Suppression Pool, which is now the main heat sink; pool temperature starts to increase rapidly.

Controller Information: (Continued)

RCIC initiates, but is unable to stabilize and trips on overspeed. See Supplemental Scenario No. 3 for RCIC controller malfunction.

HPCS initiates and begins to inject water into the reactor vessel; Division I and II ECCS pumps automatically start and align for injection, but the injection valves stay closed since reactor pressure remains at greater than 1000 psig.

Both 'A' and 'B' reactor recirculation pumps trip, and Division I and II containment isolations initiate.

Deliver message 10.1x when operators enter EOP-1A, "Anticipated Transient Without Scram", and carry out the steps in the Power Control Section.

1991 PRACTICE EXERCISE  
Message Number = 10

Clock Time = 1015  
Scenario Time = 02/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information: (Continued)

If the Emergency Director fails to classify these events as a SITE AREA EMERGENCY, deliver message 11.1x as directed.

Refer to Supplemental Scenario No. 4 for additional information regarding the recovery from the ATWS.

Expected Actions:

Enter EOP-1, "RPV Control" and carry out scram procedure.

Enter EOP-2, "Primary Containment Control".

Prepare to enter EOP-1A, "Anticipated Transient Without Scram".

Expected Actions: (Continued)

A SITE AREA EMERGENCY should be declared in accordance with EIP-2-001, SAE EAL# 7, "Transient Requiring Operation of Shutdown Systems with Failure to Scram (ATWS)".

The Emergency Director should direct the implementation of the following procedures:

EIP-2-004, "Site Area Emergency"

EIP-2-006, "Notifications"

EIP-2-020, "Emergency Operations Facility - Activation"

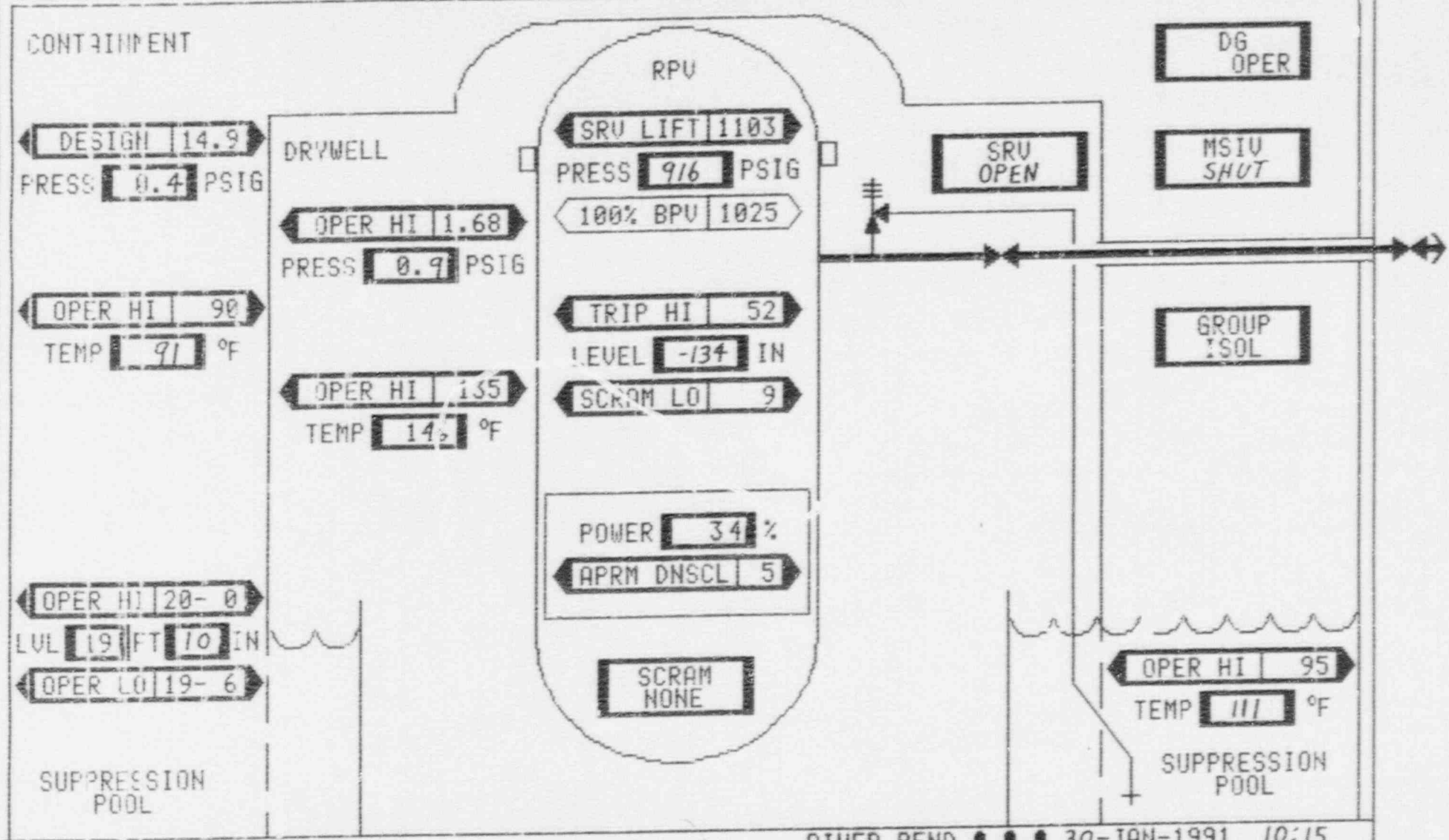
EIP-2-021, "Emergency Operations Facility - Support Functions"

EIP-2-026, "Evacuation"

EIP-2-027, "Personnel Accountability"



011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

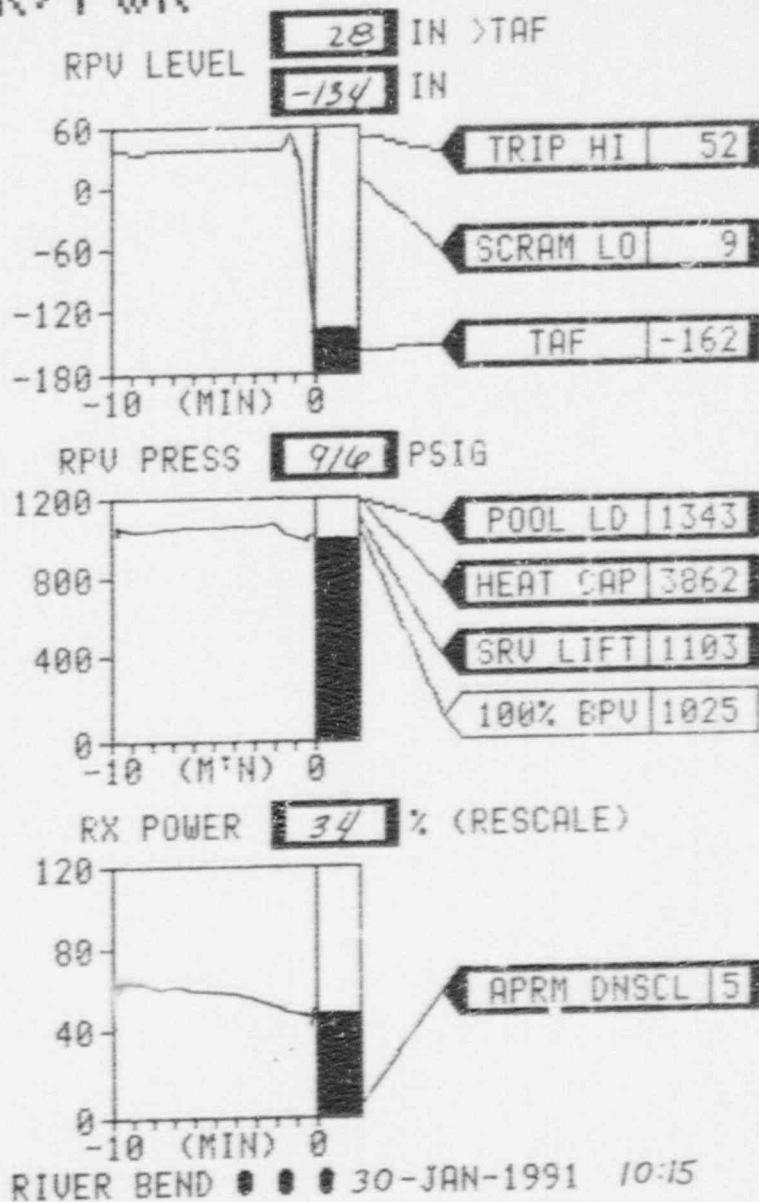


013

## RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
MSL DRAINS	COOLING AVAILABLE	V. PWR AVAIL	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

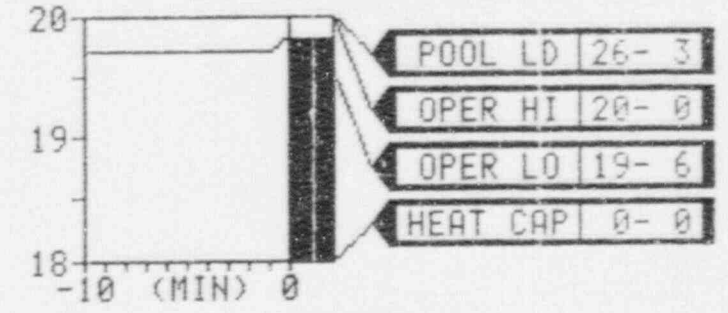
DG  
OPERSRV  
OPENMSIU  
SHUTGROUP  
ISOLSCRAM  
NONE



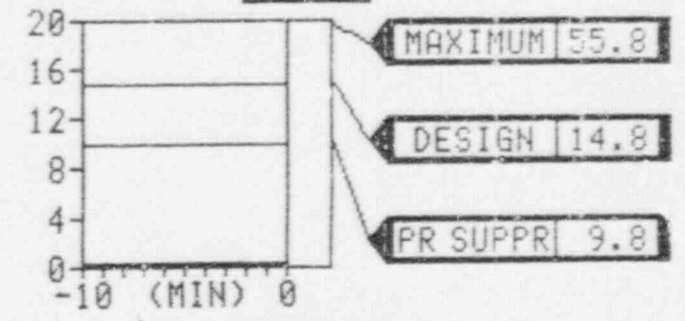
# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	DG OPER
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN OFF	SRU OPEN
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN	GROUP ISOL
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE LINE UP	POWER AVAIL	FAN ON	

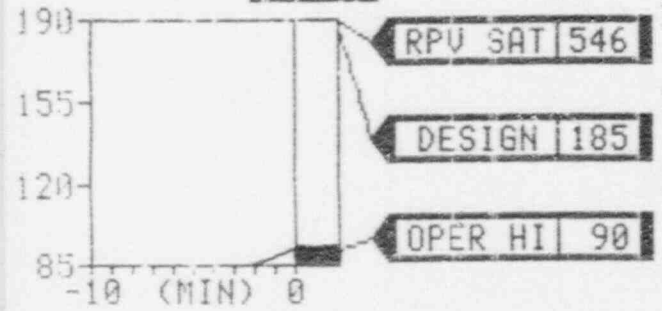
POOL LEVEL **19** FT **10** IN (RESCALE)



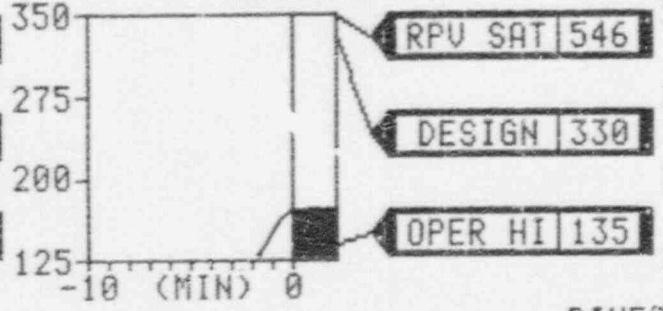
CNTMT PRESS **0.4** PSIG



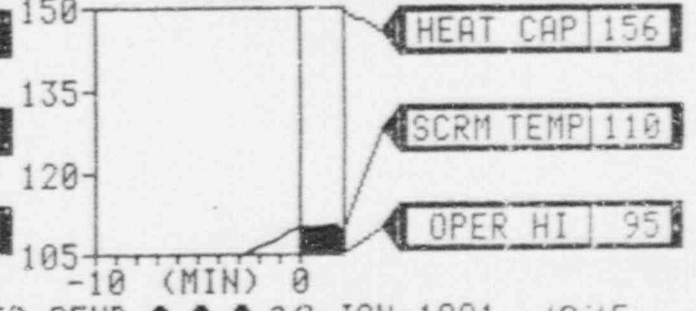
CNTMT TEMP **91** °F



DW TEMP **146** °F



POOL TEMP **111** °F



RIVER BEND ●●● 30-JAN-1991 10:15

1991 PRACTICE EXERCISE

Message Number: 10

Clock Time = 10:15

Scenario Time = 02/15

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	500 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	10.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.5 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	5.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	IC NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111P	Cont. Atmosphere (PART)	2.6E-03 $\mu\text{Ci/cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111G	Cont. Atmosphere (GAS)	3.0E+00 $\mu\text{Ci/cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci/cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci/cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu\text{Ci/cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci/cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci/cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci/cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci/cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci/cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu\text{Ci/sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci/cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci/cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci/cc}$			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci/cc}$	Off Gas Pre-treatment Monitor	50	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci/cc}$	Off Gas Post-treatment Monitor	20	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	5.0E-10 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	6.0E-08 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	5.3E-10 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor	1000	mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE  
Message Number = 10.1x

Clock Time = 1017  
Scenario Time = 02/17

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

ARI INITIATED - P680-07A/D03

Indications in Control Room include:

ADS manual inhibit switches S34A/B in INHIBIT position; white lights on.

SLC pump 'B' control switch in RUN; red light on  
SLC squib valve C41-F001B white continuity light off  
SLC suction valve C41-F001B red light lit

1991 PRACTICE EXERCISE

Message Number = 10.1x

Clock Time = 1017

Scenario Time = 02/17

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller information:

When the operators realize that a reactor scram signal has been received and that all control rods are not fully inserted, they should enter EOP-1A, "Anticipated Transient Without Scram".

Standby Liquid Control pump 'B' is started, but trips within 2 minutes and is unable to inject the required minimum amount of Boron (78 lbs.) into the reactor vessel. See Supplemental Scenario No. 5.

Control rods can be selected and driven into the core individually from Control Room panel P580.

Deliver this message to the control room operators after they enter EOP-1A and as they are carrying out the appropriate steps in the Power Control section. In order to drive control rods individually, the operators may start the second CRD pump (CRD 'B'). Change data sheets as appropriate.

Expected Actions:

Enter EOP-1A, "Anticipated Transient Without Scram", and carry out the steps under the Power Control section of the procedure to initiate SLC, drive control rods, and control reactor level, pressure and power.

ADS should be inhibited, and injection from ECCS and other major water sources should be either terminated or prevented.

The operators should monitor primary containment parameters and be prepared to enter the Emergency RPV Depressurization section of EOP-1A when required.

1991 PRACTICE EXERCISE  
 Message Number - 10.1x

Clock Time - ≈1017  
 Scenario Time - ≈02/17

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>LPCI</u>		<u>MIN</u>
RHR B	<u>LPCI</u>		<u>MIN</u>
RHR C	<u>LPCI</u>		<u>MIN</u>
LPCS	<u>OP</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>OP</u>	<u>945</u>	<u>2750</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>2000</u>
SLC B	<u>LT OFF</u>	<u>945</u>	
	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>916</u>	<u>-134"</u>	<u>FZR</u>
DIV I	<u>DIESEL</u>	<u>OP</u>	
DIV II	<u>DIESEL</u>	<u>OP</u>	
DIV III	<u>DIESEL</u>	<u>OP</u>	

SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>
F041A	<u>ON</u>	<u>OFF</u>	<u>ON</u>
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047F	<u>ON</u>	<u>OFF</u>	<u>ON</u>
F051B	<u>ON</u>	<u>OFF</u>	<u>ON</u>
F051C	<u>ON</u>	<u>OFF</u>	<u>ON</u>
F051D	<u>ON</u>	<u>OFF</u>	<u>ON</u>
F051G	<u>ON</u>	<u>OFF</u>	<u>ON</u>
MSIV	<u>RED</u>	<u>GRN</u>	
F022A	<u>OFF</u>	<u>ON</u>	
F022B	<u>OFF</u>	<u>ON</u>	
F022C	<u>OFF</u>	<u>ON</u>	
F022D	<u>OFF</u>	<u>ON</u>	
F028A	<u>OFF</u>	<u>ON</u>	
F028B	<u>OFF</u>	<u>ON</u>	
F028C	<u>OFF</u>	<u>ON</u>	
F028D	<u>OFF</u>	<u>ON</u>	

POWER 34% APRM LEVEL -134"

CNS P1A OP FWS P1A OP  
 CNS P1B OP FWS P1B OP  
 CNS P1C OP FWS P1C OP

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>0.9</u>	<u>146°</u>	
CTMT	<u>0.4</u>	<u>91°</u>	
SPR PL		<u>111°</u>	<u>19'10"</u>

PANEL 870/601

SWP P2A OP SWP P2C OP  
 SWP P2B OP SWP P2D OP

PANEL 863

SGTS A OP SGTS B OP  
 D/W COOLERS OPERATING ISOL  
 CTMT COOLERS OPERATING A

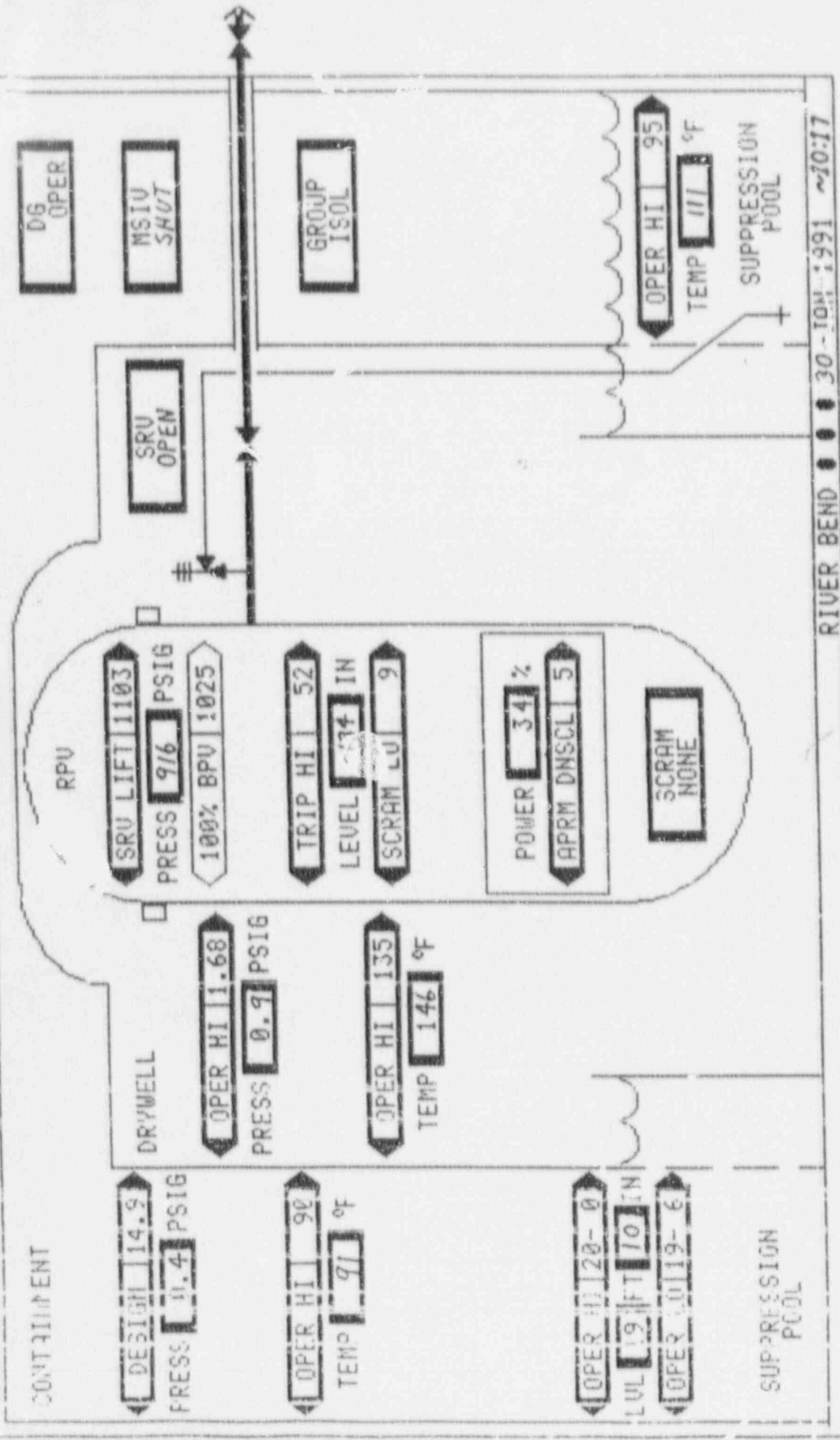
OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAIL/BLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

# CRITICAL PLANT VARIABLES

CNTMT ALARM

011 [RVU ALARM]



RIVER BEND 30-ION:991 ~10:17

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE OPEN
MSL DRAINS	COOLING AVAILABLE	U. PWR AVAIL	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP RUN	

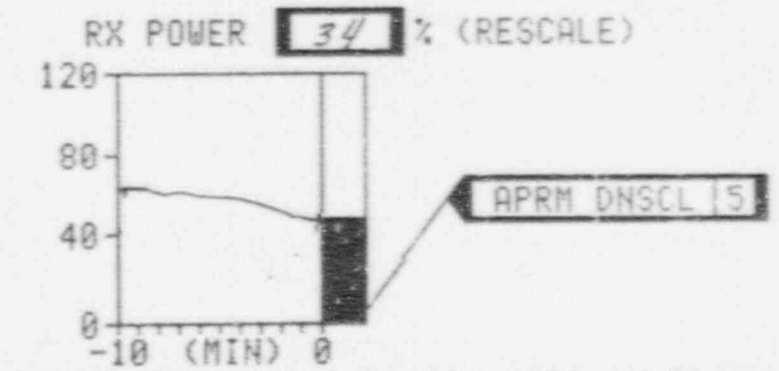
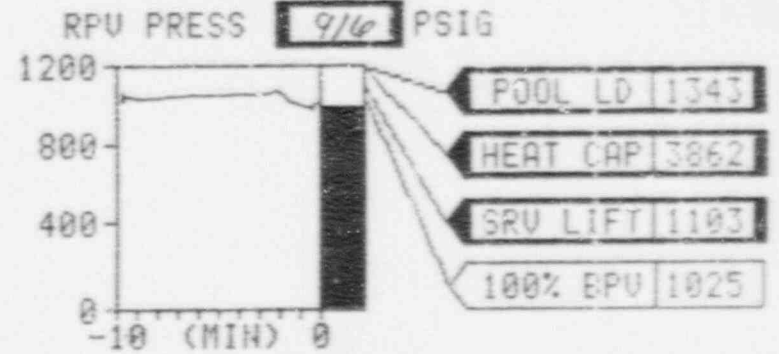
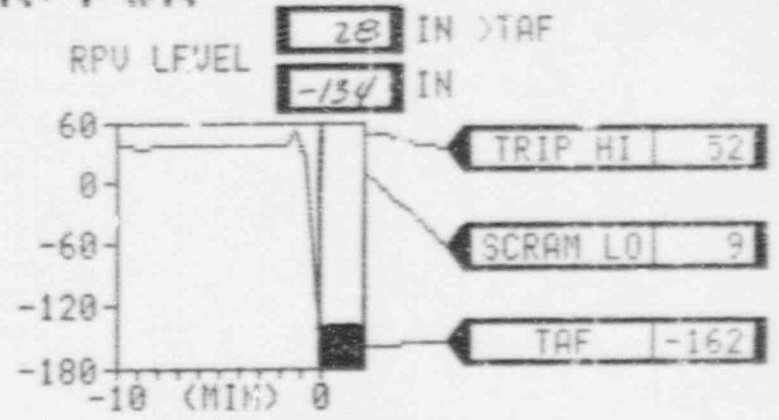
DG OPER

SRU OPEN

MSIU SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND 30-JAN-1991 ~10:17

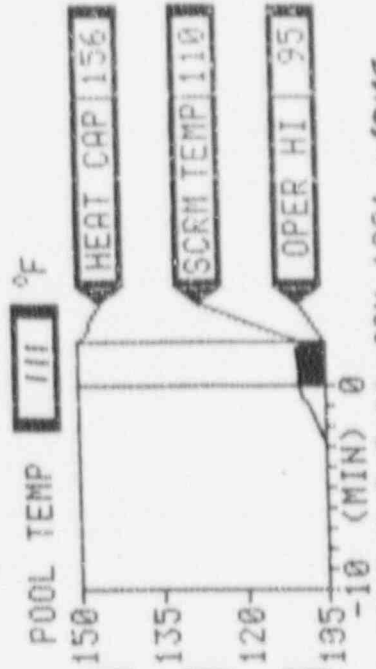
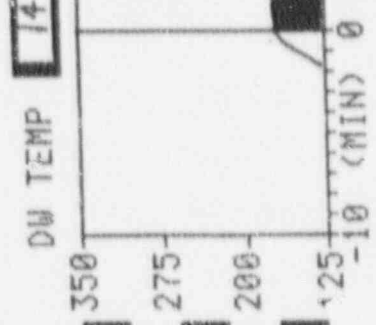
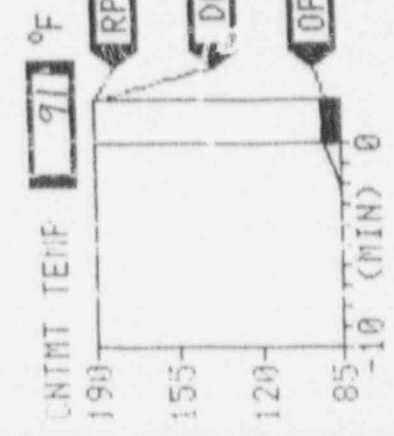
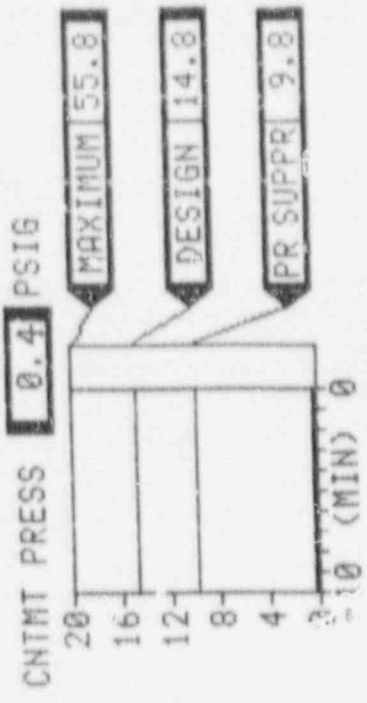
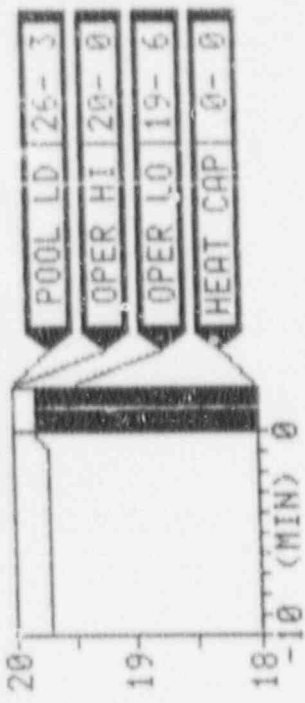


# 027 RPU ALARM CONTAINMENT CONTROL -- UPSET / MR

POOL LEVEL 19 FT 10 IN (RESERVE)

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PIJMP RUN
DRYWELL COOLING	COOLING AVAILABLE	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LIME UP	POWER AVAIL	FAN ON

DG OPER
SRU OPEN
GROUP ISOL
SCRAM NONE



RIVER BEND 30-JAN-1991 ~10:17

1991 PRACTICE EXERCISE

Message Number = 10.1

Clock Time = 1020

Scenario Time = 02/20

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

SUPPRESSION POOL LEVEL HIGH - P808-84A/G02  
NSSS INIT DRYWELL HIGH PRESSURE - P680-06A/B05  
CONTAINMENT PRESSURE HIGH - P808-84A/F01  
RHR PUMP 'A' IN MANUAL OVERRIDE - P601-20A/H03  
RHR PUMP E12-C002B IN MAN OVERRIDE - P601-17A/C04  
RHR PUMP E12-C002C IN MAN OVERRIDE - P601-17A/D04  
LPCS PUMP E21-C001 IN MANUAL OVERRIDE - P601-21A/B07  
DIV 1 ADS LOGIC MANUAL INITIATION SWITCH ARMED -  
P601-19A/D08  
DIV 2 ADS LOGIC MANUAL INITIATION SWITCH ARMED -  
P601-19A/D11

Indications in Control Room include:

The ADS A/B instantaneous logic manual initiation collars on switches S30A/B and S31A/B in the armed position.

Manual Override HPCS Pump Control white indicating light on panel P-601-16C is lit.

SLC 'B' pump discharge pressure decreases rapidly to 0. Red light goes out.

1991 PRACTICE EXERCISE

Message Number = 10.1

Clock Time = 1020

Scenario Time = 02/20

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

With Reactor pressure greater than 700 psig, and Suppression Cool temperature exceeding 160°F and continuing to rise, the heat capacity temperature limit is in the unsafe zone according to Figure 1 of EOP-1A and Figure 1 of EOP-2.

Pumps used for core cooling have been manually overridden, and stopped to prevent further injection of water into the reactor vessel in order to gain control of reactor power and level.

The seven (7) ADS valves are manually opened from Control Room panel P601 to depressurize the reactor below the minimum alternate RPV flooding pressure in accordance with Table 2 of EOP-1A (125 psig above containment pressure).

Once the reactor is depressurized, it is necessary to control level and power until the reactor can be maintained subcritical.

When operators attempt to initiate SLC per EOP-1A, the pump starts, comes up to pressure, then trips due to an electrical fault at the pump supply breaker. See Supplemental Scenario No. 5 for further details.

Expected Actions:

Operators monitor reactor power, level and pressure and primary containment parameters to determine when reactor depressurization is required per EOP-1A, Emergency RPV Depressurization Section.

Prevent or terminate injection of water into the vessel.

Open the seven (7) ADS valves to depressurize the reactor vessel.

Shift Supervisor dispatch an NEO to investigate the trip of SLC pump 'B'.

1991 PRACTICE EXERCISE  
 Message Number ~ 10.1

Clock Time ~ 1029  
 Scenario Time ~ 02/20

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHF A	SS	Press	Flow	SRV	RED	GRN	AC. MN
RHF B	SS		0	F041A	OFF	ON	OFF
RHF C	SS		0	F041B	ON	OFF	ON
			0	F041C	ON	OFF	ON
LPCS	SS		0	F041D	ON	OFF	ON
			0	F041F	ON	OFF	ON
RCIC	OOS	0	0	F041G	OFF	ON	OFF
HPCS	SS	0	0	F041L	OFF	ON	OFF
CRD A	OP	1900	75	F047A	ON	OFF	ON
CRD B	AV	0	0	F047B	OFF	ON	OFF
				F047C	ON	OFF	ON
				F047D	OFF	ON	OFF
				F047F	OFF	ON	OFF
SLC A	OOS	Press	Level	F051B	OFF	ON	OFF
			1930	F051C	OFF	ON	OFF
SLC B	OFF	0		F051D	OFF	ON	OFF
				F051G	ON	OFF	ON
RPV	Press	Level	Range	MSIV	RED	GRN	
	728	-120"	FZR	F022A	OFF	ON	
DIV I	DIESEL	OP		FC22B	OFF	ON	
DIV II	DIESEL	OP		F022C	OFF	ON	
DIV III	DIESEL	OP		F022D	OFF	ON	
				F028A	OFF	ON	
				F028B	OFF	ON	
				F028C	OFF	ON	
				F028D	OFF	ON	

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

POWER	314	APPM	LEVEL	-120"
CNS P1A	OP		FWS P1A	OP
CNS P1B	SS		FWS P1B	SS
CNS P1C	SS		FWS P1C	SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

DRYWELL	Press	Temp	Level
	1.9	180°	
CTMT	0.6	96°	
SPR PL		161°	20'8"

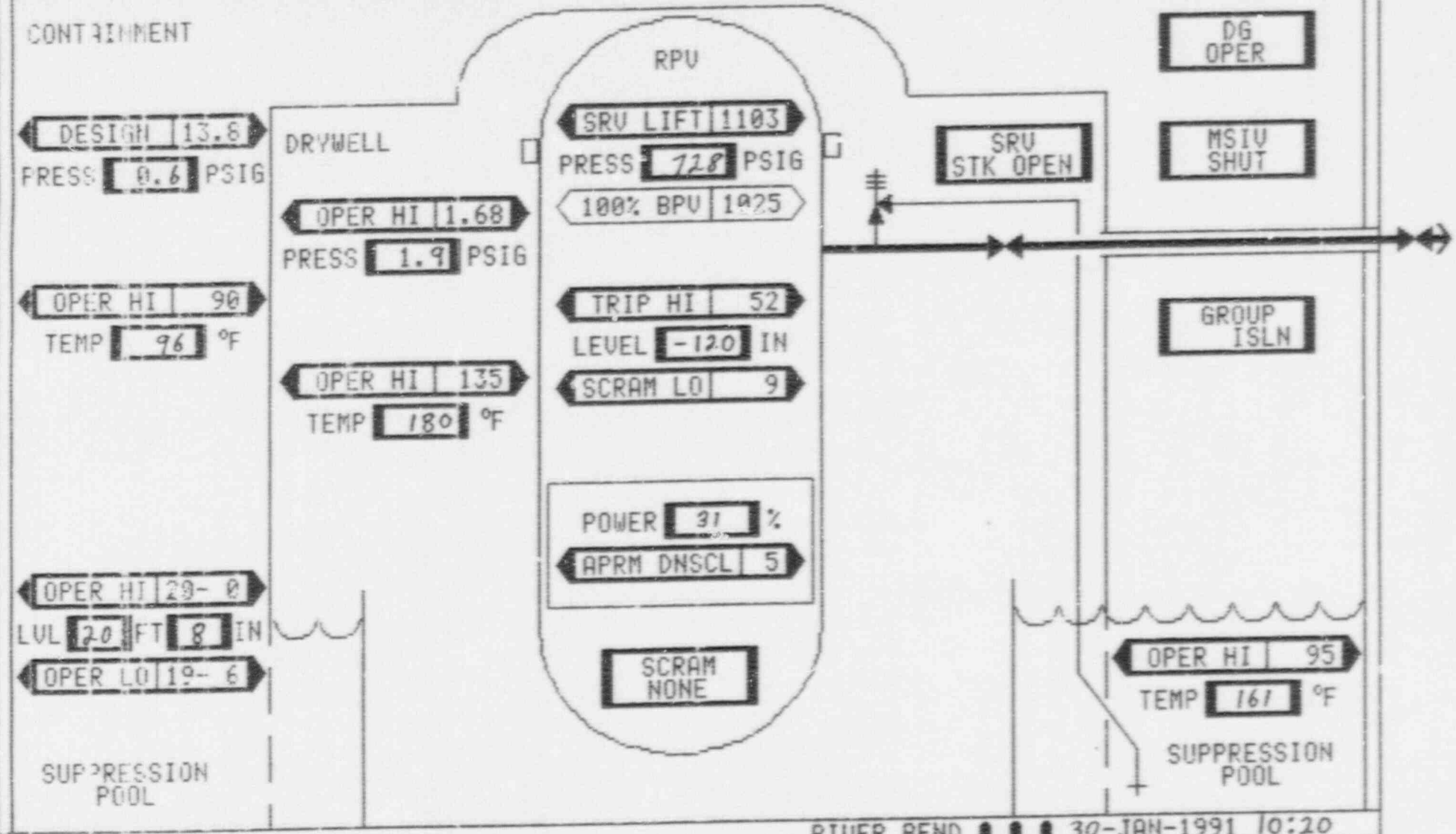
PANEL 870/601

SWP P2A	OP	SWP P2C	OP
SWP P2B	OP	SWP P2D	OP

PANEL 863

SGTS A	OP	SGTS B	SS
D/W COOLERS	OPERATING	ISOL	ISOL
CTMT COOLERS	OPERATING		A

011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM



RIVER BEND ●●● 30-JAN-1991 10:20

013

# RPV CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PJMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
SHTDN COOLING	CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR AVAIL	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

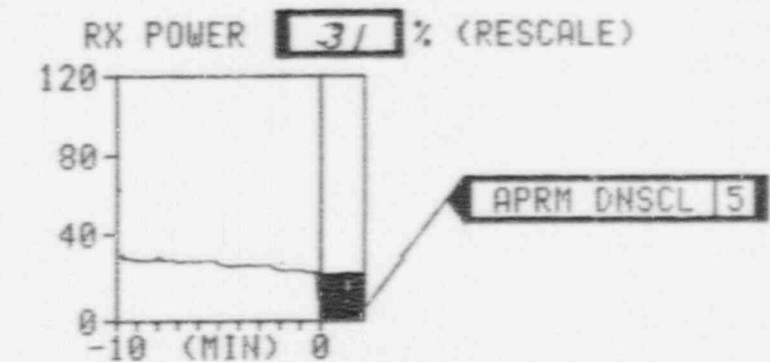
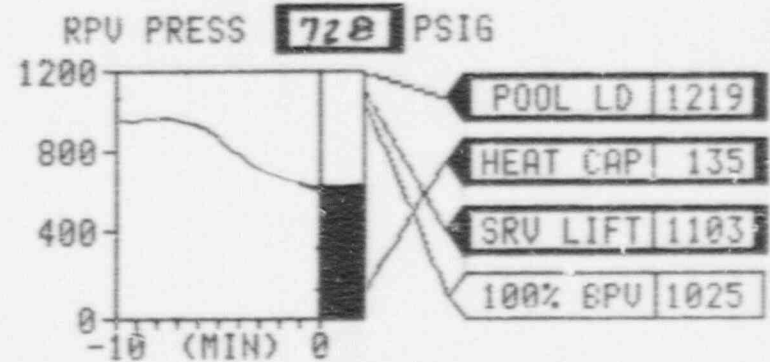
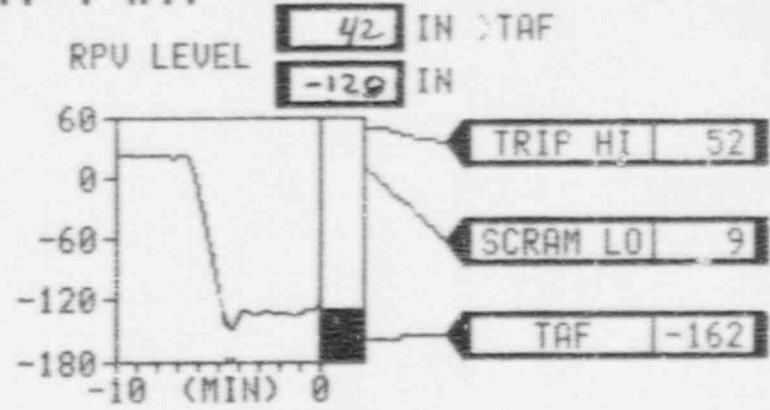
DG OPER

SRV STK OPEN

MSIU SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 10:20

027

RPU ALARM

# CONTAINMENT CONTROL--UPSET/MR

POOL COOLING

COOLING AVAILABLE	POWER AVAIL	PUMP OFF
-------------------	-------------	----------

DG OPER

DRYWELL COOLING

COOLING NOT AVAIL	POWER AVAIL	FAN OFF
-------------------	-------------	---------

SRU STK OPEN

CNTMT COOLING

COOLING NOT AVAIL	POWER AVAIL	FAN OFF
-------------------	-------------	---------

GROUP ISLN

PRESS CONTROL

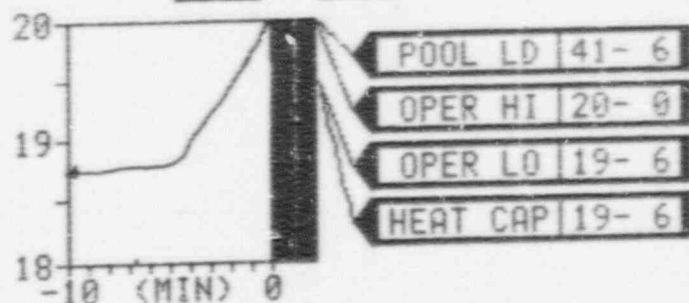
VALVE SHUT	POWER AVAIL	FAN OFF
------------	-------------	---------

SCRAM NONE

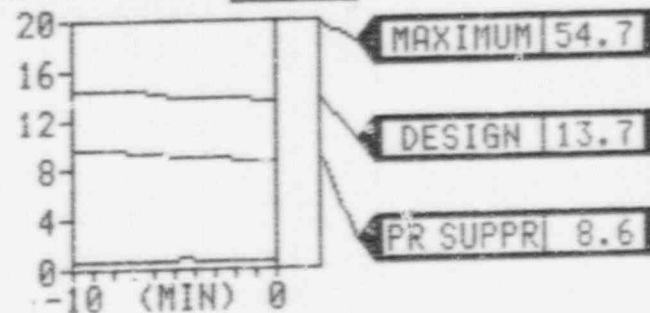
SBGT

VALVE LINE-UP	POWER AVAIL	FAN RUN
---------------	-------------	---------

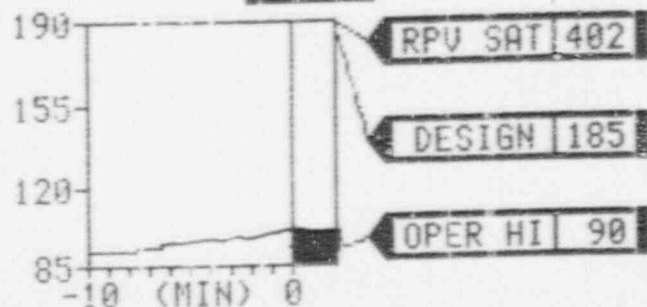
POOL LEVEL 20 FT 8 IN (RESCALE)



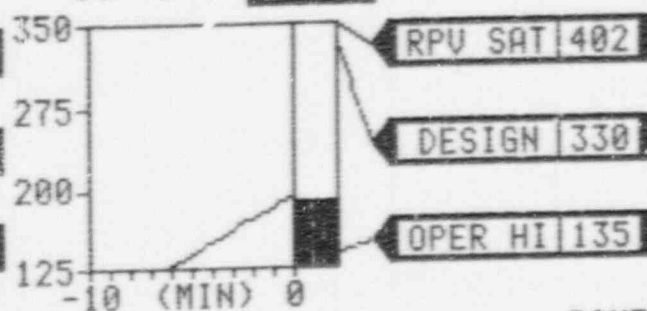
CNTMT PRESS 0.6 PSIG



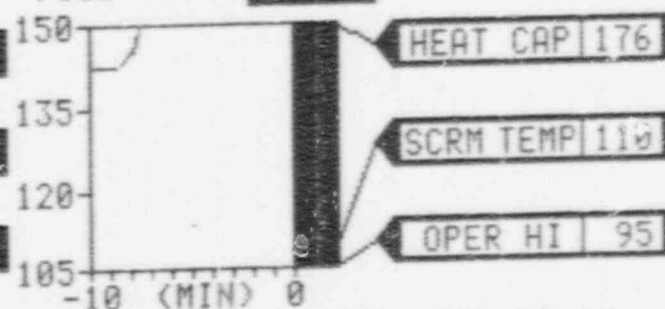
CNTMT TEMP 96 °F



DW TEMP 180 °F



POOL TEMP 161 °F



RIVER BEND 30-JAN-1991 10:20

1991 PRACTICE EXERCISE  
Message Number = 10.2

Clock Time = 1025  
Schedule Time = 10:25

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 10.2

Clock Time = 1025

Scenario Time = 02/25

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Suppression Pool temperature is approximately 200°F and increasing; reactor pressure is around 220 psig and decreasing; and reactor power is between 28% to 30%, with the reactor operator inserting control rods individually.

The reactor is being depressurized with the intention of maintaining reactor level in a specified band and allowing boiling to continue per EOP-1A. This action will provide continued cooling for the reactor until either enough boron is injected, or all control rods have been inserted so that the reactor can be maintained in a shutdown condition.

The operators should be preparing to place two loops of RHR into the Suppression Pool cooling mode in approximately 5 more minutes when the automatic open signal on the RHR heat exchanger bypass valves (E12\*F048A/B) will be removed. These valves are maintained open for 10 minutes after the LPCI injection signals are received (Rx low level-level 1, high drywell pressure).

Data indicate that SGTS B has been placed in Secured Status by operators.

Expected Actions:

Continue to follow steps of EOP-1A and EOP-2.

Monitor reactor pressure while depressurizing below the minimum alternate RPV flooding pressure (EOP-1A, Table 2).

Continue to investigate the trip of SLC pump 'B'.

1991 PRACTICE EXERCISE  
 Message Number - 10.2

Clock Time - 1025  
 Scenario Time - 02/25

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/871

RHR A	RHR B	RHR C	LPCS	RCIC	HPCS	CRD A	CRD B	SLC A	SLC B	RPV	DIV I	DIV II	DIV III
SS	SS	SS	SS	OOS	SS	OP	AV	OOS	OFF	220	DIESEL	DIESEL	DIESEL
Flow	0	0	0	0	0	75	0	Level	1930	Range			
Press				0	0	1900	0	Press	0	Level	-127"	OP	OP

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE  
 SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

PANEL 601

SRV	RED	GRN	AC, MN
F041A	OFF	ON	OFF
F041B	ON	OFF	ON
F041C	ON	OFF	ON
F041D	ON	OFF	ON
F041F	ON	OFF	ON
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	ON	OFF	ON
F047B	OFF	ON	OFF
F047C	ON	OFF	ON
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	ON	OFF	ON

MSIV	F022A	F022B	F022C	F022D	F028A	F028B	F028C	F028D
MSIV	OFF	ON	ON	ON	ON	ON	ON	ON
F022A	OFF	ON	ON	ON	ON	ON	ON	ON
F022B	OFF	ON	ON	ON	ON	ON	ON	ON
F022C	OFF	ON	ON	ON	ON	ON	ON	ON
F022D	OFF	ON	ON	ON	ON	ON	ON	ON
F028A	OFF	ON	ON	ON	ON	ON	ON	ON
F028B	OFF	ON	ON	ON	ON	ON	ON	ON
F028C	OFF	ON	ON	ON	ON	ON	ON	ON
F028D	OFF	ON	ON	ON	ON	ON	ON	ON

PANEL 680

POWER	28% APRM	LEVEL
CNS P1A	OP	FWS P1A OP
CNS P1B	SS	FWS P1B SS
CNS P1C	SS	FWS P1C SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

DRYWELL	CTMT	SPR PL	Press	Temp	Level
DRYWELL	2.7		213°		
CTMT	0.8		104°		
SPR PL			197°		21'4"

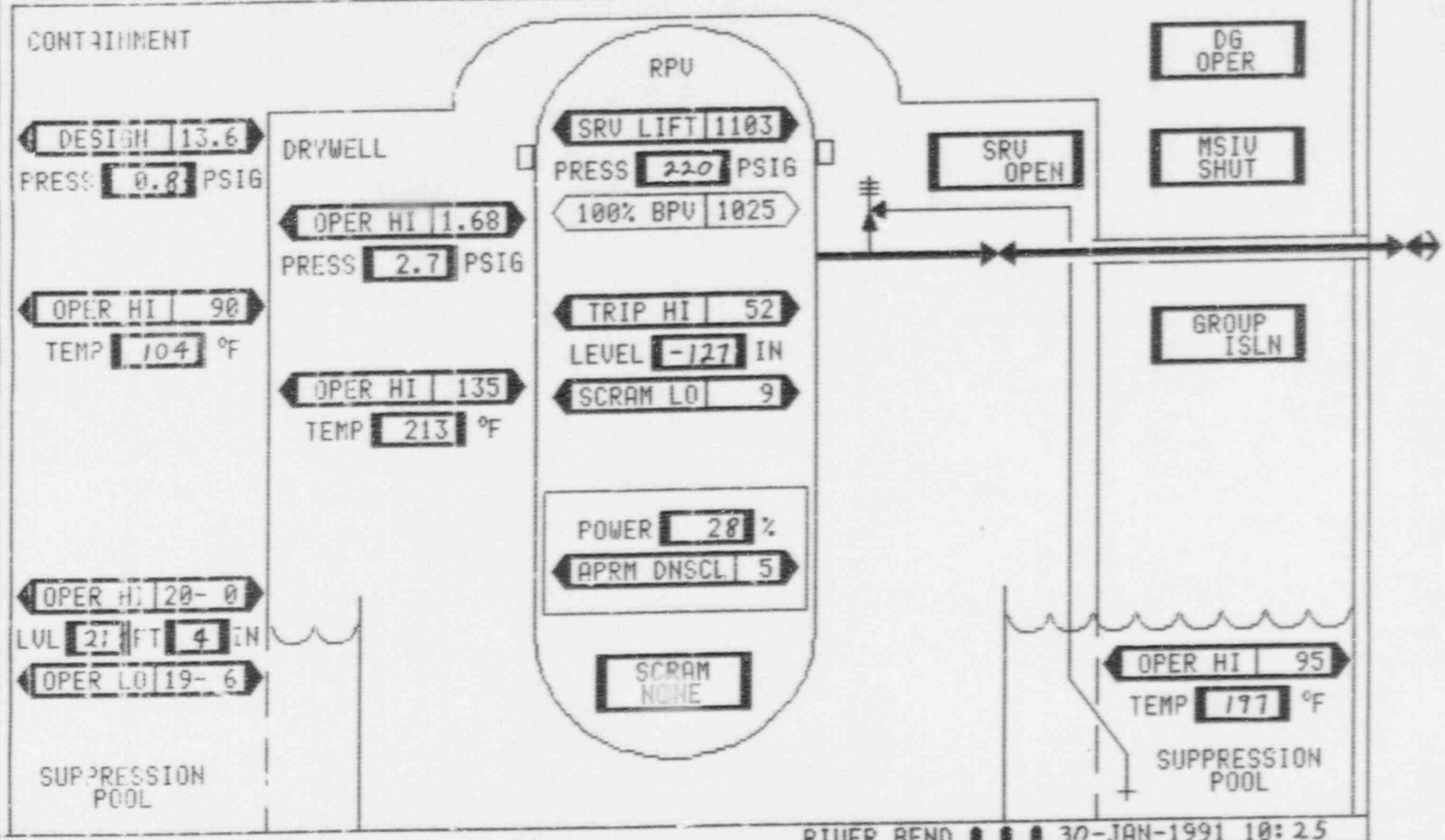
PANEL 870/601

SWP F2A	SWP F2B	SWP F2C	SWP F2D
SWP F2A	OP	OP	OP
SWP F2B	OP	OP	OP

PANEL 863

SCTS A	SCTS B	D/W COOLERS OPERATING	CTMT COOLERS OPERATING
SCTS A	OP	SS	SS
D/W COOLERS OPERATING		ISOL	ISOL
CTMT COOLERS OPERATING			A

011 [RFV ALARM] CRITICAL PLANT VARIABLES [CNTMT ALARM]



RIVER BEND ●●● 30-JAN-1991 10:25

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
SHTDN COOLING	CLG AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
RWCL	COOLING NOT AVAIL		POWER AVAIL	PUMP OFF
TURBINE CONTROL	CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE		V. PWR NA	VALVE SHUT
SLC	LIQUID AVAILABLE		POWER NA	PUMP OFF

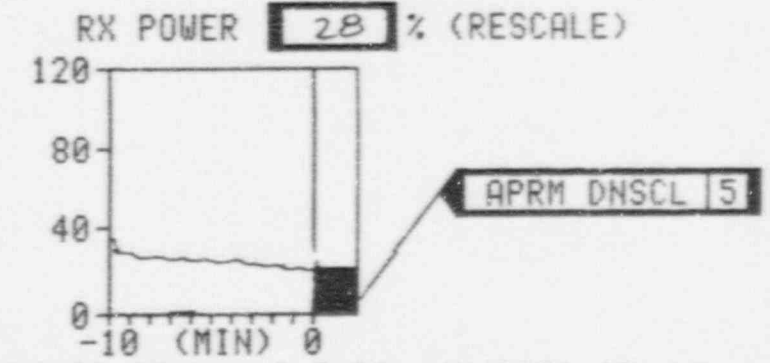
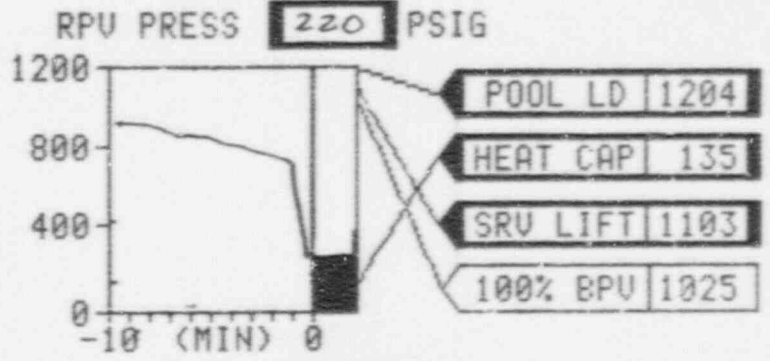
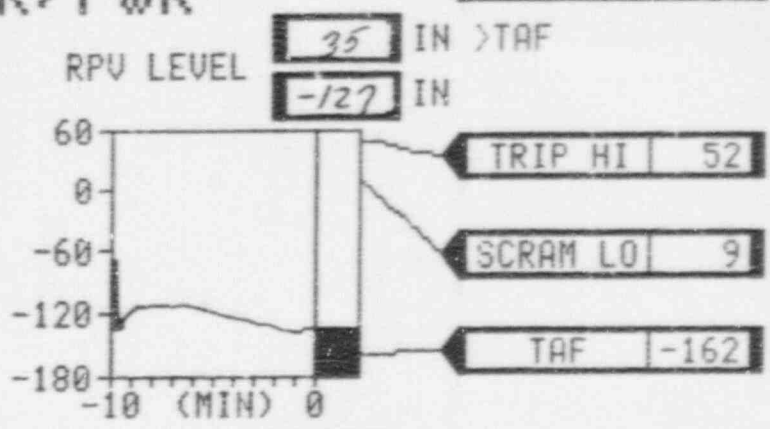
DG OPER

SRU OPEN

MSIU SH'T

GROUP ISOL

SCRAM NONE



# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP OFF
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

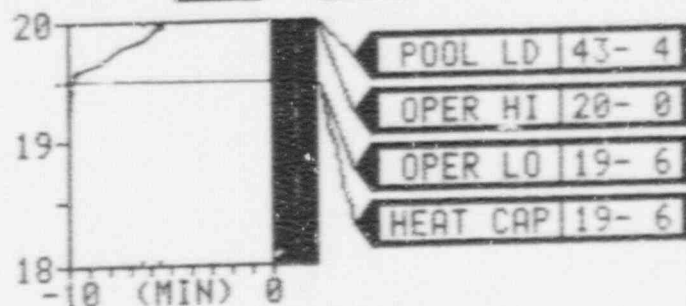
DG OPER

SRV OPEN

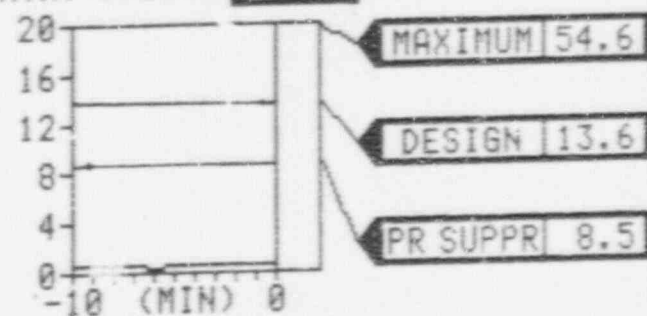
GROUP ISLN

SCRAM NONE

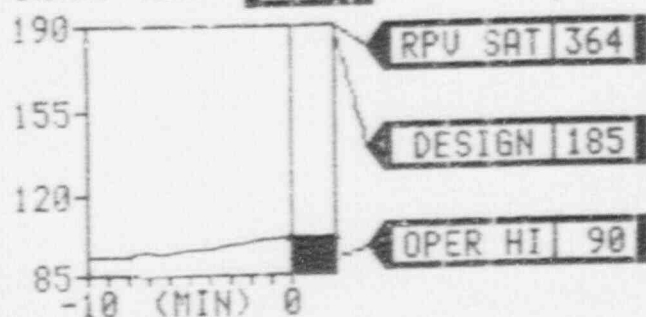
POOL LEVEL 27 FT 4 IN (RESCALE)



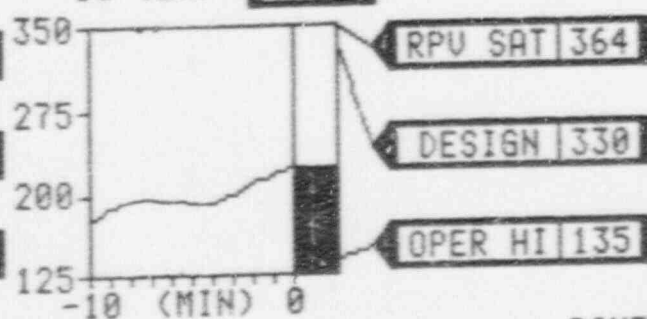
CNTMT PRESS 0.8 PSIG



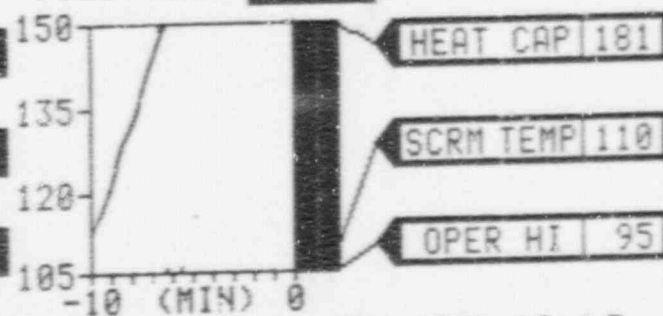
CNTMT TEMP 107 °F



DW TEMP 213 °F



POOL TEMP 197 °F



RIVER BEND ●●● 30-JAN-1991 10:25

1991 PRACTICE EXERCISE

Message Number = 01

Clock Time = 1030

Scenario Time = 02/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

DRYWELL TEMPERATURE HIGH - P80E-84A/B04  
RHR TEST RETURN VLV E12-F024B IN MANUAL OVERRIDE -  
P608-17A/F03  
RHR TEST RETURN VLV E12-F024A IN MANUAL OVERRIDE -  
P608-20A/D06

Indications in Control Room include:

RHR heat exchanger bypass valves E12\*F048A/B red and green  
lights lit.

1991 PRACTICE EXERCISE

Message Number = 11

Clock Time = 1030

Scenario Time = 02/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

With reactor power at 25% to 28%, the reactor vessel is depressurized below the minimum alternate RPV flooding pressure, the operators should be in the Level/Power Control section of EOP-1A, maintaining reactor level between -100" and -193" using a feedwater pump to inject water into the vessel as directed.

The operator reports that SLC pump 'B' breaker, located on electrical panel 1EHS\*MCC2B, has failed and is not able to be reset and closed. Electricians are presently troubleshooting the breaker. See Supplemental Scenario No. 5.

With 10 minutes having elapsed since the receipt of a LPCI initiation signal, the operators can place the RHR System in the Suppression Pool cooling mode, and throttle back on bypass valves E12\*F048A/B to direct flow from the Suppression Pool through the RHR heat exchangers.

Deliver message 11.1x if a SITE AREA EMERGENCY has not been declared by this time.

Expected Actions:

Continue to follow the steps outlined in EOP-1A, Level/Power Control section, and continue to insert control rods.

Maintain vessel level between -100" and -193", and perform all operations in a slow and controlled manner.

Place RHR loops 'A' and 'B' in Suppression Pool cooling, and operate the system in accordance with RHR procedure SOP-0031.

Continue to investigate SLC pump 'B' breaker failure.

1991 PRACTICE EXERCISE  
 Message Number - 11

Clock Time - 1030  
 Scenario Time - 02/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	Status	SPC	Press	Flow	SRV	RED	GRN	AC.MN
RHR B	SPC		5200	F041A	OFF	ON	OFF	
RHR C	SS		5200	F041B	ON	OFF	ON	
			0	F041C	ON	OFF	ON	
LPCS	SS		0	F041D	ON	OFF	ON	
			0	F041F	ON	OFF	ON	
RCIC	OOS		0	F041G	OFF	ON	OFF	
HPCS	SS		0	F041L	OFF	ON	OFF	
			0	F047A	ON	OFF	ON	
CRD A	OP		1900	F047B	OFF	ON	OFF	
CRD B	AV		0	F047C	ON	OFF	ON	
			0	F047D	OFF	ON	OFF	
SIC A	Squib		Level	F047F	OFF	ON	OFF	
SIC B	OCS		1930	F051B	OFF	ON	OFF	
	OFF		0	F051C	OFF	ON	OFF	
			0	F051D	OFF	ON	OFF	
RPV	Press	Level	Range	F051G	ON	OFF	ON	
	125	-135°	FZR	MSIV	RSD	GRN	GRN	
DIV I	DIESEL	SS		F022A	OFF	ON	ON	
DIV II	DIESEL	SS		F022B	OFF	ON	ON	
DIV III	DIESEL	SS		F022C	OFF	ON	ON	
				F022D	OFF	ON	ON	
				F028A	OFF	ON	ON	
				F028B	OFF	ON	ON	
				F028C	OFF	ON	ON	
				F028D	OFF	ON	ON	

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

	RED	GRN	AC.MN
F041A	OFF	ON	OFF
F041B	ON	OFF	ON
F041C	ON	OFF	ON
F041D	ON	OFF	ON
F041F	ON	OFF	ON
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	ON	OFF	ON
F047B	OFF	ON	OFF
F047C	ON	OFF	ON
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	ON	OFF	ON
MSIV	RSD	GRN	GRN
F022A	OFF	ON	ON
F022B	OFF	ON	ON
F022C	OFF	ON	ON
F022D	OFF	ON	ON
F028A	OFF	ON	ON
F028B	OFF	ON	ON
F028C	OFF	ON	ON
F028D	OFF	ON	ON

PANEL 680

POWER	27% APRM	LEVEL	-135°
CNS P1A	OP	FWS F1A	OP
CNS P1B	SS	FWS P1B	SS
CNS P1C	SS	FWS P1C	SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

Press	Temp	Level
DRYWELL <u>3.3</u>	<u>240°</u>	
CTMT <u>1.1</u>	<u>112°</u>	
SPR PL	<u>214°</u>	<u>22.1°</u>

PANEL 870/601

SWP P2A	OP	SWP P2C	OP
SWP P2B	OP	SWP P2D	OP

PANEL 863

SGTS A	OP	SGTS B	SS
D/W COOLERS	OPERATING	ISOL	
CTMT COOLERS	OPERATING	A	



# 011 [RPV ALARM] CRITICAL PLANT VARIABLES

[CNTMT ALARM]

CONTAINMENT

DESIGN 13.5  
PRESS 1.1 PSIG

DRYWELL

OPER HI 1.68  
PRESS 3.3 PSIG

OPER HI 90  
TEMP 112 °F

OPER HI 135  
TEMP 240 °F

OPER HI 20-0  
LVL 22 FT 1 IN  
OPER LO 19-6

SUPPRESSION  
POOL

RPV

SRV LIFT 1103  
PRESS 125 PSIG

100% BPV 1025

TRIP HI 52  
LEVEL -135 IN  
SCRAM LO 9

POWER 27 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

MSIU  
SHUT

SRV  
OPEN

GROUP  
ISLN

OPER HI 95  
TEMP 214 °F

SUPPRESSION  
POOL

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CNDS/FW	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V.PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

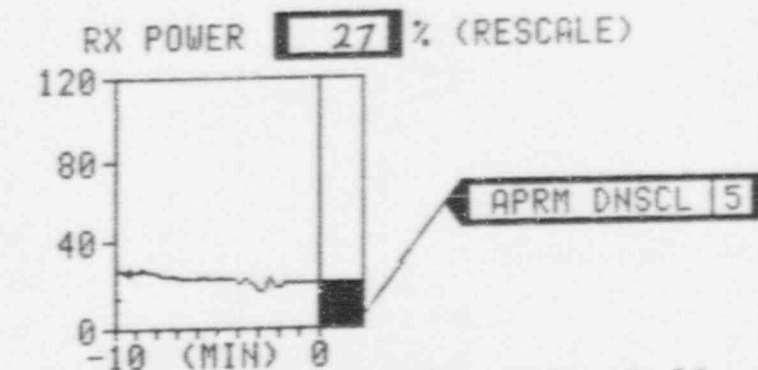
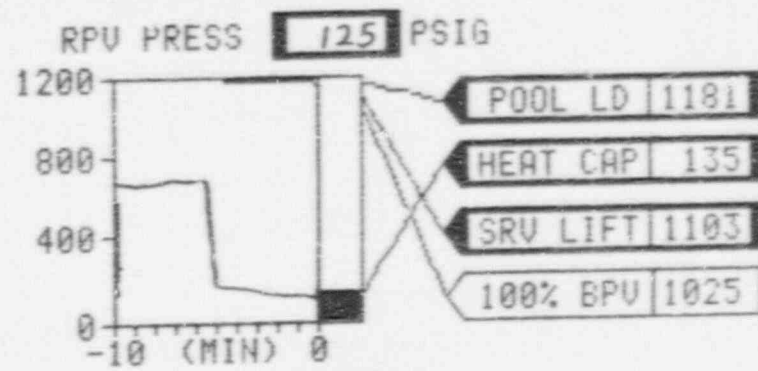
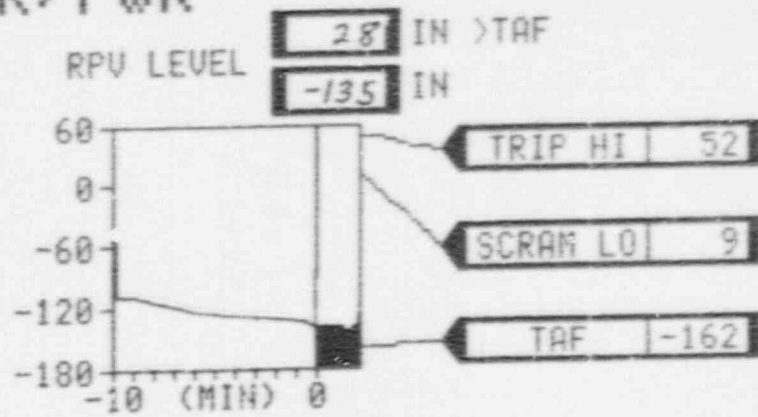
DG NOT OPER.

SRV OPEN

MSIV SHUT

GROUP ISLN

SCRAM NONE

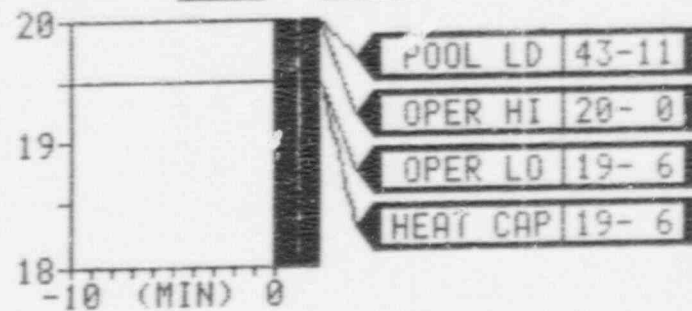


RIVER BEND ●●● 30-JAN-1991 10:30

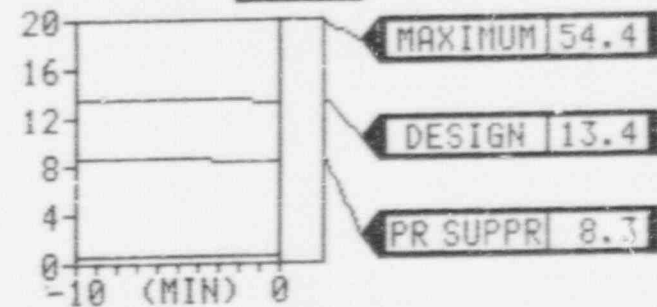
# 027 **RPV ALARM** CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	<b>DG NOT OPER</b>  <b>SRU OPEN</b>  <b>GROUP ISLN</b>  <b>SCRAM NONE</b>
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	
CNTMT COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN	

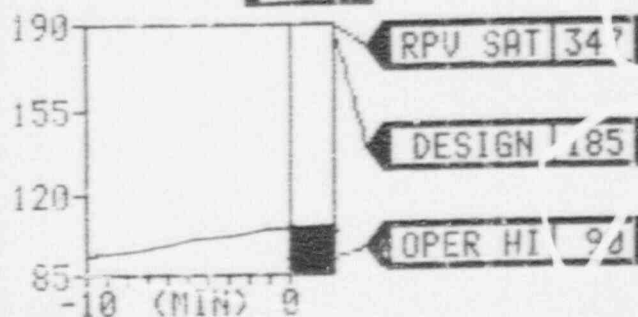
POOL LEVEL **22** FT **1** IN (RESCALE)



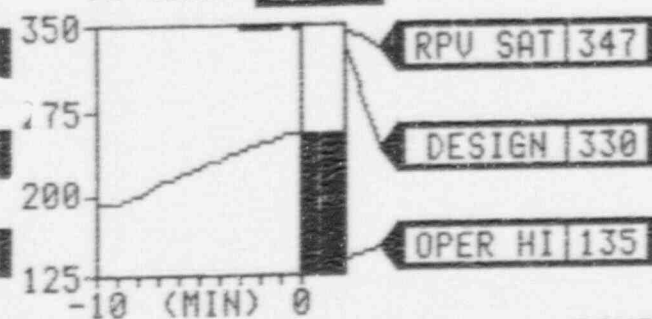
CNTMT PRESS **1.1** PSIG



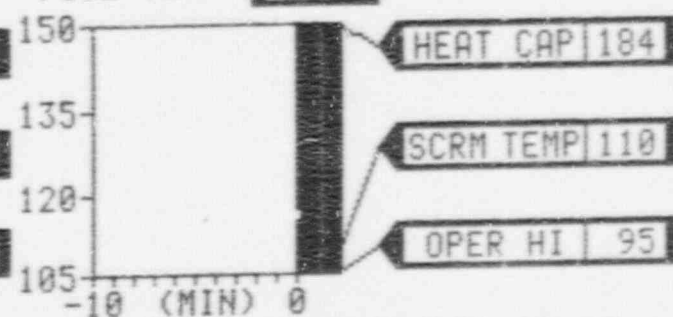
CNTMT TENP **112** °F



DW TEMP **240** °F



POOL TEMP **214** °F



RIVER BEND ●●● 30-JAN-1991 10:30

1991 PRACTICE EXERCISE

Message Number: 11

Clock Time = 1030

Scenario Time = 02/30

**RIVER BEND STATION  
DRMS MONITORS**

<u>ID NUMBER</u>	<u>LOCATION (TYPE)</u>	<u>READING</u>	<u>ID NUMBER</u>	<u>LOCATION (TYPE)</u>	<u>READING</u>
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	500 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	10.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.2 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Hm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	5.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 11

Clock Time = 1030  
 Scenario Time = C2/30

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	2.3E-03	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	3.5E+00	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07	μCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-06	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01	μCi/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	μCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	5.0E-10	μCi/cc				
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07	μCi/cc				

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 11.1x

Clock Time = 1035

Scenario Time = 02/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Emergency Director

Declare a SITE AREA EMERGENCY in accordance with EIP-2-001, "Classification of Emergencies", SAE EAL 7, "Transient Requiring Operation of Shutdown Systems with Failure to Scram".

1991 PRACTICE EXERCISE  
Message Number = 11.1x

Clock Time = 1035  
Scenario Time = 02/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver this message only if a SITE AREA EMERGENCY has not been declared, and the Shift Supervisor has not recognized that events have occurred which require the declaration of a SITE AREA EMERGENCY and no actions are being taken which would result in the declaration of a SITE AREA EMERGENCY.

Expected Actions:

Declare a SITE AREA EMERGENCY.

1991 PRACTICE EXERCISE  
Message Number = 12

Clock Time = 1045  
Scenario Time = 02/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 12

Clock Time = 1045

Scenario Time = 02/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant status update indicates that Suppression Pool temperature is decreasing. The 'A' and 'B' loops of RHR are in the Suppression Pool cooling mode of operation.

Reactor level continues to be maintained between -100" and -193" with seven (7) SRV's open and venting to the Suppression Pool. Control rods are being inserted into the reactor core; power is approximately 25% and slowly decreasing.

Electricians report that the SLC pump 'B' breaker's control transformer is electrically open and will have to be replaced. Repairs will take approximately two (2) hours to complete.

Expected Actions:

Continue to follow the steps outlined in EOP-1A and EOP-2.

Continue to insert control rods into the reactor core.

Affect repairs to the SLC pump 'B' breaker.

1991 PRACTICE EXERCISE  
 Message Number ~ 12

Clock Time ~ 1045  
 Scenario Time ~ 02/65

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	RHR B	RHR C	LPCS	RCIC	HPCS	CRD A	CRD B	SILC A	SILC B	RPV	DIV I	DIV II	DIV III
Status	SPC	SPC	SS	OOS	SS	OP	AV	OOS	OFF	Press	DIESEL	DIESEL	DIESEL
Flow	5200	5200	0	0	0	1900	0	0	0	Level	SS	SS	SS
SRV	F041A	F041B	F041C	F041D	F041F	F041G	F041L	F047A	F047B	F047C	F047D	F047F	F051B
SRV	F051C	F051D	F051G	MSIV	F022A	F022B	F022C	F022D	F028A	F028B	F028C	F028D	
Flow	5200	5200	0	0	0	75	0	Level	Level	Range			
Level	1930												
Press	117	-173"											

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 680

POWER	254 APRM	LEVEL	-173"
CNS F1A	OP	FWS P1A	OP
CNS P13	SS	FWS P1B	SS
CNS P1C	SS	FWS P1C	SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

DEWELL	Press	Temp	Level
3.7	3.7	277°	
1.3	1.3	112°	
SFR FL		210°	22'10"

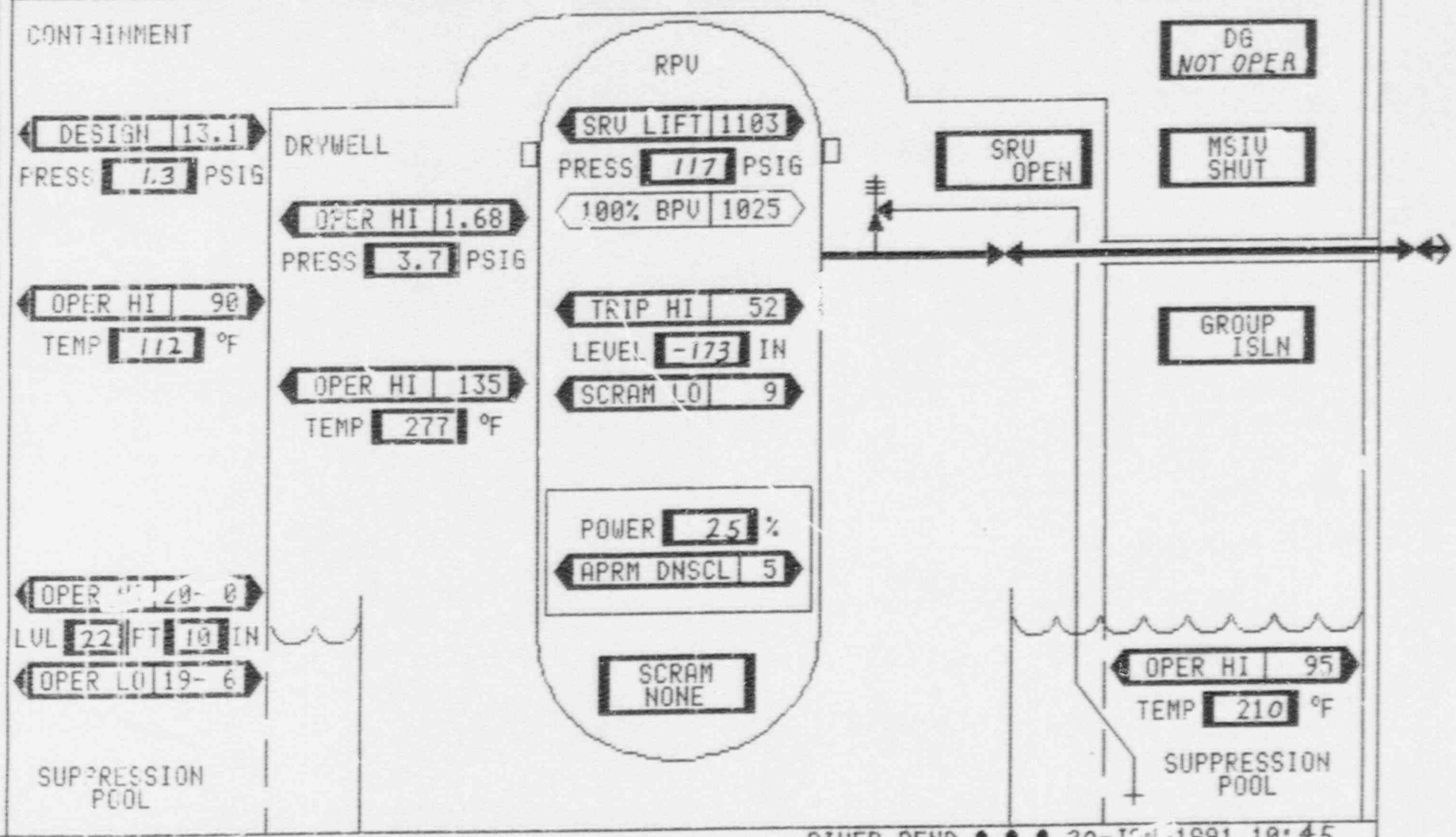
PANEL 870/601

SWP P2A	OP	SWP P2C	OP
SWP P2B	OP	SWP P2D	OP

PANEL 863

SGTS A	OP	SGTS B	SS
D/W COOLERS	OPERATING	ISOL	
CTMT COOLERS	OPERATING	A	

011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM



013

## RPU CONTROL--WR/PWR

CNTMT ALARM

CNDS/FW

WATER NA	RPU PR HI	POWER AVAIL	PUMP RUN
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CRD

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
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RCIC

WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
----------------	--------------	-------------	-------------

HPCE

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
----------------	--------------	----------------	-------------

LPCCE

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
----------------	--------------	----------------	-------------

LPCI

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
----------------	--------------	----------------	-------------

SHTDN  
COOLING

CLG AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
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RWCU

COOLING NOT AVAIL	POWER AVAIL	PUMP OFF
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TURBINE  
CONTROL

CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
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TURBINE  
BYPASS

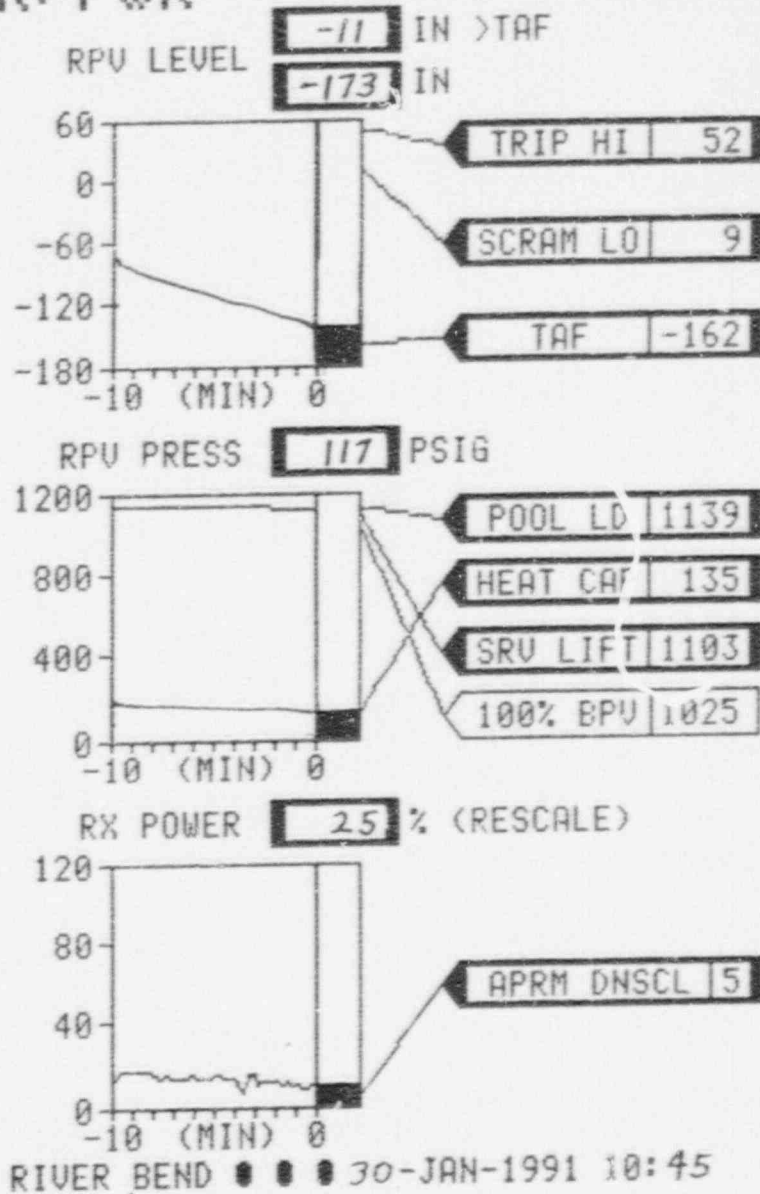
CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
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MSL  
DRAINS

COOLING AVAILABLE	U. PWR NA	VALVE SHUT
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SLC

LIQUID AVAILABLE	POWER NA	PUMP OFF
---------------------	-------------	-------------

DG  
NOT OPERSRV  
OPENMSIV  
SHUTGROUP  
ISLNSCRAM  
NONE

# 027 RPV ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

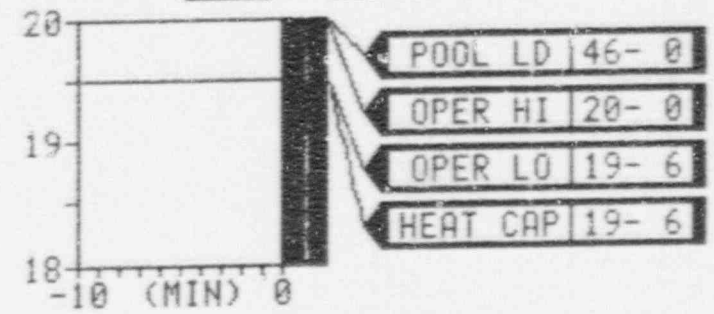
DG  
NOT OPER

SRU  
OPEN

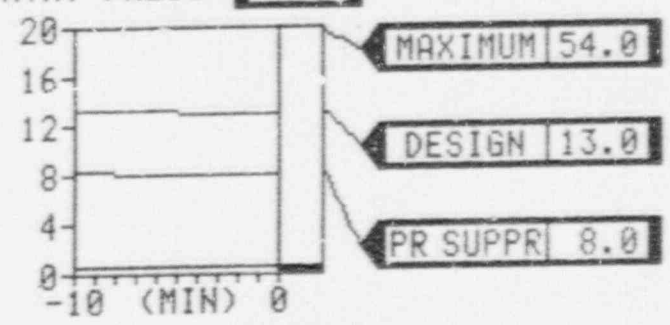
GROUP  
ISLN

SCRAM  
NONE

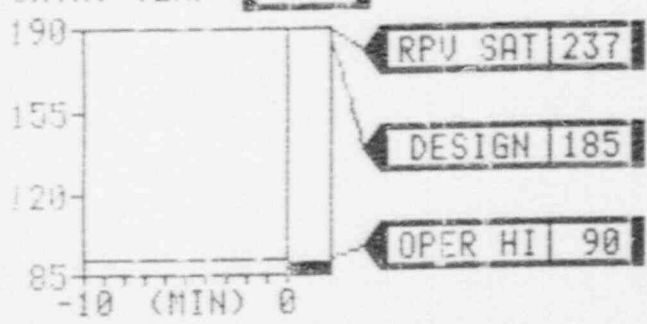
POOL LEVEL 22 FT 10 IN (RESCALE)



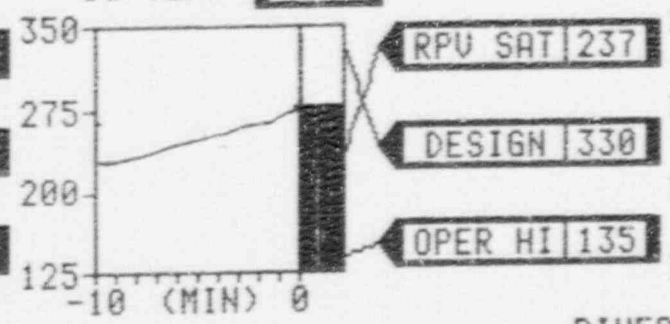
CNTMT PRESS 1.3 PSIG



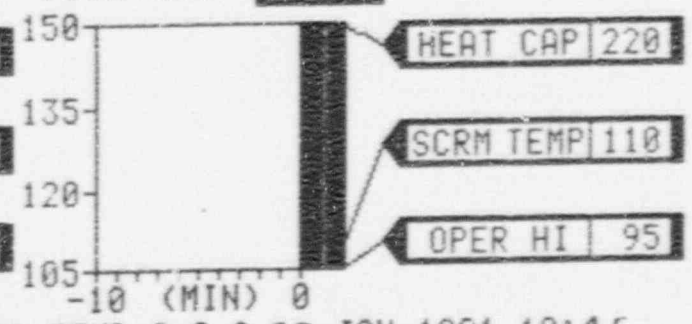
CNTMT TEMP 112 °F



DW TEMP 277 °F



POOL TEMP 210 °F



RIVER BEND ●●● 30-JAN-1991 10:45

1991 PRACTICE EXERCISE

Message Number: 12Clock Time = 1045Scenario Time = 02/45RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	500 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	10.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.5 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen. Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	CS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	P R A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	5.0 mR/hr

☐ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 12

Clock Time = 1045

Scenario Time = 02/45

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	2.7E-03	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	3.8E+00	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07	μCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-06	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01	μCi/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	μCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc				
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	μCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	μCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.7E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 13

Clock Time = 1100

Scenario Time = 03/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 13

Clock Time = 1100

Scenario Time = 03/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant status update indicates reactor level is being maintained between -100" and -193"; reactor power is approximately 24% and slowly decreasing.

Expected Actions:

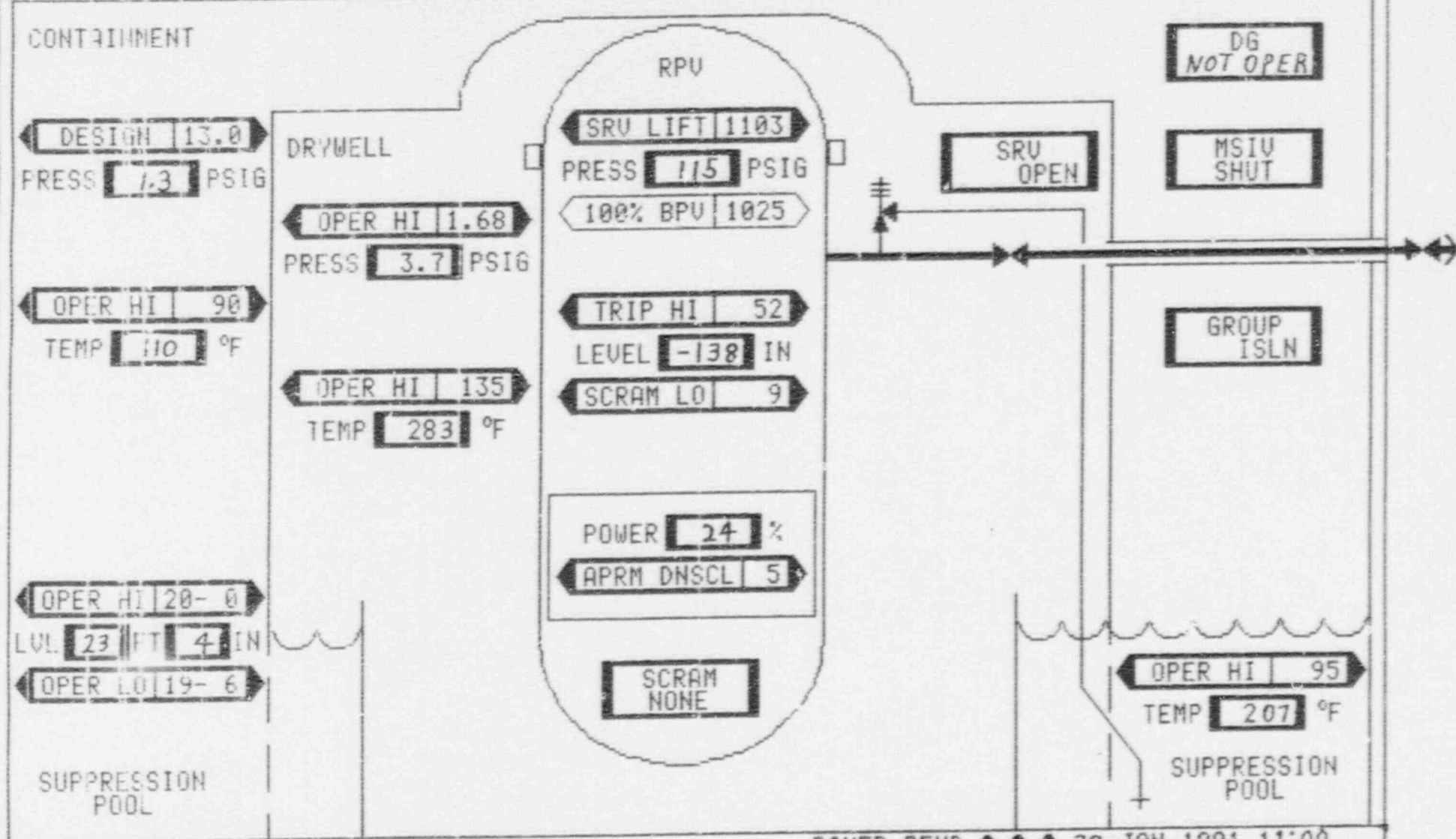
Continue to follow the steps outlined in EOP-1A and EOP-2.

Continue to insert control rods.

Affect repairs to SLC pump 'B' breaker.



011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM



013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW

WATER NA	RPU PR HI	POWER AVAIL	PUMP RUN
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CRD

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

RCIC

WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
-------------	-----------	----------	----------

HPCS

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCS

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCI

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

SHTDN COOLING

CLG AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RWCU

COOLING NOT AVAIL	POWER AVAIL	PUMP OFF
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TURBINE CONTROL

CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
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TURBINE BYPASS

CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
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MSL DRAINS

COOLING AVAILABLE	U.PWR NA	VALVE SHUT
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SLC

LIQUID AVAILABLE	POWER NA	PUMP OFF
------------------	----------	----------

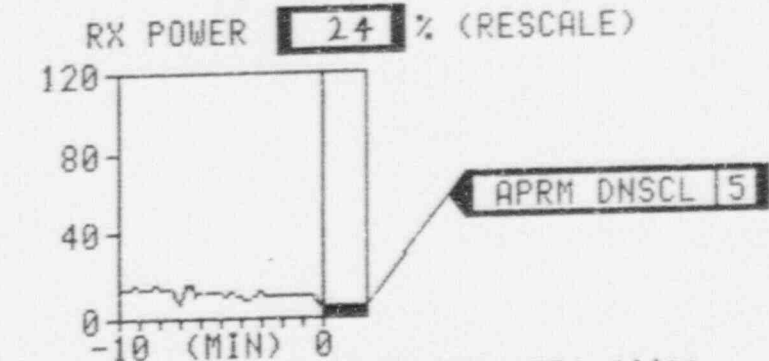
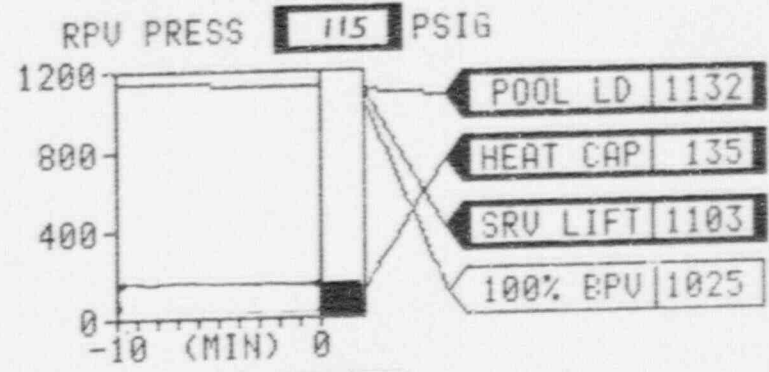
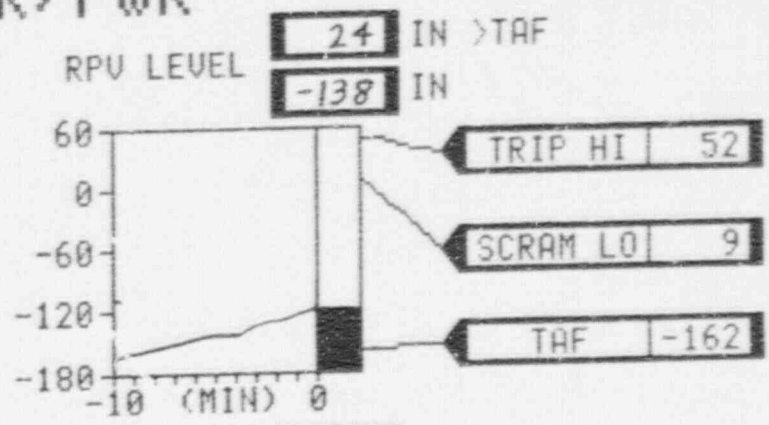
DG NOT OPER

SRV OPEN

MSIV SHUT

GROUP ISLN

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 11:00

# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

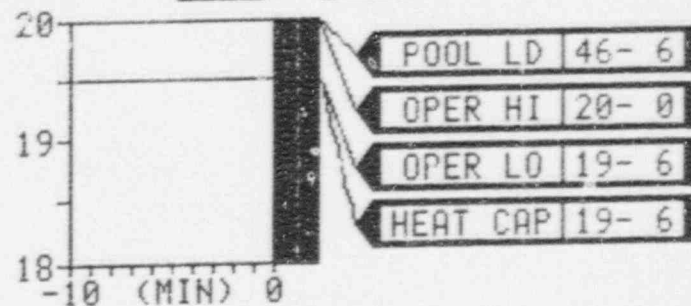
DG  
NOT OPER

SRV  
OPEN

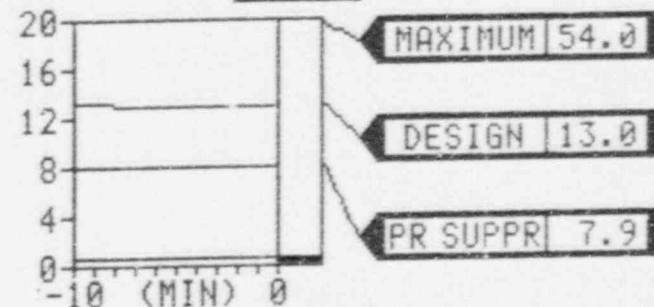
GROUP  
ISLN

SCRAM  
NONE

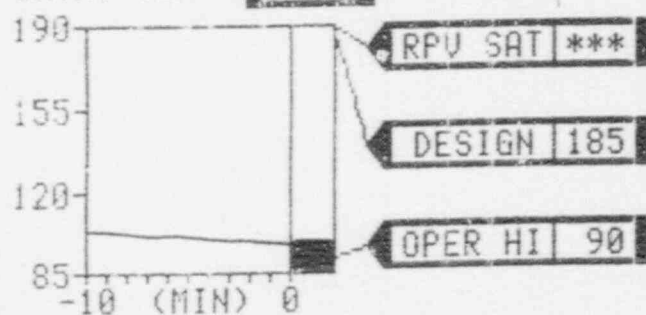
POOL LEVEL **23** FT. **4** IN (RESCALE)



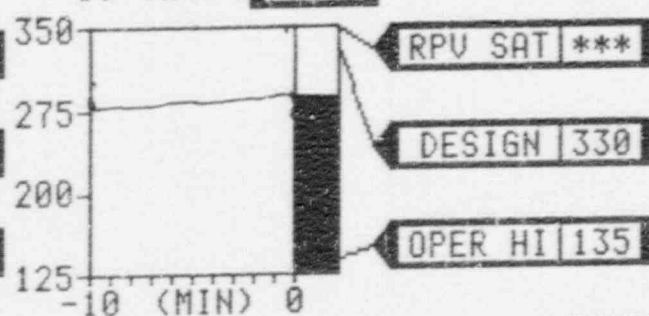
CNTMT PRESS **1.3** PSIG



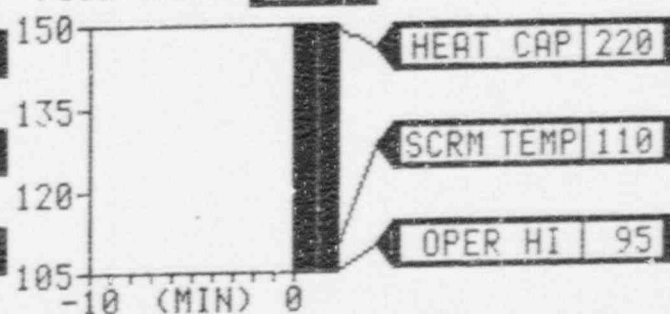
CNTMT TEMP **110** °F



DW TEMP **283** °F



POOL TEMP **207** °F



RIVER BEND 000 30-JAN-1991 11:00

1991 PRACTICE EXERCISE

Message Number: 13

Clock Time = 1100

Scenario Time = 03/00

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	500 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	10.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.5 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/h
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	FHR A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	5.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale In

All other ARMs are "as read"

1991 PRACTICE EXERCISE  
 Message Number: 13

Clock Time = 1100  
 Scenario Time = 03/00

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	2.9E-03	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	4.2E+00	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07	μCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-06	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01	μCi/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	μCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	μCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.6E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr

█ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 14

Clock Time = 1115

Scenario Time = 03/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE

Message Number = 14

Clock Time = 1115

Scenario Time = 03/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant status update indicates reactor level is being maintained between -100" and -193"; reactor power is approximately 23% and slowly decreasing.

Expected Actions:

Continue to follow the steps outlined in EOP-1A and EOP-2.

Continue to insert control rods.

Affect repairs to SLC pump 'B' breaker.

With alternate electrical power sources available and load available, the operators can shutdown the Diesel Generators at their discretion.

Data indicate that Diesels are in Secured Status by 1130. If operators choose to continue to run Diesel, modify data accordingly.

1991 PRACTICE EXERCISE  
 Message Number - 14

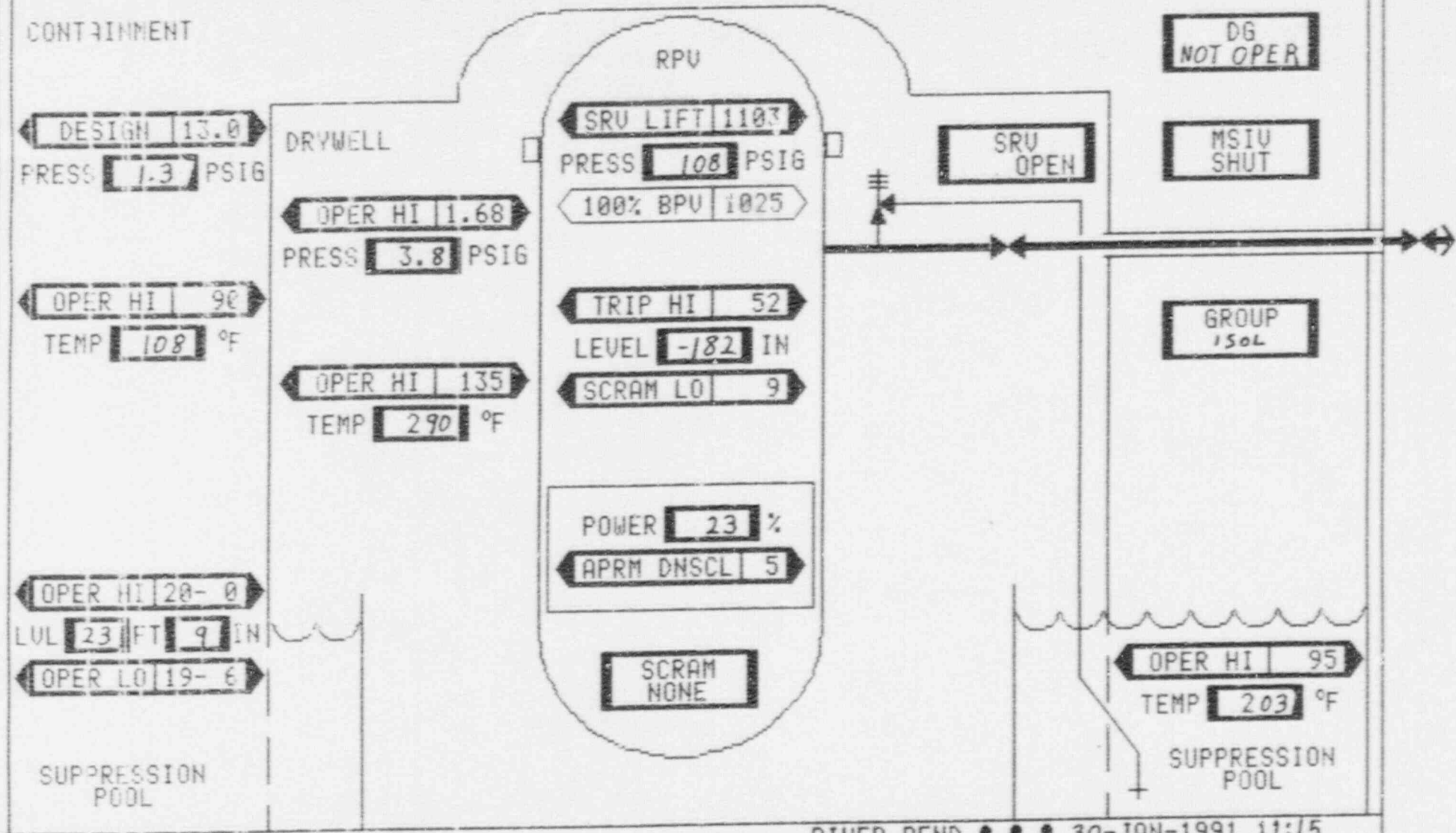
Clock Time - 1115  
 Scenario Time - 03/15

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

<u>PANEL 601/877</u>				<u>PANEL 601</u>			<u>PANEL 680</u>	
	<u>Status</u>	<u>Press</u>	<u>Flow</u>	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AC, MN</u>	
RHR A	<u>SPC</u>		<u>5200</u>	F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	POWER <u>23% APRM</u> LEVEL <u>-182"</u>
RHR B	<u>SPC</u>		<u>5200</u>	F041B	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1A <u>OP</u> FWS P1A <u>OP</u>
RHR C	<u>SS</u>		<u>0</u>	F041C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1B <u>SS</u> FWS P1B <u>SS</u>
LPCS	<u>SS</u>		<u>0</u>	F041D	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1C <u>SS</u> FWS P1C <u>SS</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>	F041E	<u>ON</u>	<u>OFF</u>	<u>ON</u>	Total Feedwater Flow <u>7.9</u> Mlbs./hr
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>	F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>	F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>	F047A	<u>ON</u>	<u>OFF</u>	<u>ON</u>	
	<u>Squib</u>	<u>Press</u>	<u>Level</u>	F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 808</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>1930</u>	F047C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>Press</u> <u>Temp</u> <u>Level</u>
SLC B	<u>OFF</u>	<u>0</u>		F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	DRYWELL <u>3.8</u> <u>290°</u>
	<u>Press</u>	<u>Level</u>	<u>Range</u>	F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CTMT <u>1.3</u> <u>108°</u>
RPV	<u>108</u>	<u>-182"</u>	<u>FZR</u>	F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SPR PL <u>203°</u> <u>23'9"</u>
DIV I	<u>DIESEL</u>	<u>SS</u>		F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 870/601</u>
DIV II	<u>DIESEL</u>	<u>SS</u>		F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2A <u>OP</u> SWP P2C <u>OP</u>
DIV III	<u>DIESEL</u>	<u>SS</u>		F051G	<u>ON</u>	<u>OFF</u>	<u>ON</u>	SWP P2B <u>OP</u> SWP P2D <u>OP</u>
				MSIV	<u>RED</u>	<u>GRN</u>		<u>PANEL 863</u>
				F022A	<u>OFF</u>	<u>ON</u>		SGTS A <u>OP</u> SGTS B <u>SS</u>
				F022B	<u>OFF</u>	<u>ON</u>		D/W COOLERS OPERATING <u>ISOL</u>
				F022C	<u>OFF</u>	<u>ON</u>		CTMT COOLERS OPERATING <u>A</u>
				F022D	<u>OFF</u>	<u>ON</u>		
				F028A	<u>OFF</u>	<u>ON</u>		
				F028B	<u>OFF</u>	<u>ON</u>		
				F028C	<u>OFF</u>	<u>ON</u>		
				F028D	<u>OFF</u>	<u>ON</u>		

OP=OPERATING SR=STANDBY READY  
 OOS=OUT OF SERVICE SS=SECURED STATUS  
 AV=AVAILABLE ISOL=ISOLATED

011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM



013

# RPV CONTROL--WR/PWR

CNTMT ALARM

CNDS/FW

WATER AVAIL	RPV PR-HI	POWER AVAIL	PUMP OFF
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CRD

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
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RCIC

WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
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HPCS

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCS

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
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LPCI

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
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SHTDN COOLING

CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
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RWCL

COOLING NOT AVAIL		POWER AVAIL	PUMP OFF
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TURBINE CONTROL

CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
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TURBINE BYPASS

CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
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MSL DRAINS

COOLING AVAILABLE		V.PWR NA	VALVE SHUT
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SLC

LIQUID AVAILABLE		POWER NA	PUMP OFF
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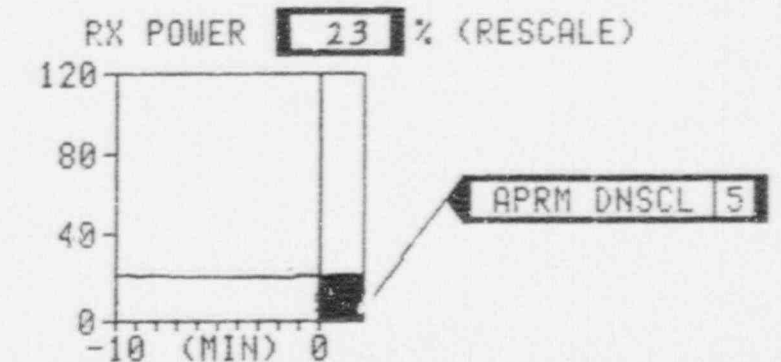
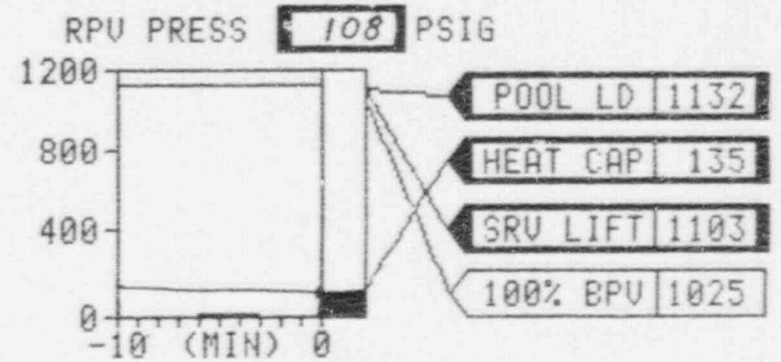
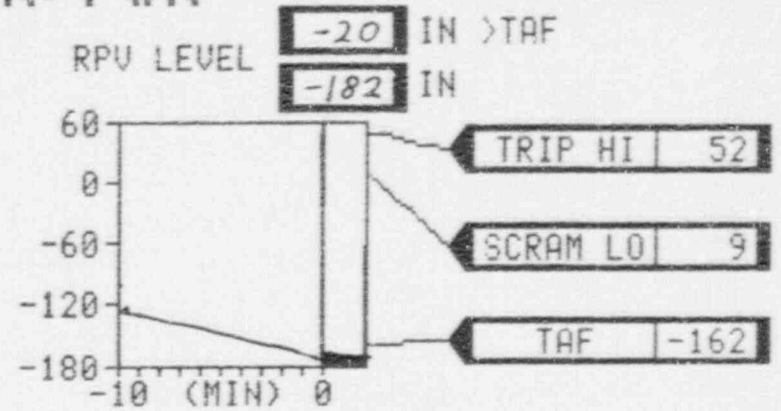
DG NOT OPER

SRV OPEN

MSIV SHUT

GROUP ISLN

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 11:15

# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

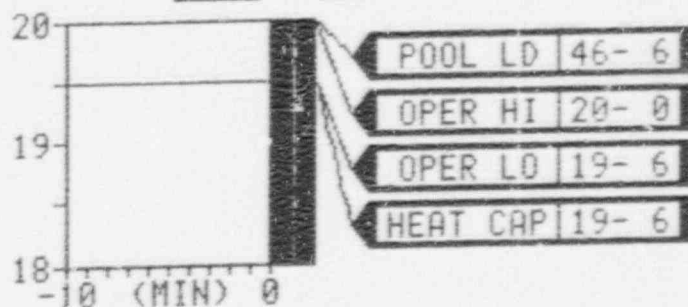
DG NOT OPER

SRV SHUT

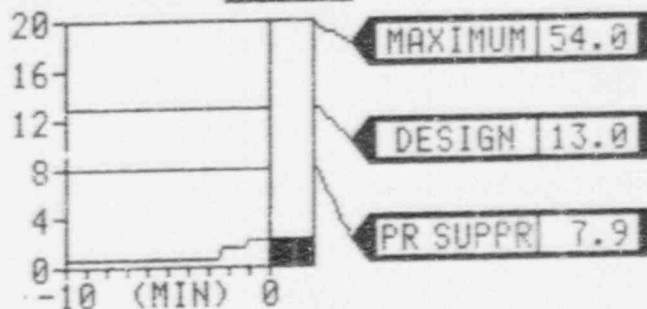
GROUP ISLN

SCRAM NONE

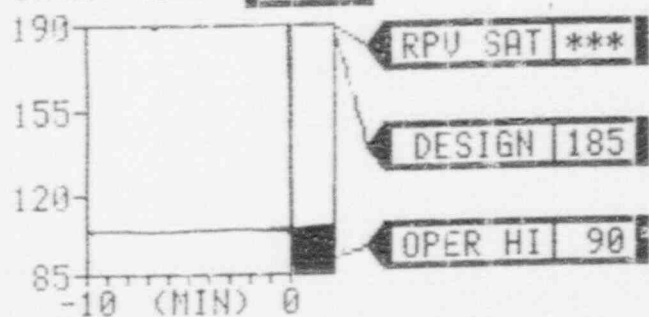
POOL LEVEL 23 FT 9 IN (RESCALE)



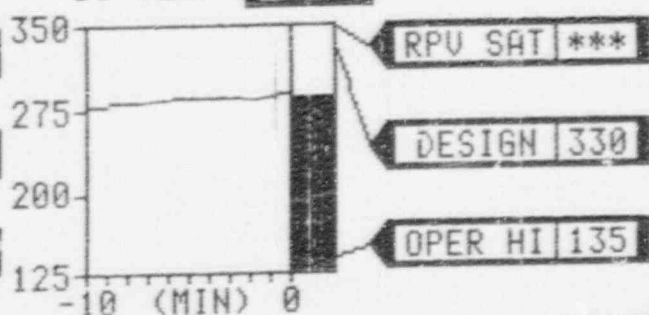
CNTMT PRESS 1.3 PSIG



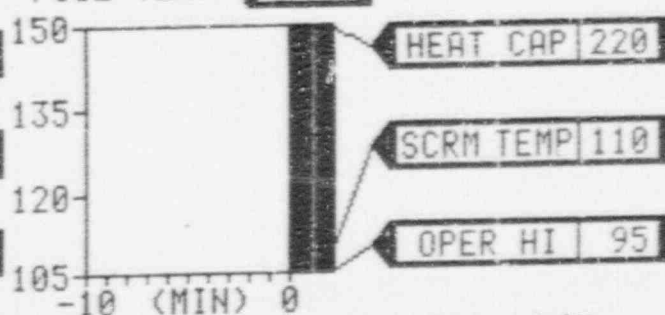
CNTMT TEMP 108 °F



DW TEMP 290 °F



POOL TEMP 203 °F



RIVER BEND 30-JAN-1991 11:15

1991 PRACTICE EXERCISE  
 Message Number: 14

Clock Time = 1115  
 Scenario Time = 03/15

RIVER BEND STATION  
 DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	500 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	10.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.5 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	5.0 mR/hr


■ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other ARMs are "as read"

1991 PRACTICE EXERCISE  
 Message Number: 14

Clock Time = 1115  
 Scenario Time = 03/15

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	3.3E-03 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	4.7E+00 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor	0	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu$ Ci/cc	Off Gas Post-treatment Monitor	0	cpm
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.3E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu$ Ci/cc			

 - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 15

Clock Time = 1130

Scenario Time = 03/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE  
Message Number = 15

Clock Time = 1130  
Scenario Time = 03/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant status update indicates reactor level is being maintained between -100" and -133"; reactor power is approximately 21% and slowly decreasing.

Expected Actions:

Continue to follow the steps outlined in EOP-1A and EOP-2.  
Continue to insert control rods.  
Affect repairs to SLC pump 'B' breaker.

1991 PRACTICE EXERCISE  
 Message Number - 15

Clock Time - 1130  
 Scenario Time - 03/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	SPC	Flow	5200
RHR B	SPC	Flow	5200
RHR C	SS	Flow	0
LPCS	SS	Flow	0

RCIC	OOS	Press	0
HPCS	SS	Press	0
CRD A	OP	Press	1900
CRD B	AV	Press	0

SIC A	OOS	Squib	Level	1930
SIC B	OFF	Squib	Level	1930

RPV	Press	97	Level	-108"	Range	FZR
DIV I	DIESEL	SS	Level	SS	Range	FZR
DIV II	DIESEL	SS	Level	SS	Range	FZR
DIV III	DIESEL	SS	Level	SS	Range	FZR

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV=AVAILABLE  
 SR-STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

SRV	RED	GRN	AC.MN
F041A	OFF	ON	OFF
F041B	ON	OFF	ON
F041C	ON	OFF	ON
F041D	ON	OFF	ON
F041F	ON	OFF	ON
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	ON	OFF	ON
F047B	OFF	ON	OFF
F047C	ON	OFF	ON
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	ON	OFF	ON

MSIV	RED	GRN
F022A	OFF	ON
F022B	OFF	ON
F022C	OFF	ON
F022D	OFF	ON
F028A	OFF	ON
F028B	OFF	ON
F028C	OFF	ON
F028D	OFF	ON

PANEL C80

POWER	214	APRM	LEVEL	-108"
CNS P1A	CP	FWS P1A	OP	
CNS P1B	SS	FWS P1B	SS	
CNS P1C	SS	FWS P1C	SS	

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

DRYWELL	Press	3.8	Temp	295°
GTMT	Press	1.2	Temp	106°
SPR PL	Press		Temp	196°

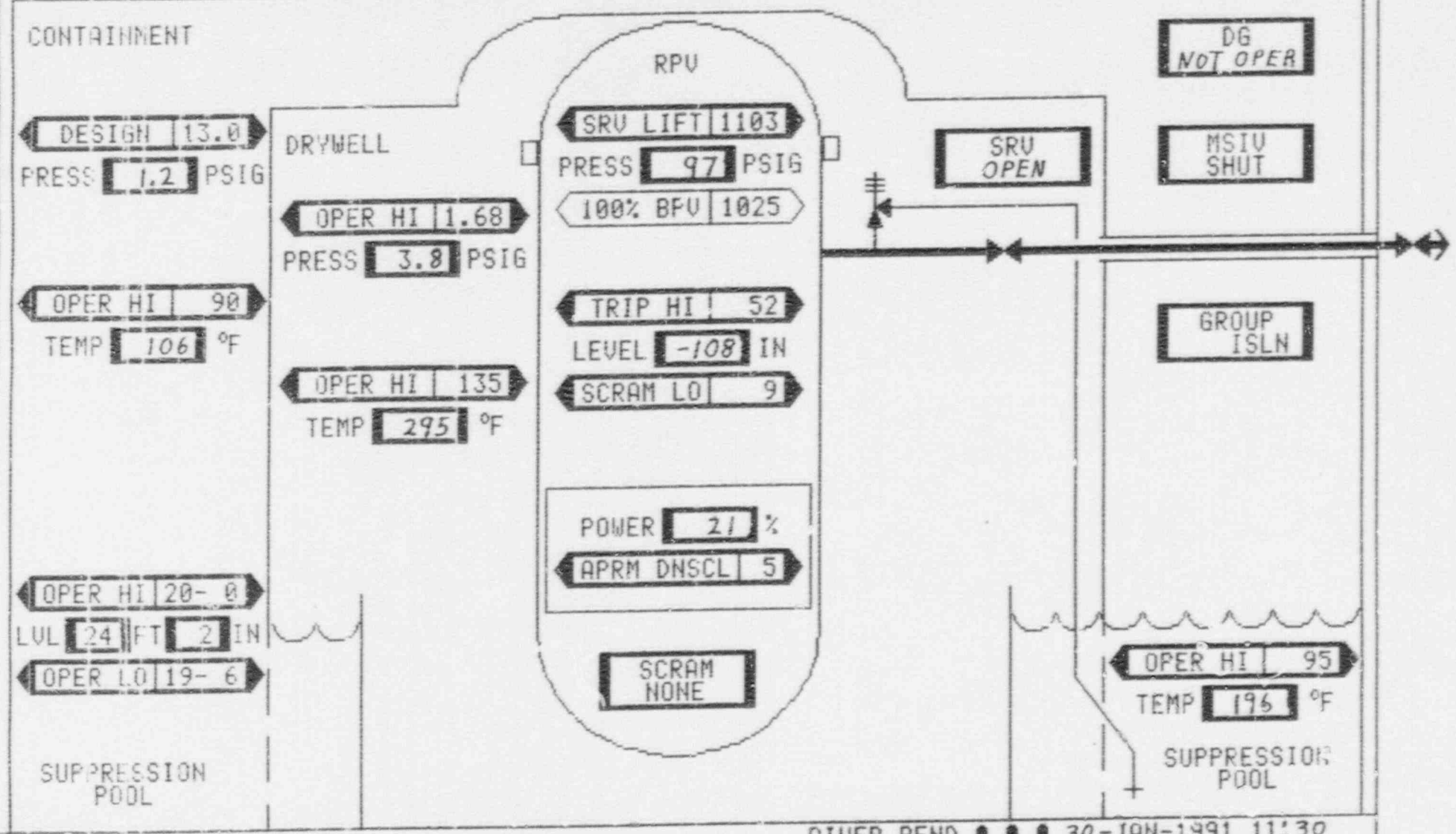
PANEL 870/60\*

SWP P2A	OP	SWP P2C	OP
SWP P2B	OP	SWP P2D	OP

PANEL 863

SGTS A	OP	SGTS B	SS
D/W COOLERS	OPERATING	ISOL	A
CTMT COOLERS	OPERATING		

011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

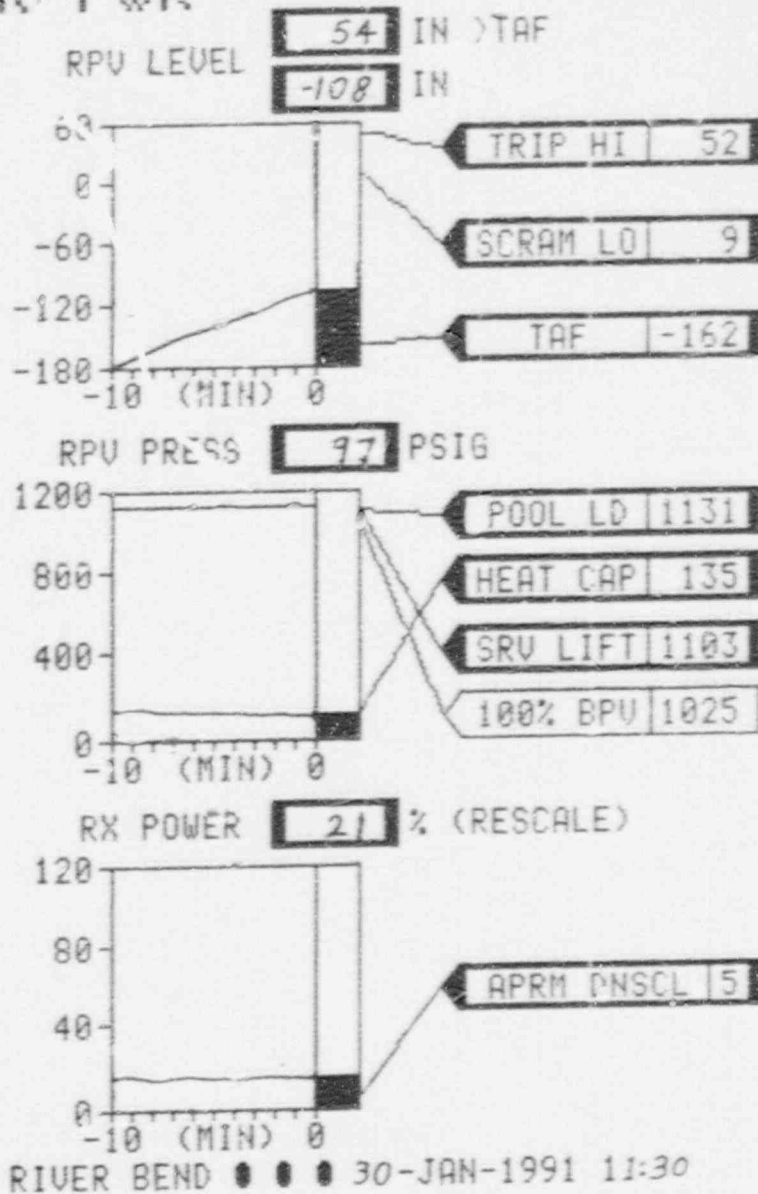


013

## RPV CONTROL--WR/PWR

CNTMT ALARM

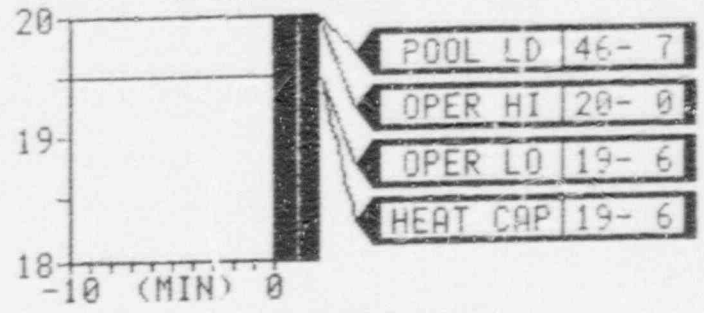
CHDS/FW	WATER NA	RPV PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LFCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RWCL	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V.PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

DG  
NOT OPERSRV  
OPENMSIV  
SHUTGROUP  
ISLNSCRAM  
NONE

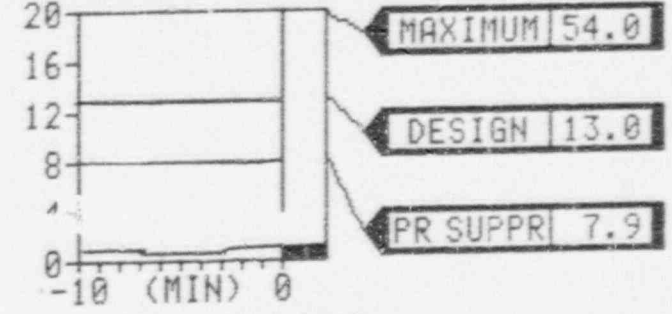
# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	SRV OPEN
CNTMT COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	GROUP ISLN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN	

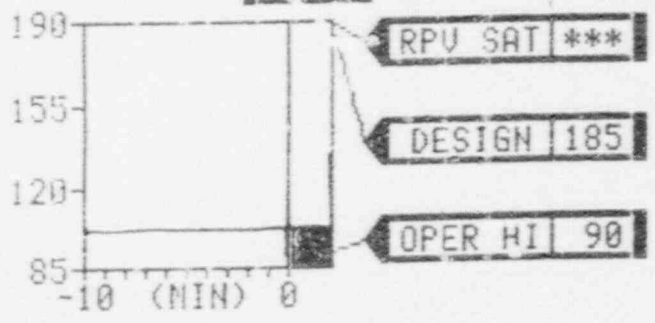
POOL LEVEL 24 FT 2 IN (RESCALE)



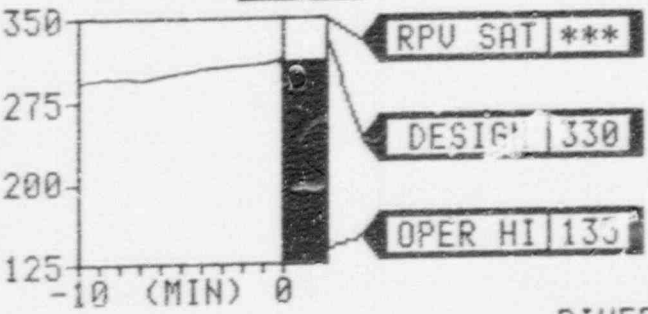
CNTMT PRESS 1.2 PSIG



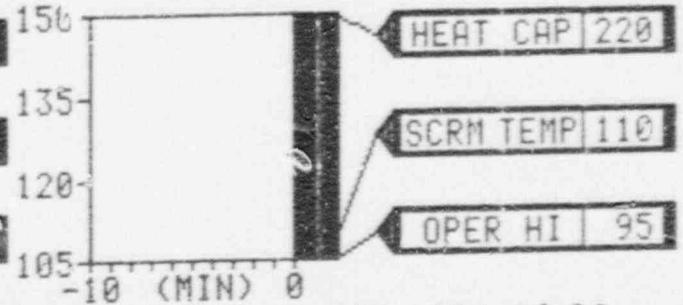
CNTMT TEMP 106 °F



DW TEMP 295 °F



POOL TEMP 196 °F



RIVER BEND 30-JAN-1991 11:30

1991 PRACTICE EXERCISE

Message Number: 15Clock Time = 1130Scenario Time = 03/30RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	500 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywall PAM D.W. 114' (DHRRM)	10.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	0.5 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Room Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RHR Area West A.B. 70' (ARM)	5.0 mR/hr

☐ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 15

Clock Time = 1130

Scenario Time = 03/30

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111P	Cont. Atmosphere (PART)	3.9E-03 $\mu\text{Ci}/\text{cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111G	Cont. Atmosphere (GAS)	5.1E+00 $\mu\text{Ci}/\text{cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci}/\text{cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci}/\text{cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu\text{Ci}/\text{cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci}/\text{cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci}/\text{cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci}/\text{cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci}/\text{cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu\text{Ci}/\text{sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci}/\text{cc}$	Off Gas Pre-treatment Monitor	0	mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci}/\text{cc}$	Off Gas Post-treatment Monitor	0	cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.2E-10 $\mu\text{Ci}/\text{cc}$			
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci}/\text{cc}$			

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 15.1

Clock Time = 1135

Scenario Time = 03/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

RX FW PUMPS LOW SUCTION PRESSURE - P680-03A/B03  
CNDS DMNHLZER BYPASS V NOT FULLY CLSD-P680-02A/E02

Indications in Control Room include:

Feedwater flow drops to zero.

Condensate recirculation valve, 1CNM-FV114, indicates full open.

Condensate bypass valve, 1CNM-FV112, indicates full open.



1991 PRACTICE EXERCISE

Message Number = 15.1

Clock Time = 1135

Scenario Time = 03/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Due to an air line break in the vicinity of the condensate demineralizer bypass valve controller, instrument air pressure is lost to the Condensate System air operated valves. The valves go to their failed position, which causes all condensate flow to be directed back to the condenser hotwell. See Supplemental Scenario No. 6 for the major valves affected by the loss of air and the subsequent flowpath setup by that loss.

This results in a low suction pressure trip of the feedwater pumps. The feedwater pumps are now unavailable to be used for reactor level control.

Expected Actions:

Equipment operators should be directed to investigate the problem associated with the Condensate System, and recover condensate flow to the suction of the feedwater pumps per AOP-0008, Loss of Instrument Air.

1991 PRACTICE EXERCISE  
 Message Number - 15.1

Clock Time - 1135  
 Scenario Time - 03/35

RIVER BEHD STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	RHR B	RHR C	LPCS	RCIC	HPCS	CRD A	CRD B	SLC A	SLC B	RPV	DIV I	DIV II	DIV III
Status	SPC	SPC	SS	OOS	SS	OP	AV	OOS	OFF	Press	DIESEL	DIESEL	DIESEL
Flow	5200	5200	0	0	0	75	0	0	0	Level	SS	SS	SS
										Range			
										FZR			

PANEL 680

SRV	F041A	F041B	F041C	F041D	F041F	F041G	F041L	F047A	F047B	F047C	F047D	F047F	F051B	F051C	F051D	F051G
RED	OFF	ON	ON	ON	ON	OFF	OFF	ON	OFF	ON	OFF	OFF	ON	ON	ON	ON
GRN	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	OFF	ON	ON	ON	ON	ON	OFF
AC, MN	OFF	ON	ON	ON	ON	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON

PANEL 608

POWER	21s APPM	LEVEL
CNS P1A	OP	FWS P1A OOS
CNS P1B	SS	FWS P1B SS
CNS P1C	SS	FWS P1C SS

Total Feedwater Flow 0 Mlbs./hr

PANEL 601

DRYWELL	CTMT	SPR PL
Press	3.8	Temp
	1.2	295°
		106°
		196°
		Level
		24.2"

PANEL 870/601

SWP P2A	SWP P2B	SWP P2C	SWP P2D
OP	OP	OP	OP

PANEL 863

SGTS A	SGTS B	D/W COOLERS OPERATING	GMT COOLERS OPERATING
OP	SS	ISOL	A

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE  
 SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

# 011 RPU ALARM CRITICAL PLANT VARIABLES

CNTMT ALARM

CONTAINMENT

DESIGN 14.4  
PRESS 1.2 PSIG

DRYWELL

OPER HI 1.68  
PRESS 3.8 PSIG

OPER HI 90  
TEMP 106 °F

OPER HI 135  
TEMP 295 °F

OPER HI 20-0  
LVL 24 FT 2" IN  
OPER LO 19-6

SUPPRESSION  
POOL

RPU

SRV LIFT 1103  
PRESS 95 PSIG

100% BPU 1025

TRIP HI 52  
LEVEL -139 IN

SCRAM LO 9

POWER 21 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

MSIU  
SHUT

SRV  
OPEN

GROUP  
ISOL

OPER HI 95  
TEMP 196 °F

SUPPRESSION  
POOL

013

# RPV CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER NA	RPV PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RWCL	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U.PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

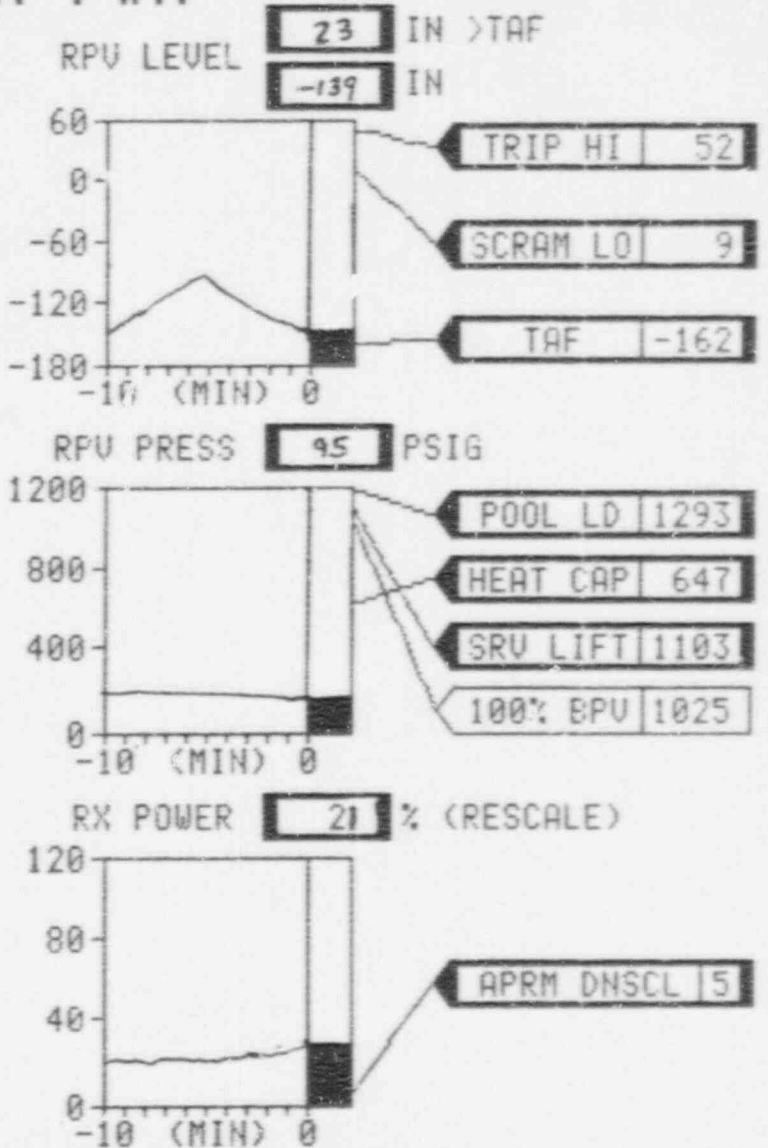
DG  
NOT OPER

SRU  
OPEN

MSIU  
SHUT

GROUP  
ISOL

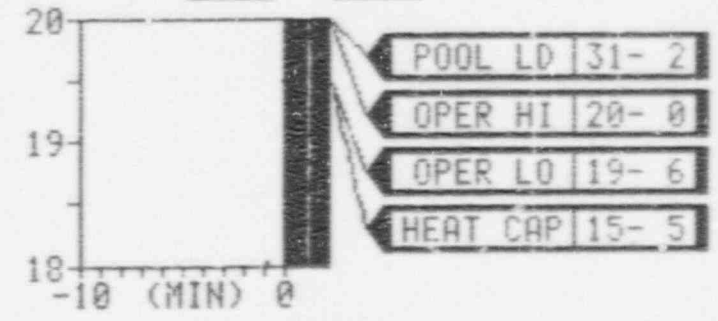
SCRAM  
NONE



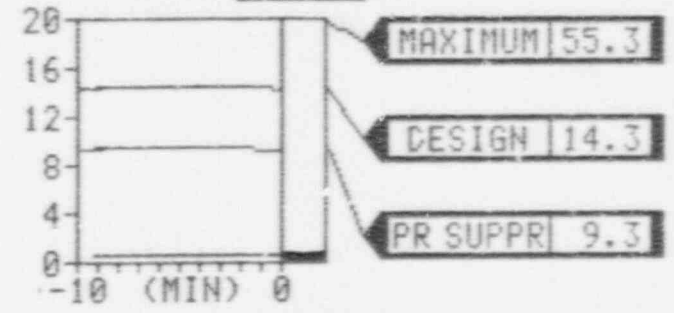
# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	DG NOT OPER  SRU OPEN  GROUP ISOL  SCRAM NONE
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	
CNTMT COOLING	COOLING AVAILABLE	POWER AVAIL	FAN ON	
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN	

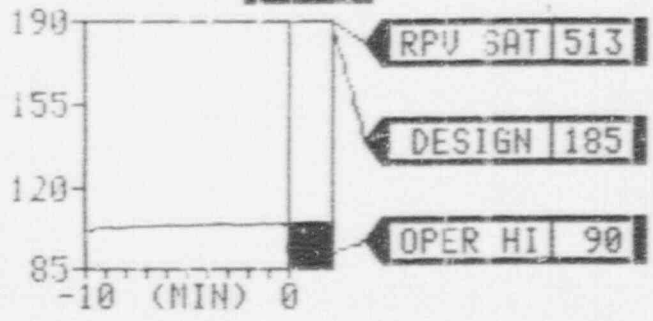
POOL LEVEL **24** FT **2** IN (RESCALE)



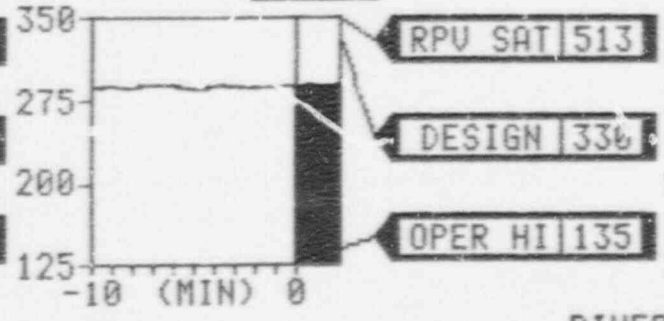
CNTMT PRESS **1.2** PSIG



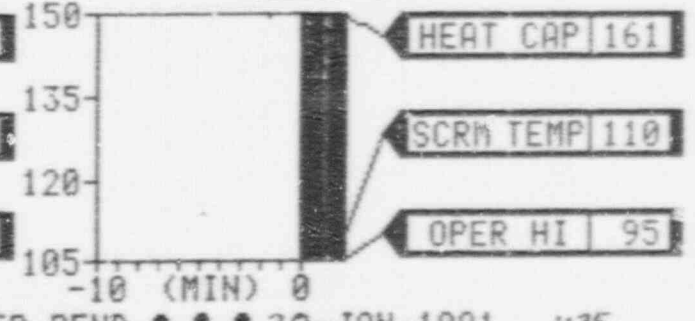
CNTMT TEMP **106** °F



DW TEMP **295** °F



POOL TEMP **196** °F



1991 PRACTICE EXERCISE  
Message Number = 16

Clock Time = 1145  
Scenario Time = 03/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

HPCS INJECTION VALVE E22-F004 MANUAL OVERRIDE - P601-16A/F02

Indications in Control Room include:

HPCS pump control switch on panel P601-16B is placed in the START position, green light is lit.

HPCS injection valve, E22\*F004, is opened from control room panel P601-16B.

HPCS flowmeter, E22\*R603, indicates continuously increasing flow.

1991 PRACTICE EXERCISE

Message Number = 16

Clock Time = 1145

Scenario Time = 03/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

With instrument air to condensate system valves lost, condensate flow is directed back to the condenser hotwell. The feedwater pumps cannot be started to recover level because of low suction pressure. Reactor level continues to decrease quickly since approximately 20% power is still being produced.

Operators start the HPCS pump and attempt to throttle flow with injection valve E22\*F004; however, MOV torque/limit switches are out of calibration, and valve E22\*F004 goes to its full open position. Once the valve is opened, it can then be throttled shut as necessary for level control.

As cold water is sprayed onto the core, a significant power spike occurs immediately followed by a pressure surge. This results in a localized overpower condition with substantial fuel cladding damage.

The resultant vibration and pressure shocks cause severe internal mechanical damage to RHR loop 'C' testable check valve E12\*F041C located in the drywell. A subsequent pipe rupture, and guard pipe

Controller Information: (Continued)

bellows failure occurs in the RHR loop 'C' line between testable check valve E12\*F041C and LPCI injection isolation valve E12\*F042C, allowing steam and fission products to blow directly into the primary containment.

Expected Actions:

Operators concentrate on reestablishing reactor level by initiating HPCS and attempting to regain level control.

Operators continue to shift valves to recover condensate flow to the suction of the feedwater pumps.

Monitor containment parameters, and discuss possible entry conditions to a General Emergency.

Continue to follow steps of EOP-1A and EOP-2.

Continue efforts to restore SLC pump 'B'.

1991 PRACTICE EXERCISE  
 Message Number - 16

Clock Time - 1145  
 Scenario Time - 03/45

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

<u>PANEL 601/877</u>				<u>PANEL 601</u>			<u>PANEL 680</u>			
	<u>Status</u>	<u>Press</u>	<u>Flow</u>	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AG, MN</u>	<u>POWER</u>	<u>APRM</u>	<u>LEVEL</u>
RHR A	<u>SPC</u>		<u>5200</u>	F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>34%</u>		<u>-168"</u>
RHR B	<u>SPC</u>		<u>5200</u>	F041B	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1A	<u>OP</u>	FWS P1A <u>00S</u>
RHR C	<u>SS</u>		<u>0</u>	F041C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1B	<u>SS</u>	FWS P1B <u>00S</u>
LPCS	<u>SS</u>		<u>0</u>	F041D	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1C	<u>SS</u>	FWS P1C <u>00S</u>
				F041F	<u>ON</u>	<u>OFF</u>	<u>ON</u>	Total Feedwater Flow <u>0</u> Mlbs./hr		
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>	F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 808</u>		
HPCS	<u>OP</u>	<u>945</u>	<u>2750</u>	F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>Press</u>	<u>Temp</u>	<u>Level</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>	F047A	<u>ON</u>	<u>OFF</u>	<u>ON</u>	DRYWELL	<u>3.8</u>	<u>295°</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>	F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CTMT	<u>4.7</u>	<u>119°</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>	F047C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	SPR PL		<u>196°</u> <u>24'2"</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>1930</u>	F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 870/601</u>		
SLC B	<u>OFF</u>	<u>0</u>		F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2A	<u>OP</u>	SWP P2C <u>OP</u>
	<u>Press</u>	<u>Level</u>	<u>Range</u>	F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2B	<u>OP</u>	SWP P2D <u>OP</u>
RPV	<u>639</u>	<u>-168"</u>	<u>FZR</u>	F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 863</u>		
DIV I	<u>DIESEL</u>	<u>SS</u>		F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SGTS A	<u>OP</u>	SGTS B <u>SS</u>
DIV II	<u>DIESEL</u>	<u>SS</u>		F051G	<u>ON</u>	<u>OFF</u>	<u>ON</u>	D/W COOLERS OPERATING		<u>ISOL</u>
DIV III	<u>DIESEL</u>	<u>SS</u>		MSIV	<u>RED</u>	<u>GRN</u>		CTMT COOLERS OPERATING		<u>A</u>
				F022A	<u>OFF</u>	<u>ON</u>				
				F022B	<u>OFF</u>	<u>ON</u>				
				F022C	<u>OFF</u>	<u>ON</u>				
				F022D	<u>OFF</u>	<u>ON</u>				
				F028A	<u>OFF</u>	<u>ON</u>				
				F028B	<u>OFF</u>	<u>ON</u>				
				F028C	<u>OFF</u>	<u>ON</u>				
				F028D	<u>OFF</u>	<u>ON</u>				

OP-OPERATING SR-STANDBY READY  
 OOS-OUT OF SERVICE SS-SECURED STATUS  
 AV-AVAILABLE ISOL-ISOLATED



011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

CONTAINMENT

DESIGN 13.9  
PRESS 4.7 PSIG

OPER HI 90  
TEMP 119 °F

OPER HI 20-0  
LVL 24 FT 2 IN

OPER LO 19-6

SUPPRESSION  
POOL

DRYWELL

OPER HI 1.68  
PRESS 3.8 PSIG

OPER HI 135  
TEMP 295 °F

RPU

SRV LIFT 1103  
PRESS 6.39 PSIG

100% BPU 1025

TRIP HI 52  
LEVEL -168 IN

SCRAM LO 9

POWER 34 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

MSIU  
SHUT

SRV  
OPEN

GROUP  
ISOL

OPER HI 95  
TEMP 196 °F

SUPPRESSION  
POOL

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER NA	RPU PR HI	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP RUN
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
PWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

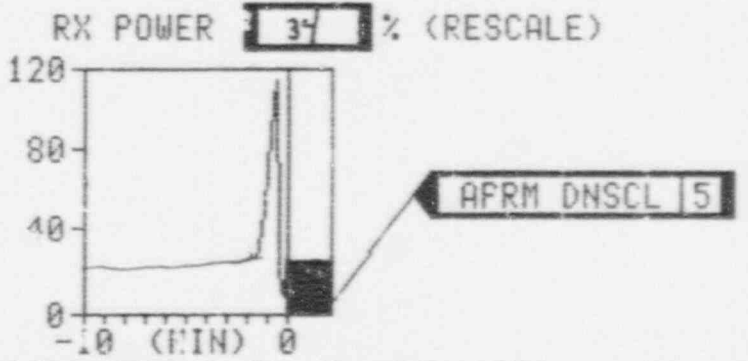
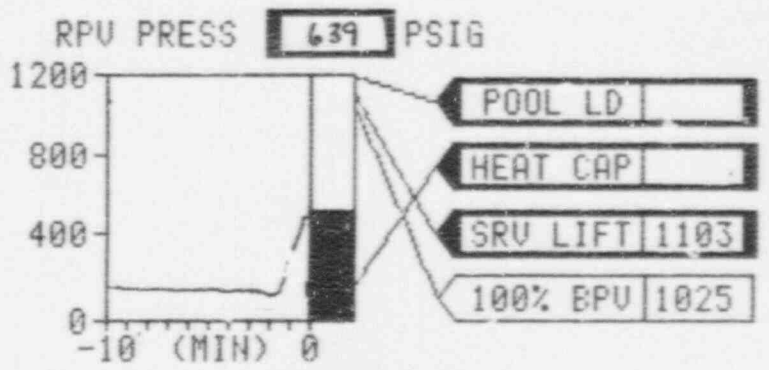
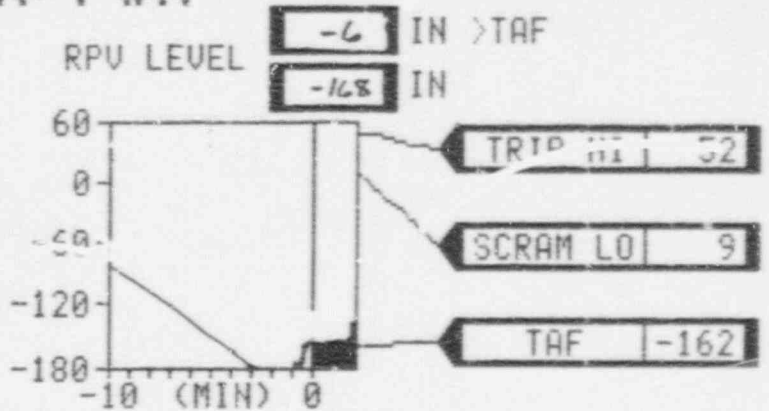
DG  
NOT OPER

SRV  
OPEN

MSIV  
SHUT

GROUP  
ISOL

SCRAM  
NONE



# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

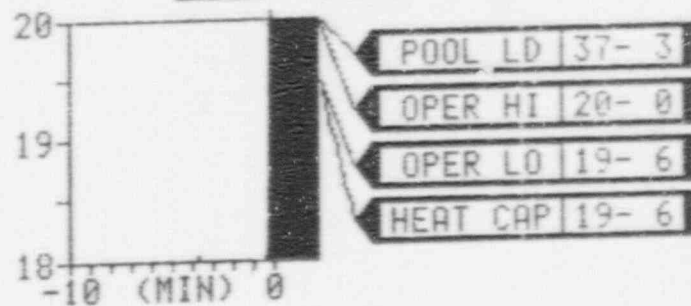
DG  
Not OPER

SRU  
OPEN

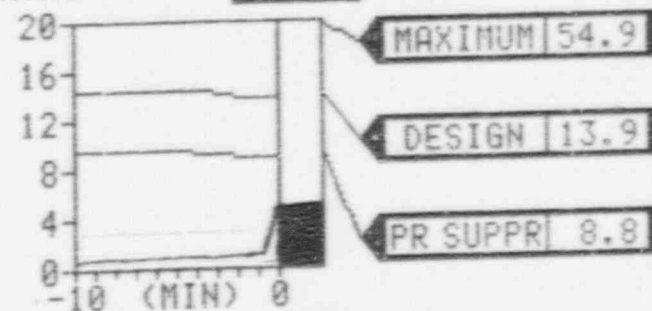
GROUP  
ISLN

SCRAM  
NONE

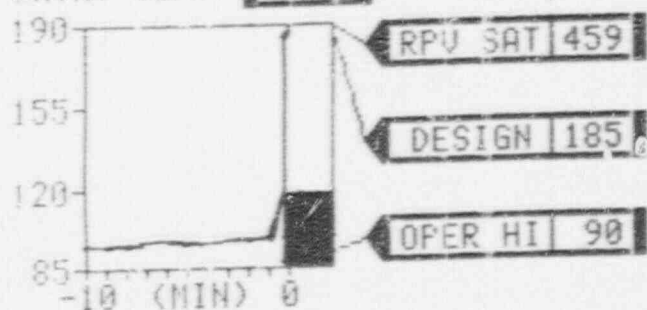
POOL LEVEL 24 FT 2 IN (RESCALE)



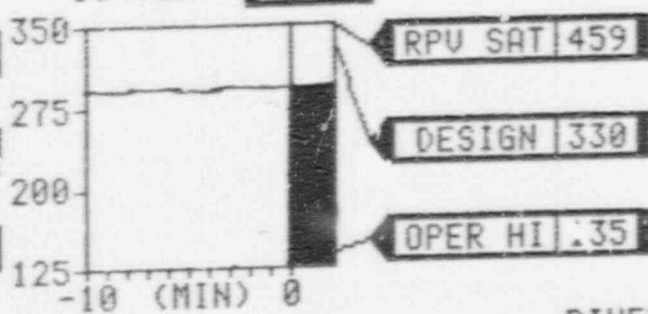
CNTMT PRESS 4.7 PSIG



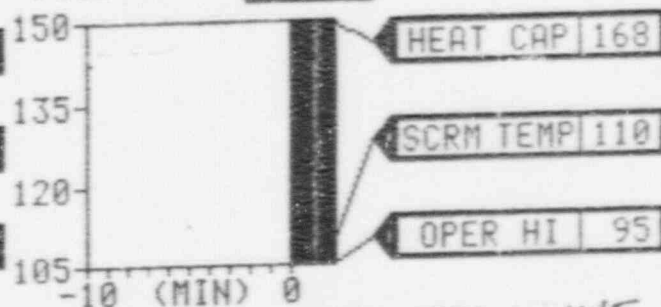
CNTMT TEMP 119 °F



DW TEMP 295 °F



POOL TEMP 196 °F



RIVER BEND 30-JAN-1991 1145

1991 PRACTICE EXERCISE

Message Number: 16Clock Time = 1145Scenario Time = 03/45RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	7.5E3 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	300 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	100 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	300 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	7.5E6 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	300 mR/hr
RE-139	Annul. Near Trans. Tube 14' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	300 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	75 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	75 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	75 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	75 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	75 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	75 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	300 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	300 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	300 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	75 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	75 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARM's are "as read"

1997 PRACTICE EXERCISE

Message Number: 16

Clock Time = 1145  
 Scenario Time = 03/45

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111P	Cont. Atmosphere (PART)	2.4E+01 $\mu\text{Ci}/\text{cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111G	Cont. Atmosphere (GAS)	2.9E+02 $\mu\text{Ci}/\text{cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci}/\text{cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci}/\text{cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu\text{Ci}/\text{cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci}/\text{cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci}/\text{cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci}/\text{cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci}/\text{cc}$	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu\text{Ci}/\text{sec}$	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu\text{Ci}/\text{cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci}/\text{cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci}/\text{cc}$			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci}/\text{cc}$	Off Gas Pre-treatment Monitor	0	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci}/\text{cc}$	Off Gas Post-treatment Monitor	0	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr

 - Indicates Alarming

OSH - Indicates On-scale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 16.1

Clock Time = 1150

Scenario Time = 03/50

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 16.1

Clock Time = 1150

Scenario Time = 03/50

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Level has been restored to -100 and the HPCS injection valve E22\*F004 is closed.

Containment pressure is increasing rapidly since most of the steam blowdown is going directly into containment rather than through the SRV's into the Suppression Pool.

Reactor power is approximately 30% and is slowly decreasing along with reactor pressure. Reactor level is recovered and being maintained between -100" and -193".

Expected Actions:

Continue to monitor containment parameters and attempt to determine where the pipe break occurred.

Continue efforts to restore condensate flow to the feedwater pumps.

Continue efforts to restore SLC pump 'B'.

Continue to insert control rods.

1991 PRACTICE EXERCISE  
 Message Number - 16.1

Clock Time - 1150  
 Scenario Time - 03/50

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	Status	SPC	Press	Flow	SRV	RED	GRN	AC.MN
RHR B	SPC		5200	F041A	OFF	ON	OFF	
RHR C	SS		5200	F041B	ON	OFF	ON	
LPCS	SS		0	F041C	ON	OFF	ON	
			0	F041D	ON	OFF	ON	
			0	F041F	ON	OFF	ON	
KCIC	OOS	0	0	F041G	OFF	ON	OFF	
HPCS	SS	0	0	F041L	OFF	ON	OFF	
GRD A	OP	1900	75	F047A	ON	OFF	ON	
GRD B	AV	0	0	F047B	OFF	ON	OFF	
				F047C	ON	OFF	ON	
				F047D	OFF	ON	OFF	
				F047F	OFF	ON	OFF	
SLC A	OOS	0	Level	F051B	OFF	ON	OFF	
SLC B	OFF	0	1930	F051C	OFF	ON	OFF	
				F051D	OFF	ON	OFF	
				F051G	ON	OFF	ON	
RPV	Press	581	Range	MSIV	RED	GRN		
	Level	-100"	FZR	F022A	OFF	ON		
DIV I	DIESEL	SS		F022B	OFF	ON		
DIV II	DIESEL	SS		F022C	OFF	ON		
DIV III	DIESEL	SS		F022D	OFF	ON		

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

SRV	RED	GRN	AC.MN
F041A	OFF	ON	OFF
F041B	ON	OFF	ON
F041C	ON	OFF	ON
F041D	ON	OFF	ON
F041F	ON	OFF	ON
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	ON	OFF	ON
F047B	OFF	ON	OFF
F047C	ON	OFF	ON
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	ON	OFF	ON
MSIV	RED	GRN	
F022A	OFF	ON	
F022B	OFF	ON	
F022C	OFF	ON	
F022D	OFF	ON	
F028A	OFF	ON	
F028B	OFF	ON	
F028C	OFF	ON	
F028D	OFF	ON	

PANEL 680

POWER	32% APRM	LEVEL	-100"
CNS P1A	OP	FWS P1A	OOS
CNS P1B	SS	FWS P1B	OOS
CNS P1C	SS	FWS P1C	OOS

Total Feedwater Flow 0 Mlbs./hr

PANEL 808

DRYWEL.	Press	Temp	Level
3.9	3.9	295°	
CTMT	11.6	148°	
SPR PL		205°	24.3"

PANEL 870/601

SWP P2A	OP	SWP P2C	OP
SWP P2B	OP	SWP P2D	OP

PANEL 862

SGTS A	OP	SGTS B	SS
D/C COOLERS	OPERATING	ISOL	
CTMT COOLERS	OPERATING	A	



# 011 CRITICAL PLANT VARIABLES

CNTMT ALARM

CONTAINMENT

DESIGN PRESS 14.7 PSIG  
11.6 PSIG

OPER HI 90 °F  
148 °F

OPER HI 20-0  
LVL 24 FT 3 IN  
OPER LO 19-6

SUPPRESSION POOL

DRYWELL

OPER HI 1.68  
PRESS 3.9 PSIG

OPER HI 135  
TEMP 295 °F

RPU

SRU LIFT 1103  
PRESS 58 PSIG  
100% BPV 1025

TRIP HI 52  
LEVEL -100 IN  
SCRAM LO 9

POWER 32 %  
APRM DNSCL 5

SCRAM NONE

DG NOT OPER

MSIV SHUT

GROUP ISOL

SRU OPEN

OPER HI 95  
TEMP 205 °F

SUPPRESSION POOL

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER NA	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL		POWER AVAIL	PUMP OFF
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE		V. PWR NA	VALVE LN-UP
SLC	LIQUID AVAILABLE		POWER NA	PUMP OFF

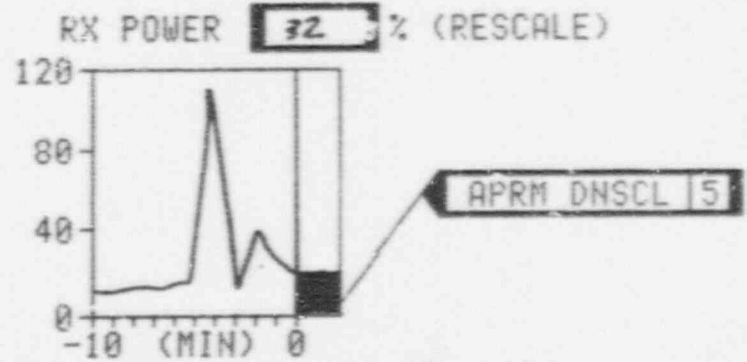
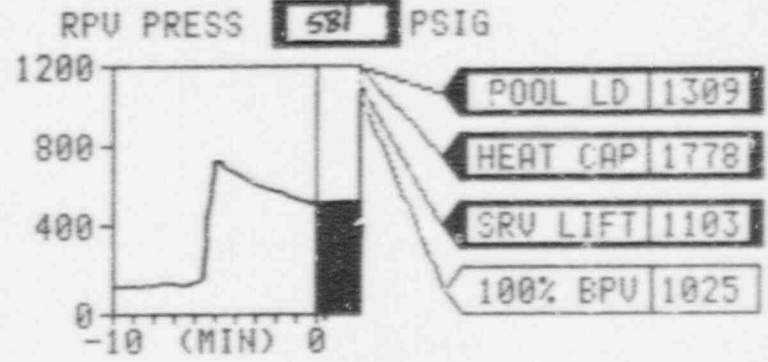
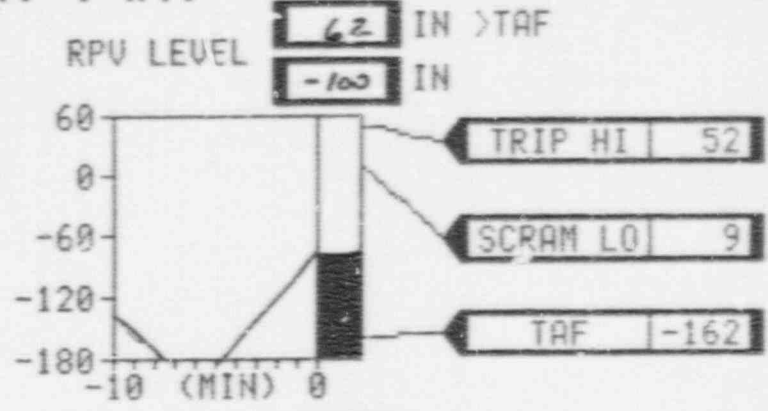
DG  
NOT OPER

SRV  
OPEN

MSIU  
SHUT

GROUP  
ISOL

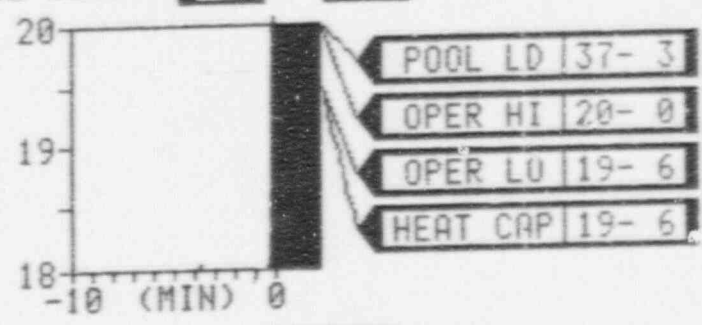
SCRAM  
NONE



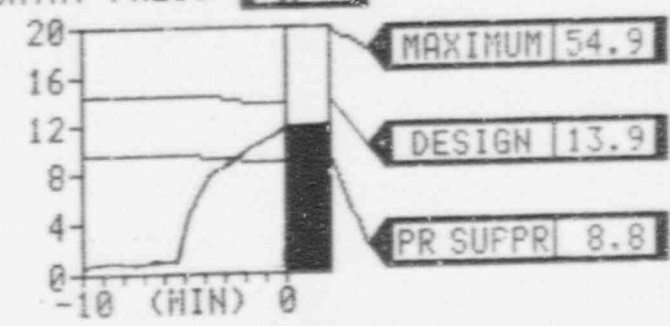
# 027 R-V ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	SRU OPEN
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN	GROUP ISLN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN	

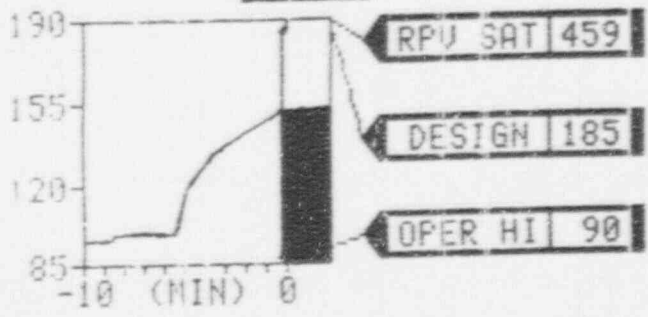
POOL LEVEL **24** FT **3** IN (RESCALE)



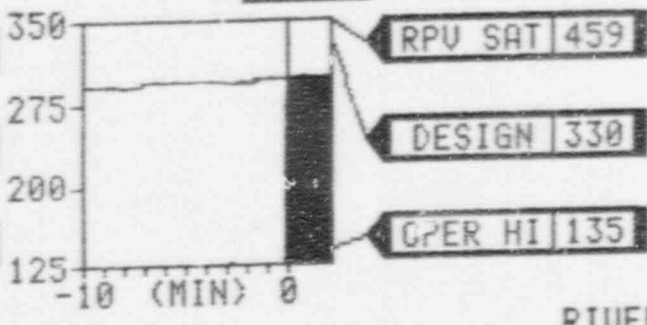
CNTMT PRESS **11.6** PSIG



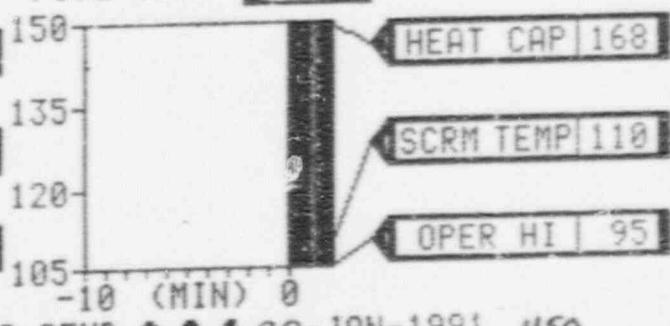
CNTMT TEMP **148** °F



DW TEMP **295** °F



POOL TEMP **205** °F



RIVER BEND 30-JAN-1991 1150

1991 PRACTICE EXERCISE

Message Number = 16.2

Clock Time = 1155

Scenario Time = 03/55

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE  
Message Number = 16.2

Clock Time = 1155  
Scenario Time = 03/55

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Feedwater is again available for use in maintaining reactor level in the range of -100" to -193" per EOP-1A. The instrument air fault has been isolated and condensate system valves are lined up to provide flow to the feedwater pumps. See Supplemental Scenario No. 6.

Containment pressure is still increasing, but appears to be leveling off, and containment temperature also appears to be stabilizing.

Expected Actions:

Operators use feedwater to control reactor level between -100" and -193" per EOP-1A.

Continue to monitor containment parameters, and follow associated steps of EOP-1A and EOP-2.

Continue efforts to restore SLC pump 'B'.

1991 PRACTICE EXERCISE  
 Message Number 16.2

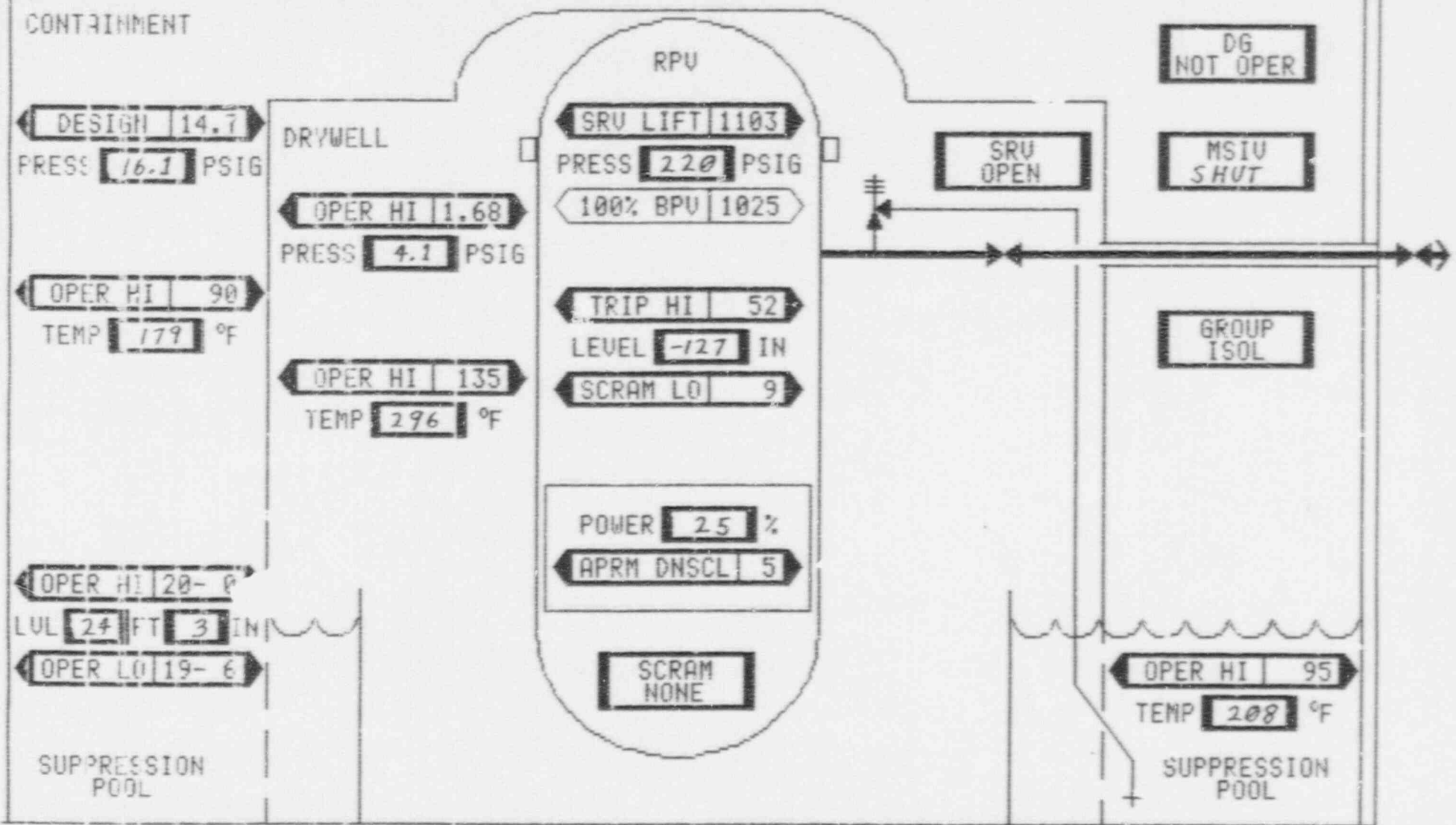
Clock Time - 1155  
 Scenario Time - 03/55

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

<u>PANEL 601/877</u>				<u>PANEL 601</u>			<u>PANEL 680</u>	
	<u>Status</u>	<u>Press</u>	<u>Flow</u>	SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>	
RHR A	<u>SPC</u>		<u>5200</u>	F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	POWER <u>25% APRM</u> LEVEL <u>-127"</u>
RHR B	<u>SPC</u>		<u>5200</u>	F041B	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1A <u>OP</u> FWS P1A <u>AV</u>
RHR C	<u>SS</u>		<u>0</u>	F041C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1B <u>SS</u> FWS P1B <u>SS</u>
LPCS	<u>SS</u>		<u>0</u>	F041D	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1C <u>SS</u> FWS P1C <u>SS</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>	F041E	<u>ON</u>	<u>OFF</u>	<u>ON</u>	Total Feedwater Flow <u>0.0</u> Mlbs./hr
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>	F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>	F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>	F047A	<u>ON</u>	<u>OFF</u>	<u>ON</u>	
	<u>Squib</u>	<u>Press</u>	<u>Level</u>	F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
SLC A	<u>OOS</u>	<u>0</u>	<u>1930</u>	F047C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>PANEL 808</u>
SLC B	<u>OFF</u>	<u>0</u>		F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
				F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>Press</u> <u>Temp</u> <u>Level</u>
	<u>Press</u>	<u>Level</u>	<u>Range</u>	F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	DRYWELL <u>4.1</u> <u>296°</u>
RPV	<u>220</u>	<u>-127"</u>	<u>FZR</u>	F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CMT <u>16.1</u> <u>179°</u>
DIV I	<u>DIESEL</u>	<u>SS</u>		F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SPR PL <u>208°</u> <u>24'3"</u>
DIV II	<u>DIESEL</u>	<u>SS</u>		F051G	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>PANEL 870/601</u>
DIV III	<u>DIESEL</u>	<u>SS</u>		MSIV	<u>PED</u>	<u>GRN</u>		SWP P2A <u>OP</u> SWP P2C <u>OP</u>
				F022A	<u>OFF</u>	<u>ON</u>		SWP P2B <u>OP</u> SWP P2D <u>OP</u>
				F022B	<u>OFF</u>	<u>ON</u>		<u>PANEL 863</u>
				F022C	<u>OFF</u>	<u>ON</u>		
				F022D	<u>OFF</u>	<u>ON</u>		
				F028A	<u>OFF</u>	<u>ON</u>		
				F028B	<u>OFF</u>	<u>ON</u>		SGTS A <u>OP</u> SGTS B <u>SS</u>
				F028C	<u>OFF</u>	<u>ON</u>		D/W COOLERS OPERATING <u>ISOL</u>
				F028D	<u>OFF</u>	<u>ON</u>		CMT COOLERS OPERATING <u>A</u>

OP=OPERATING SR=STANDBY READY  
 OOS=OUT OF SERVICE SS=SECURED STATUS  
 AV=AVAILABLE ISOL=ISOLATED

011 [RPV ALARM] CRITICAL PLANT VARIABLES [CNTMT ALARM]



013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

RCIC

WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
-------------	-----------	----------	----------

HPCE

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCE

WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCI

WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

SHTDN COOLING

CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RWCU

COOLING NOT AVAIL	POWER AVAIL	PUMP OFF
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TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
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TURBINE BYPASSES

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
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MSL DRAINS

COOLING AVAILABLE	V. PWR NA	VALVE LN-UP
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SLC

LIQUID AVAILABLE	POWER NA	PUMP OFF
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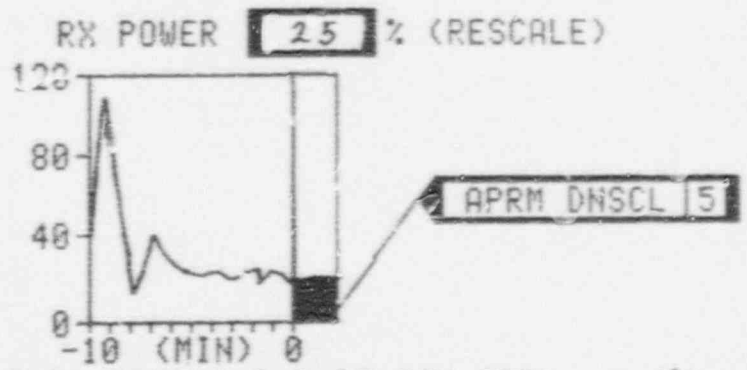
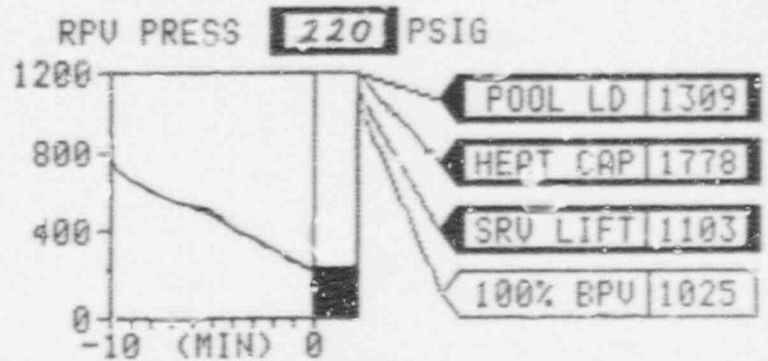
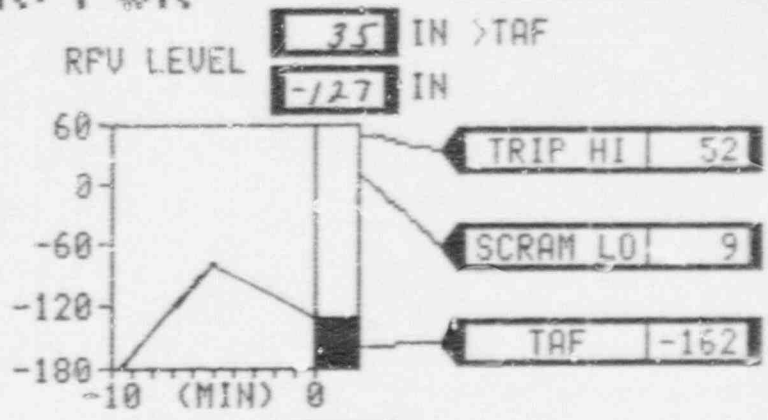
DC NOT OPER

SRV OPEN

MSIU SHUT

GROUP ISOL

SCRAM NONE



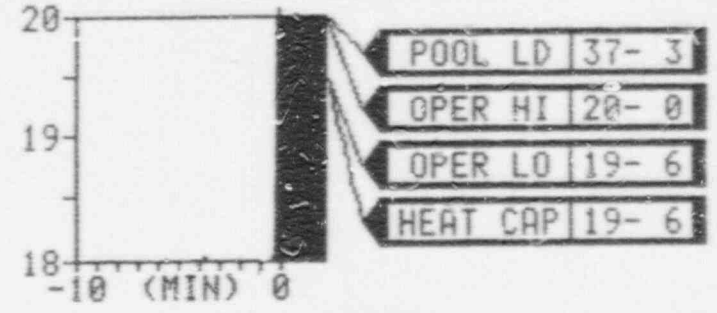
RIVER BEND ●●● 30-JAN-1991 11:55



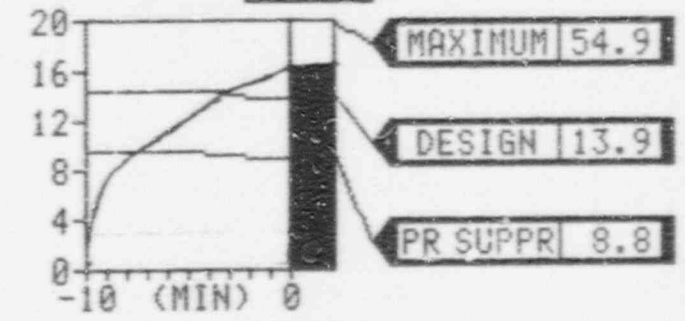
# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	SRU OPEN
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN	GROUP ISLN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN	

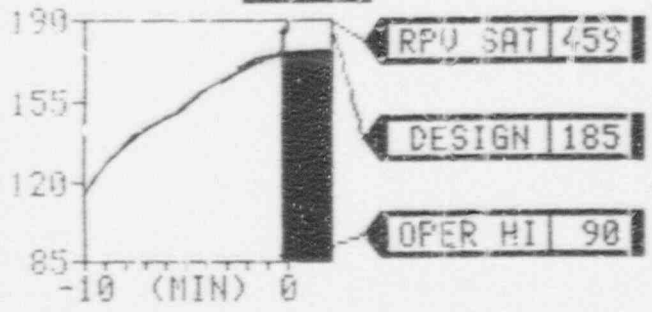
POOL LEVEL **24** FT **3** IN (RESCALE)



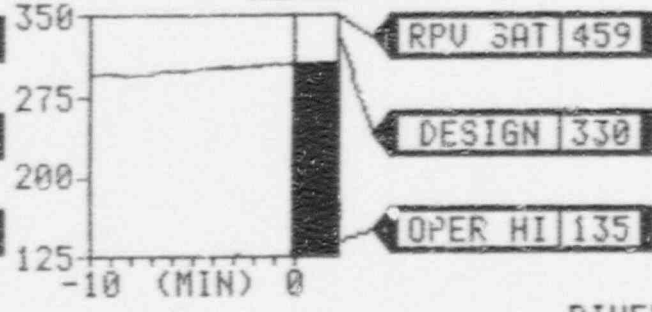
CNTMT PRESS **16.1** PSIG



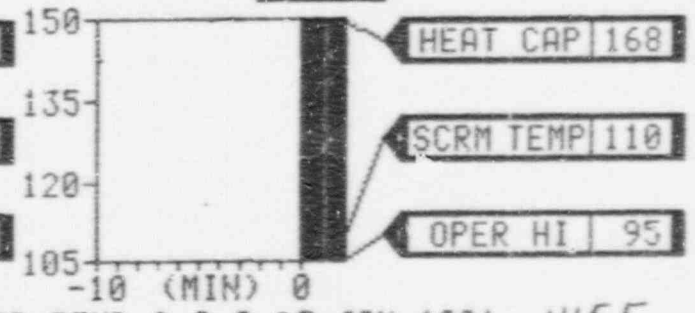
CNTMT TEMP **179** °F



DW TEMP **296** °F



POOL TEMP **208** °F



RIVER BEND ●●● 30-JAN-1991 11:55

1991 PRACTICE EXERCISE  
Message Number = 17

Clock Time = 1200  
Scenario Time = 04/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

DIV I RX BLDG CO/TMT PAM AREA RADN ALARM - P863-71A/B06  
DIV II RX BLDG CONTMT PAM AREA RADN ALARM - P863-71A/F06

Indications in Control Room include:

As shown on attached DRMS data sheets.

1991 PRACTICE EXERCISE  
Message Number = 17

Clock Time = 1200  
Scenario Time = 04/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Radiation monitors 1RMS\*RE16A/B have increased to the Alert setpoint due to the pipe break in containment allowing fission products to blow directly into primary containment.

Containment pressure has leveled off at about 19 psig, and blowdown into containment has decreased in volume since reactor power and pressure levels have decreased to approximately the same values when the power transient occurred.

The Emergency Director may choose to declare a General Emergency at this time.

Expected Actions:

Continue to follow steps of EOP-1A and EOP-2.

Trend containment radiation levels.

Monitor containment pressure and temperature closely.

At this time, a GENERAL EMERGENCY may be declared in accordance with EIP-2-001, GE EAL 2, Initiating Condition 5, "Other Indications of Loss of Two of the Following With Potential Loss of the Third: Fuel Cladding, RCS Pressure Boundary, Containment Integrity".

If a General Emergency is declared, the Emergency Director should direct the implementation of the following procedures:

- EIP-2-005, "General Emergency"
- EIP-2-006, "Notifications"
- EIP-2-007, "Protective Action Recommendation Guidelines"
- EIP-2-012, "Radiation Exposure Controls"
- EIP-2-013, "Onsite Radiological Monitoring"
- EIP-2-014, "Offsite Radiological Monitoring"
- EIP-2-024, "Offsite Dose Calculations"

1991 PRACTICE EXERCISE  
 Message Number - 17

Clock Time - 1200  
 Scenario Time - 04/00

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SPC</u>		<u>5200</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SS</u>		<u>0</u>
LPCS	<u>SS</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>1930</u>
SLC B	<u>OFF</u>	<u>0</u>	

	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>148</u>	<u>-168"</u>	<u>FZR</u>
DIV I	<u>DIESEL</u>	<u>SS</u>	
DIV II	<u>DIESEL</u>	<u>SS</u>	
DIV III	<u>DIESEL</u>	<u>SS</u>	

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

PANEL 601

	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AC, M<sup>3</sup></u>
FG41A	<u>OFF</u>	<u>ON</u>		<u>1</u>
F041B	<u>ON</u>	<u>OFF</u>		<u>ON</u>
F041C	<u>ON</u>	<u>OFF</u>		<u>ON</u>
F041D	<u>ON</u>	<u>OFF</u>		<u>ON</u>
F041F	<u>ON</u>	<u>OFF</u>		<u>ON</u>
F041G	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F047A	<u>ON</u>	<u>OFF</u>		<u>ON</u>
F047B	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F047C	<u>ON</u>	<u>OFF</u>		<u>ON</u>
F047D	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F047F	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F051B	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F051C	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F051D	<u>OFF</u>	<u>ON</u>		<u>OFF</u>
F051G	<u>ON</u>	<u>OFF</u>		<u>ON</u>
MSIV	<u>RED</u>	<u>GRN</u>		
F022A	<u>OFF</u>	<u>ON</u>		
F022B	<u>OFF</u>	<u>ON</u>		
F022C	<u>OFF</u>	<u>ON</u>		
F022D	<u>OFF</u>	<u>ON</u>		
F028A	<u>OFF</u>	<u>ON</u>		
F028B	<u>OFF</u>	<u>ON</u>		
F028C	<u>OFF</u>	<u>ON</u>		
F028D	<u>OFF</u>	<u>ON</u>		

PANEL 680

POWER 22% APRM LEVEL -168"  
 CNS P1A OP FWS P1A OP  
 CNS P1B SS FWS P1B SS  
 CNS P1C SS FWS P1C SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>4.2</u>	<u>297°</u>	
CTMT	<u>18.7</u>	<u>207°</u>	
SPR PL		<u>210°</u>	<u>24'4"</u>

PANEL 870/601

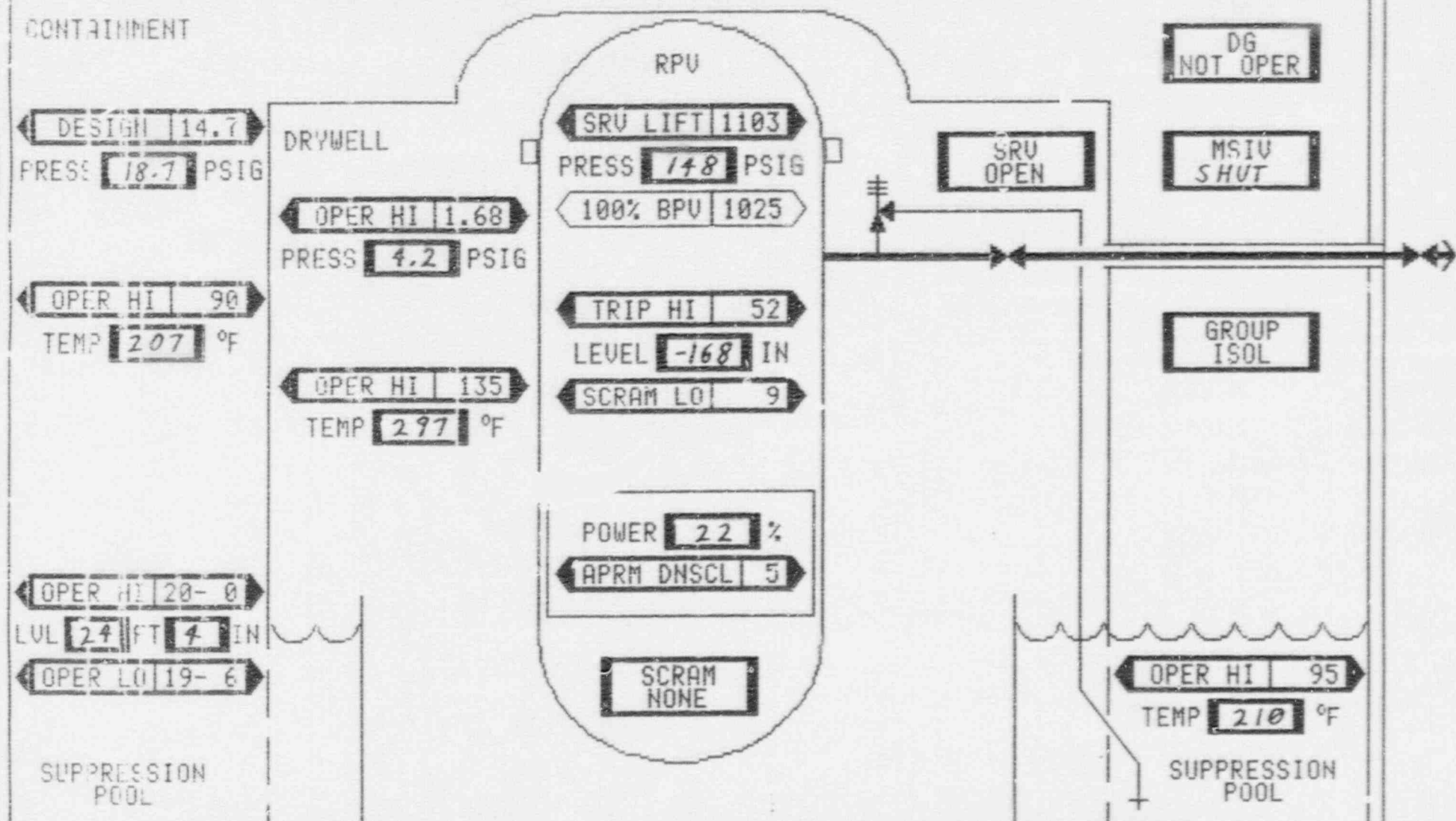
SWP P2A OP SWP P2C OP  
 SWP P2B OP SWP P2D OP

PANEL 863

SGTS A OP SGTS B SS  
 D/W COOLERS OPERATING ISOL  
 CTMT COOLERS OPERATING A

# 011 RPU ALARM CRITICAL PLANT VARIABLES

CNTMT ALARM



013

# RPV CONTROL--WR/PWR

CNTMT ALARM

CHDS/FM	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HFCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U. PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

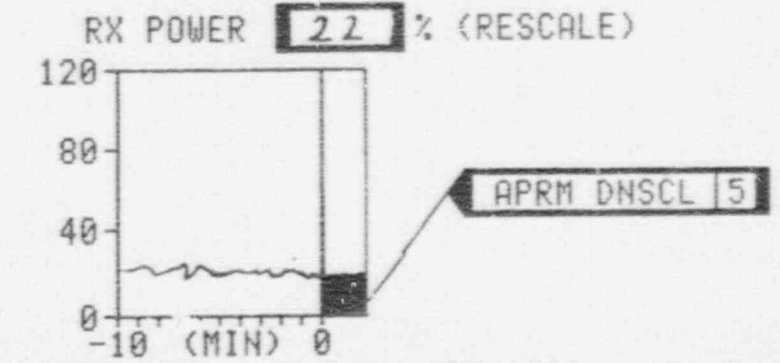
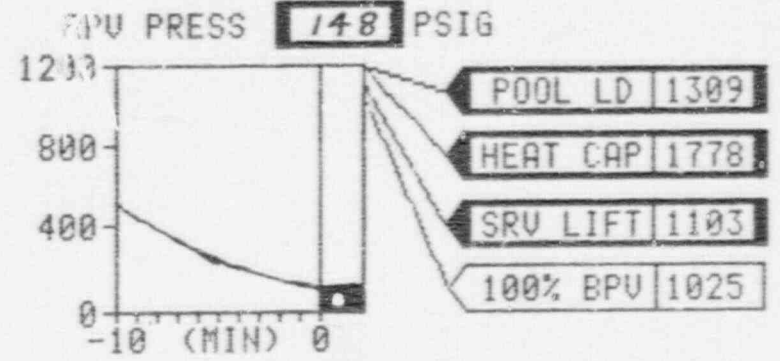
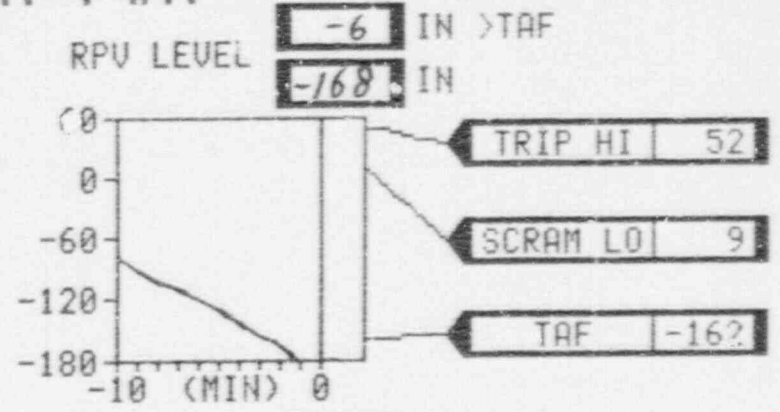
DG NOT OPER

SRV OPEN

MSIV SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 12:00

# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

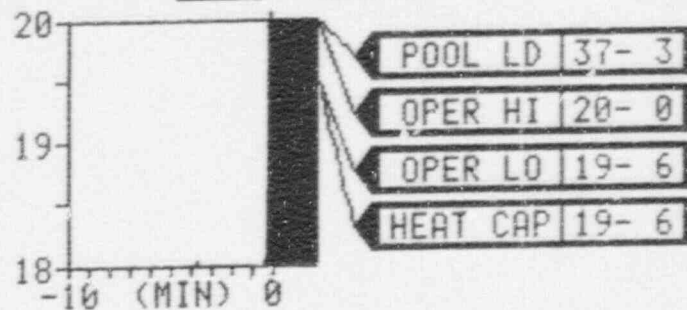
DG NOT OPER

SRU OPEN

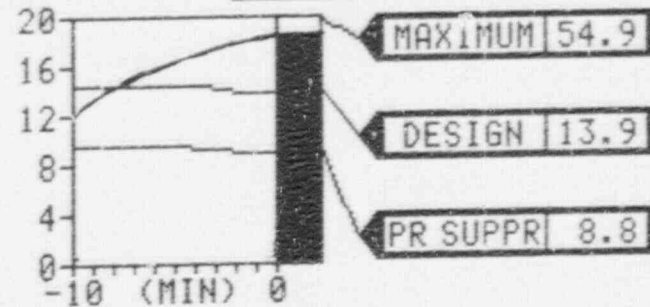
GROUP ISLN

SCRAM NONE

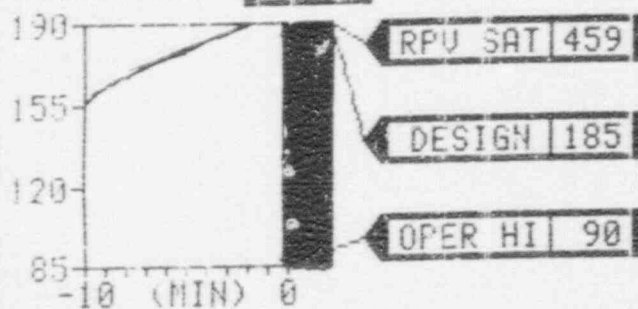
POOL LEVEL 24 FT 4 IN (RESCALE)



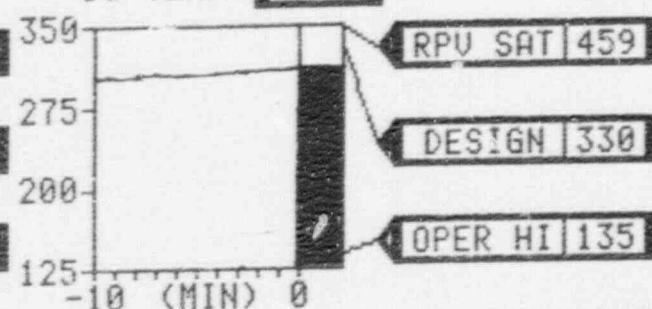
CNTMT PRESS 18.7 PSIG



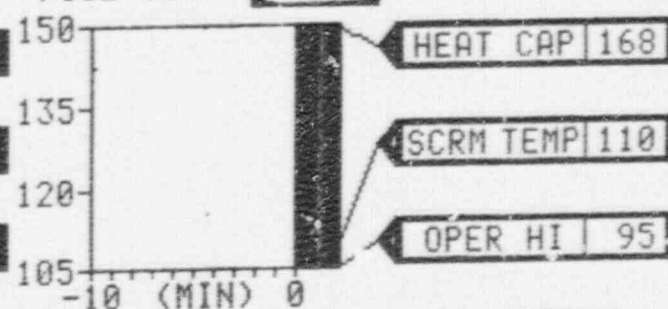
CNTMT TEMP 207 °F



DW TEMP 297 °F



POOL TEMP 210 °F



RIVER BEND 30-JAN-1991 12:00

1991 PRACTICE EXERCISE

Message Number: 17

Clock Time = 1200

Scenario Time = 04/00

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	7.5E3 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	300 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	100 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	300 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	7.5E6 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	300 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-152	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASSE Panel A.B. 114' (ARM)	300 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	75 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	75 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	75 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	75 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	75 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	75 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	300 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	300 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	300 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	75 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	75 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale

All other ARMs are "as read"



1991 PRACTICE EXERCISE

Message Number: 17

Clock Time = 1200  
 Scenario Time = 04/00

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	3.0E+01 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	3.5E+02 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	7.4E-07 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.3E+01 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	2.5E-08 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor	0	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu$ Ci/cc	Off Gas Post-treatment Monitor	0	cpm
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr

█ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

1991 PRACTICE EXERCISE  
Message Number = 18

Clock Time = 1215  
Scenario Time = 04/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

indications in Control Room include:

ANNULUS PRESSURE HIGH - P863-72A/A01

1991 PRACTICE EXERCISE

Message Number = 18

Clock Time = 1215

Scenario Time = 04/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

O-ring seals on several electrical containment penetrations have failed completely; containment pressure is being released through the O-ring seal area, past the protective cover for the cables, and into the annulus area.

Radioactive material from the primary containment is now being released to the environment through the Standby Gas Treatment System, which is presently taking a suction on the annulus area. See Supplemental Scenario No. 8.

Deliver Contingency Message 19.1x if the Emergency Director has not declared a General Emergency by 1230.

Expected Actions:

Enter EOP-3, "Secondary Containment and Radiological Release Control"

Continue to monitor primary containment radiation levels, and trend radiation levels for the annulus exhaust (iRMS\*RE11A/B).

Expected Actions: (Continued)

Perform dose projections using effluent monitors and meteorological conditions and compare to results based on containment monitors.

A General Emergency should be declared in accordance with EIP-2-001, GE EAL-2, Initiating Condition 5, "Other Indications of Loss of Two of the Following With Potential Loss of the Third: Fuel Cladding, RCS Pressure Boundary, Containment Integrity".

The Emergency Director should direct the implementation of the following procedures:

EIP-2-005, "General Emergency"

EIP-2-006, "Notifications"

EIP-2-007, "Protective Action Recommendation Guidelines"

EIP-2-012, "Radiation Exposure Controls"

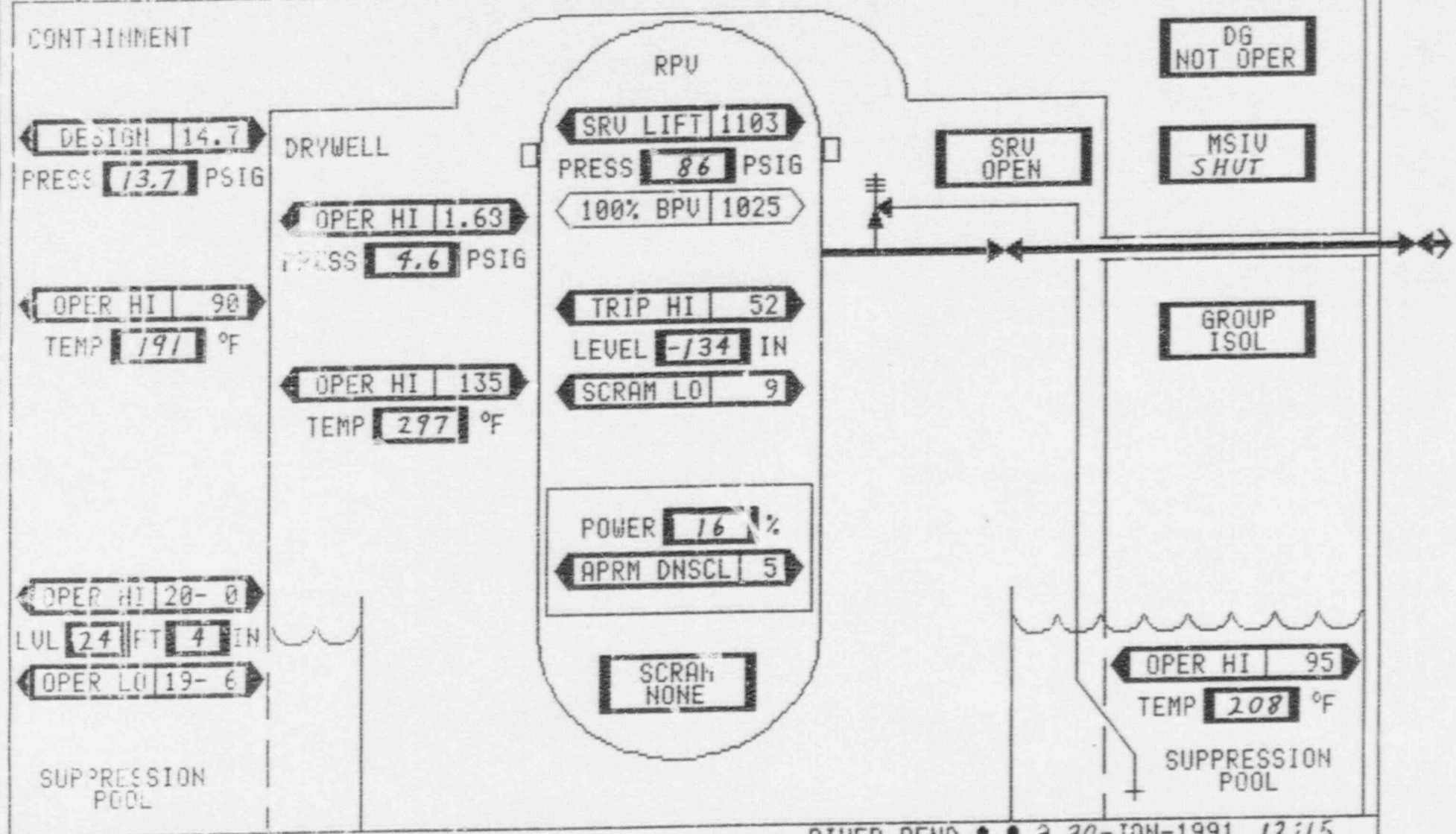
EIP-2-013, "Onsite Radiological Monitoring"

EIP-2-014, "Offsite Radiological Monitoring"

EIP-2-024, "Offsite Dose Calculations"



011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM



013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RC1C	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCE	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

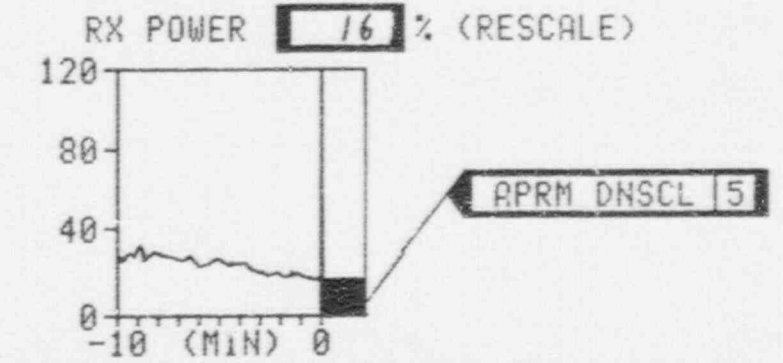
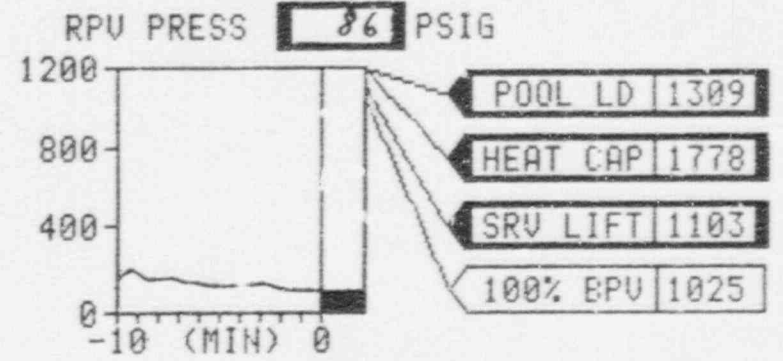
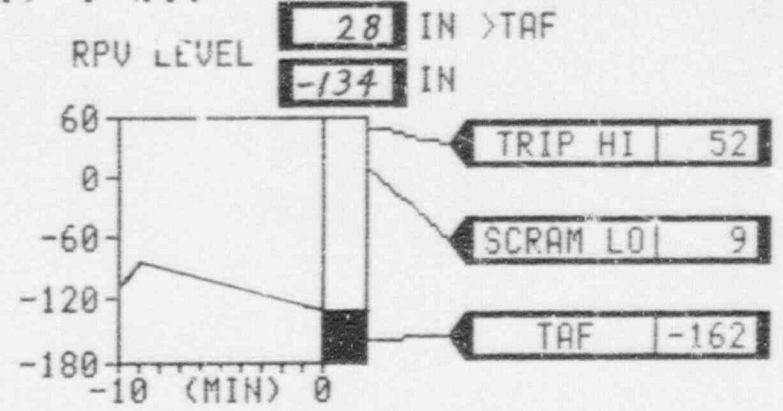
DG NOT OPER

SRV OPEN

MSIU SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 12:15

027

RPU ALARM

# CONTAINMENT CONTROL--UPSET/MR

POOL COOLING

COOLING AVAILABLE	POWER AVAIL	PUMP RUN
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DG NOT OPER

DRYWELL COOLING

COOLING NOT AVAIL	POWER AVAIL	FAN OFF
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SRU OPEN

CNTMT COOLING

COOLING AVAIL	POWER AVAIL	FAN RUN
---------------	-------------	---------

GROUP ISLN

PRESS CONTROL

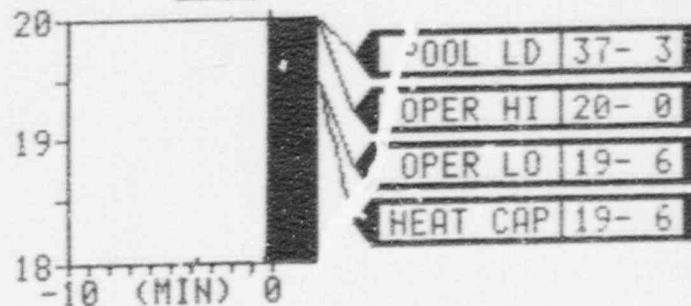
VALVE SHUT	POWER AVAIL	FAN OFF
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SCRAM NONE

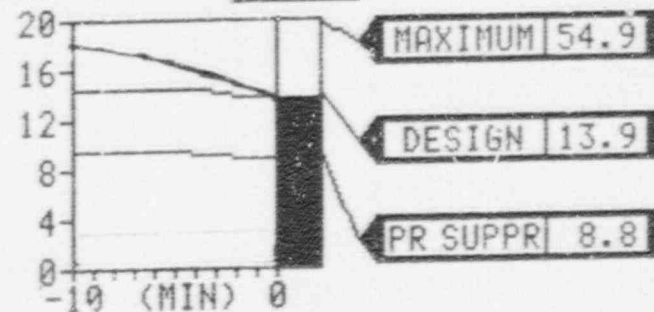
SBGT

VALVE LINE-UP	POWER AVAIL	FAN RUN
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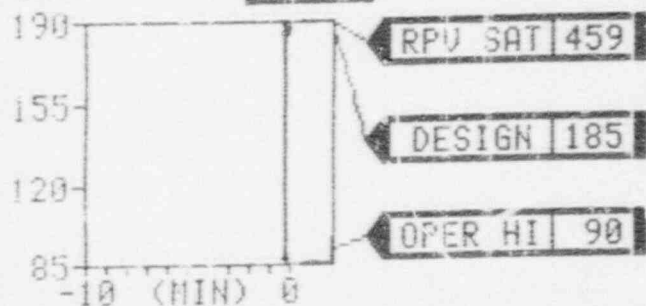
POOL LEVEL 24 FT 4 IN (RESCALE)



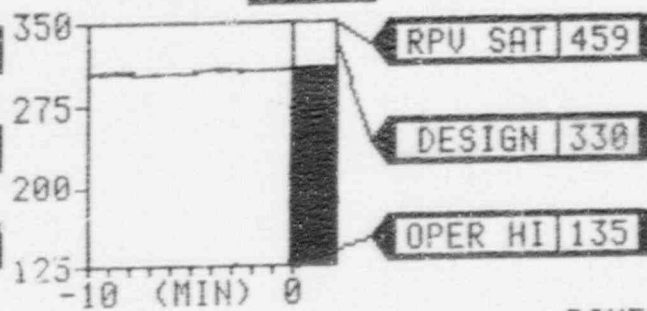
CNTMT PRESS 13.7 PSIG



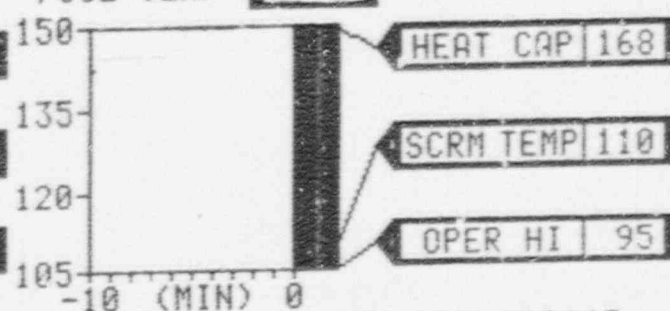
CNTMT TEMP 191 °F



DW TEMP 297 °F



POOL TEMP 208 °F



RIVER BEND 30-JAN-1991 12:15

1991 PRACTICE EXERCISE

Message Number: 18

Clock Time = 1215  
Scenario Time = 04/15RIVER BEND STATION  
DRMS MONITORING

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	4.5E3 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	180 mR/hr
RE-20A,B	Lowwell PAM D.W. 114' (DHRRM)	60 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	180 mR/hr
RE-21A,B	Ctrl. Purge Isol. R.B. 141' (ARM)	4.5E6 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	180 mR/hr
RE-139	Manul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	180 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	45 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	45 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	45 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	45 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	45 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	45 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	180 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	180 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	180 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	45 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	45 mR/hr

☐ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"



1991 PRACTICE EXERCISE

Message Number: 18

Clock Time = 1215  
Scenario Time = 04/15

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111P	Cont. Atmosphere (PART)	1.7E+01	µCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111G	Cont. Atmosphere (GAS)	2.1E+02	µCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	µCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	µCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	2.0E-01	µCi/cc	RE-103	SGTS Effluent (GAS)	5.0E-02	µCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	2.0E-01	µCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	µCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	2.0E-01	µCi/cc	RE-11A	Annulus Exhaust (GAS)	2.2E+00	µCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	1.0E+07	µCi/sec	RE-11B	Annulus Exhaust (GAS)	2.2E+00	µCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	µCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	µCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	µCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	1.9E-03	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	2.0E-01	µCi/cc				

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 18.1

Clock Time = 1220

Scenario Time = 04/20

RIVER BEND STATION  
EMERGENCY PREPAREDNESS EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators in Control Room include:

DIV I ANNULUS EXH RADN ALARM - P863-71A/C07

DIV II ANNULUS EXH RADN ALARM - P863-71A/G07

Indications in Control Room include:

As shown on attached DRMS data sheets.

1991 PRACTICE EXERCISE

Message Number = 18.1

Clock Time = 1220

Scenario Time = 04/20

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Radiation monitors 1RMS\*RE11A/B have increased to the Alert setpoint due to leakage past the containment electrical penetrations into the annulus area.

Expected Actions:

Trend annulus exhaust radiation levels, and continue to monitor containment radiation levels.

Continue to follow the steps of EOP-1A, EOP-2, and EOP-3.

Continue to monitor containment pressure and temperature.

Review protective actions to ensure that previously recommended actions are conservative.

1991 PRACTICE EXERCISE  
 Message Number - 18.1

Clock Time - 1220  
 Scenario Time - 04/20

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

<u>PANEL 601/877</u>				<u>PANEL 601</u>			<u>PANEL 680</u>				
	<u>Status</u>	<u>Press</u>	<u>Flow</u>	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AC, MN</u>				
RHR A	<u>SPC</u>		<u>5200</u>	F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	POWER	<u>14% APRM</u>	LEVEL <u>-159"</u>	
RHR B	<u>SPC</u>		<u>5200</u>	F041B	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1A	<u>OP</u>	FWS P1A <u>OP</u>	
RHR C	<u>SS</u>		<u>0</u>	F041C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1B	<u>SS</u>	FWS P1B <u>SS</u>	
LPCS	<u>SS</u>		<u>0</u>	F041D	<u>ON</u>	<u>OFF</u>	<u>ON</u>	CNS P1C	<u>SS</u>	FWS P1C <u>SS</u>	
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>	F041E	<u>ON</u>	<u>OFF</u>	<u>ON</u>	Total Feedwater Flow <u>7.9</u> Mlbs./hr			
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>	F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 808</u>			
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>	F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>		<u>Press</u>	<u>Temp</u>	<u>Level</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>	F047A	<u>ON</u>	<u>OFF</u>	<u>ON</u>	DRYWELL	<u>4.9</u>	<u>297°</u>	
	<u>Squib</u>	<u>Press</u>	<u>Level</u>	F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CTMT	<u>11.8</u>	<u>185°</u>	
SLC A	<u>OOS</u>	<u>0</u>	<u>1930</u>	F047C	<u>ON</u>	<u>OFF</u>	<u>ON</u>	SPR PL		<u>206°</u>	<u>24'4"</u>
SLC B	<u>OFF</u>	<u>0</u>		F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 870/601</u>			
RPV	<u>Press</u>	<u>Level</u>	<u>Range</u>	F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2A	<u>OP</u>	SWP P2C	<u>OP</u>
	<u>65</u>	<u>-159"</u>	<u>FZR</u>	F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2B	<u>OP</u>	SWP P2D	<u>OP</u>
DIV I	<u>DIESEL</u>	<u>SS</u>		F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 863</u>			
DIV II	<u>DIESEL</u>	<u>SS</u>		F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SGTS A	<u>OP</u>	SGTS B	<u>SS</u>
DIV III	<u>DIESEL</u>	<u>SS</u>		F051G	<u>ON</u>	<u>OFF</u>	<u>ON</u>	D/W COOLERS OPERATING		ISOL	
				MSIV	<u>RED</u>	<u>GRN</u>		CTMT COOLERS OPERATING		<u>A</u>	
				F022A	<u>OFF</u>	<u>ON</u>					
				F022B	<u>OFF</u>	<u>ON</u>					
				F022C	<u>OFF</u>	<u>ON</u>					
				F022D	<u>OFF</u>	<u>ON</u>					
				F028A	<u>OFF</u>	<u>ON</u>					
				F028B	<u>OFF</u>	<u>ON</u>					
				F028C	<u>OFF</u>	<u>ON</u>					
				F028D	<u>OFF</u>	<u>ON</u>					

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

011 [RPV ALARM] CRITICAL PLANT VARIABLES [CNTMT ALARM]

CONTAINMENT

DESIGN 14.7  
PRESS 11.8 PSIG

DRYWELL

OPER HI 1.68  
PRESS 4.9 PSIG

OPER HI 90  
TEMP 185 °F

OPER HI 135  
TEMP 297 °F

OPER HI 20-0  
LVL 24 FT 4 IN  
OPER LO 19-6

SUPPRESSION POOL

RPV

SRV LIFT 1103  
PRESS 65 PSIG

100% BPU 1025

TRIP HI 52

LEVEL -159 IN

SCRAM LO 9

POWER 14 %

OPRM DNSCL 5

SCRAM NONE

DG NOT OPER

MSIU SHUT

SRV OPEN

GROUP ISOL

OPER HI 95

TEMP 206 °F

SUPPRESSION POOL

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CNDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCE	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V.PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

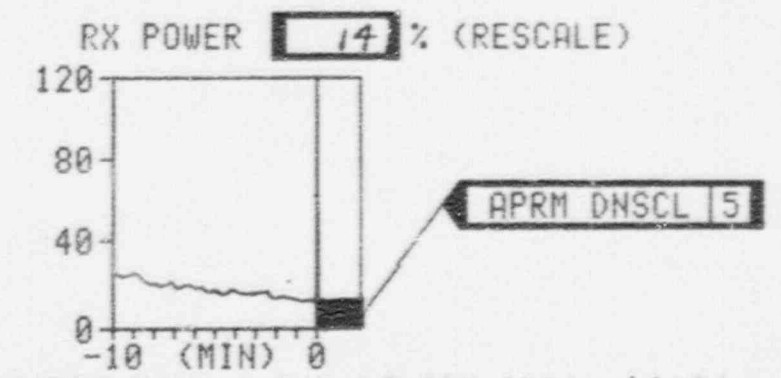
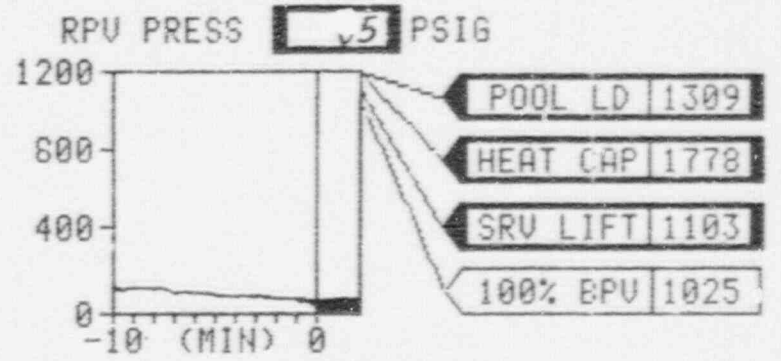
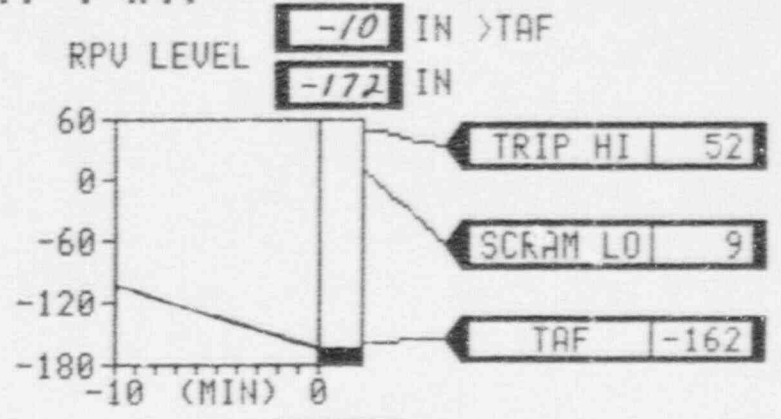
DG NOT OPER

SRV OPEN

MSIU SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 12:20

# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

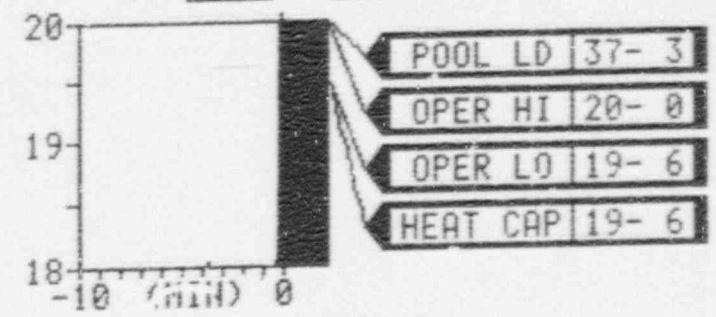
DG NOT OPER

SRV OPEN

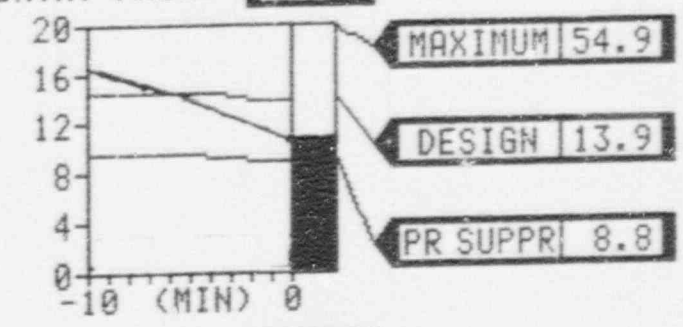
GROUP ISLN

SCRAM NONE

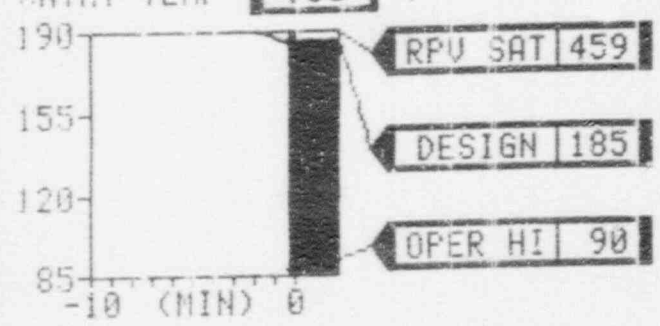
POOL LEVEL **24** FT **4** IN (RESCALE)



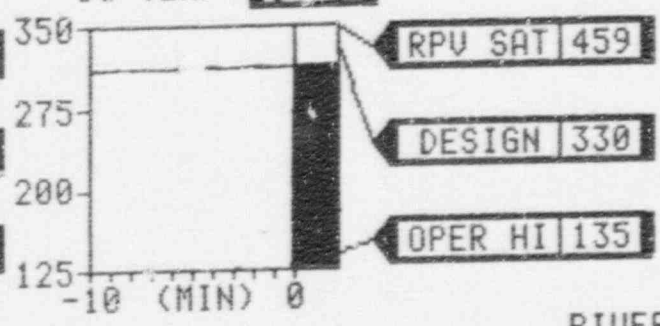
CNTMT PRESS **11.8** PSIG



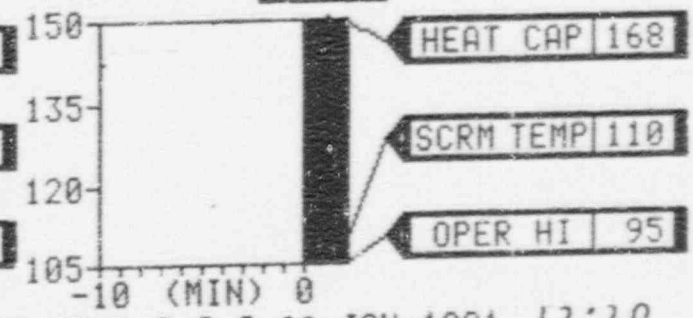
CNTMT TEMP **185** °F



DW TEMP **297** °F



POOL TEMP **206** °F



RIVER BEND ●●● 30-JAN-1991 12:20

1991 PRACTICE EXERCISE  
Message Number = 19

Clock Time = 1230  
Scenario Time = 04/30

RIVERT BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update



1991 PRACTICE EXERCISE  
Message Number 9

Clock Time = 1230  
Scenario Time = 04/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Expected Actions:

The radioactive release to the environment continues via the Standby Gas Treatment System.

With reactor pressure below 50 psig all SRV's close.

Dose projections based on the effluent monitors and actual meteorological data indicate that the protective action recommendations based on containment conditions are conservative.

Compare results of computer dose projections and field team readings.

Continue to maintain reactor level between -100" and -193".

Continue efforts to restore SLC pump 'B'.

1991 PRACTICE EXERCISE  
 Message Number - 19

Clock Time - 1230  
 Scenario Time - 04/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SPC</u>		<u>5200</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SS</u>		<u>0</u>
LPCS	<u>SS</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>1930</u>
SLC B	<u>OFF</u>	<u>0</u>	
	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>34</u>	<u>-109"</u>	<u>FZR</u>
DIV I	<u>DIESEL</u>	<u>SS</u>	
DIV II	<u>DIESEL</u>	<u>SS</u>	
DIV III	<u>DIESEL</u>	<u>SS</u>	

SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
MSIV	<u>RED</u>	<u>GRN</u>	
F022A	<u>OFF</u>	<u>ON</u>	
F022B	<u>OFF</u>	<u>ON</u>	
F022C	<u>OFF</u>	<u>ON</u>	
F022D	<u>OFF</u>	<u>ON</u>	
F028A	<u>OFF</u>	<u>ON</u>	
F028B	<u>OFF</u>	<u>ON</u>	
F028C	<u>OFF</u>	<u>ON</u>	
F028D	<u>OFF</u>	<u>ON</u>	

POWER 11% APRM LEVEL -109"  
 CNS P1A OP FWS P1A OP  
 CNS P1B SS FWS P1B SS  
 CNS P1C SS FWS P1C SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>4.9</u>	<u>297°</u>	
CTMT	<u>8.3</u>	<u>174°</u>	
SPR PL		<u>205°</u>	<u>24'4"</u>

PANEL 870/601

SWP P2A OP SWP P2C OP  
 SWP P2B OP SWP P2D OP

PANEL 863

SGTS A OP SGTS B SS  
 D/W COOLERS OPERATING ISOL  
 CTMT COOLERS OPERATING A

OP=OPERATING SR=STANDBY READY  
 OOS=OUT OF SERVICE SS=SECURED STATUS  
 AV=AVAILABLE ISOL=ISOLATED

011 RPV ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

CONTAINMENT

DESIGN 14.5  
PRESS 8.3 PSIG

DRYWELL

OPER HI 1.68  
PRESS 4.9 PSIG

OPER HI 90  
TEMP 174 °F

OPER HI 135  
TEMP 297 °F

OPER HI 20-0  
LVL 24 FT 4 IN  
OPER LO 19-6

SUPPRESSION  
POOL

RPV

SRV LIFT 1103  
PRESS 34 PSIG

100% BPU 1025

TRIP HI 52  
LEVEL -109 IN  
SCRAM LO 9

POWER 11 %  
APRM DNSCL 5

SCRAM  
NONE

SRV  
SHUT

DG  
NOT OPER

MSIV  
SHUT

GROUP  
ISOL

OPER HI 95  
TEMP 205 °F

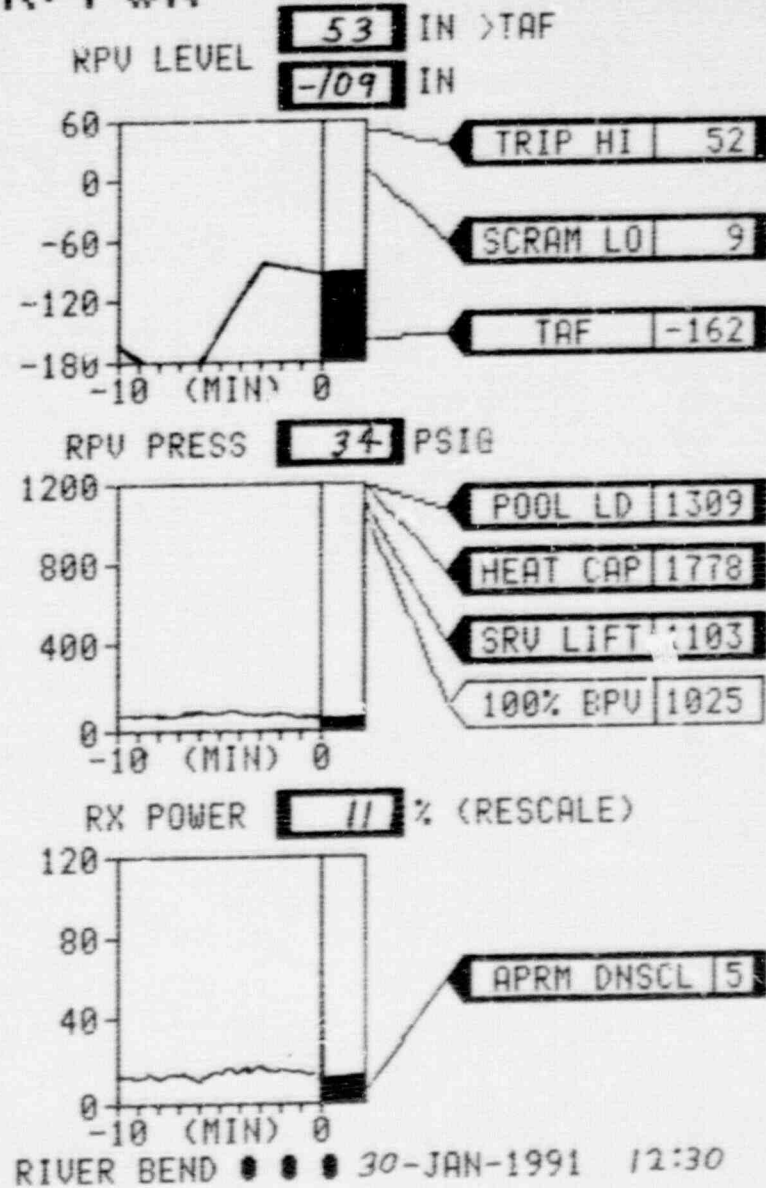
SUPPRESSION  
POOL

013

## RPV CONTROL--WR/PWR

CNTMT ALARM

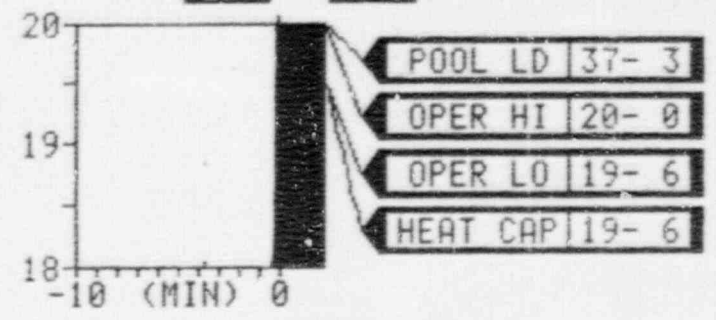
CNDS/FW	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCE	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER NA	PUMP OFF	

DG  
NOT OPERSRV  
SHUTMSIU  
SHUTGROUP  
ISOLSCRAM  
NONE

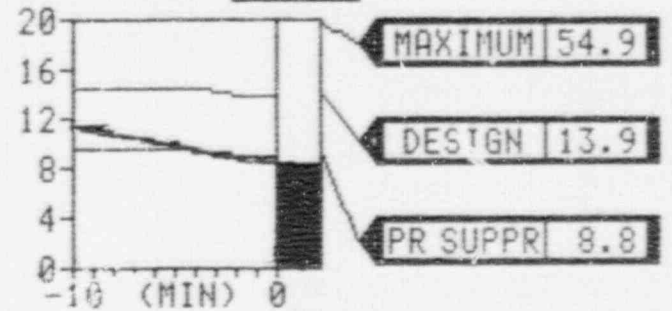
# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN	DG NOT OPER
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF	SRU SHUT
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN	GROUP ISLN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF	SCRAM NONE
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN	

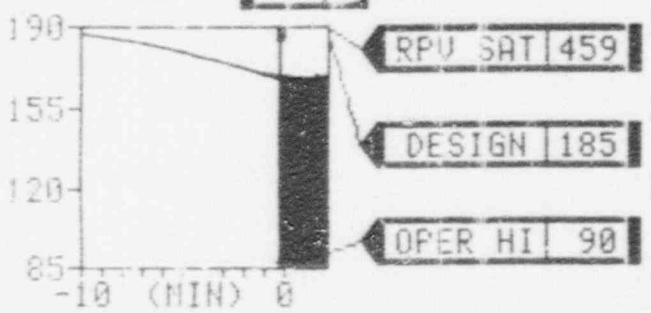
POOL LEVEL **24** FT **4** IN (RESCALE)



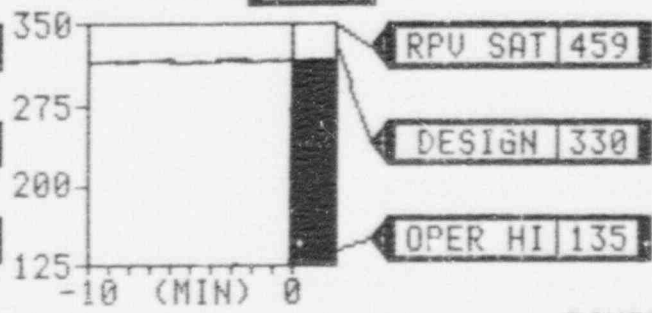
CNTMT PRESS **8.3** PSIG



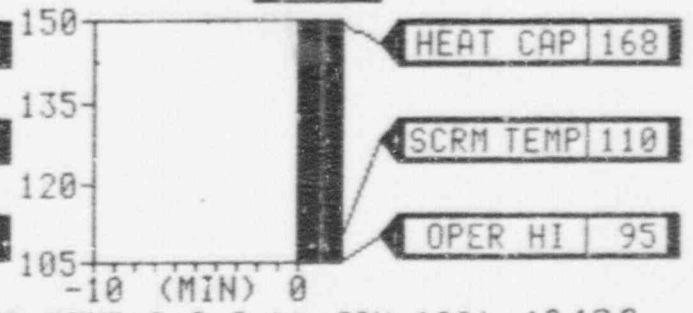
CNTMT TEMP **174** °F



DW TEMP **297** °F



POOL TEMP **205** °F



RIVER BEND ●●● 30-JAN-1991 12:30

1991 PRACTICE EXERCISE

Message Number: 19

Clock Time = 1230

Scenario Time = 04/30

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	3.9E3 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	150 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	52 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	150 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	3.9E6 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	150 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	150 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	40 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	40 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	40 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	40 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	40 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	40 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	150 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	150 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	150 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	38 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	40 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 19

Clock Time = 1230  
Scenario Time = 04/30

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111P	Cont. Atmosphere (PART)	1.6E+01	µCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111G	Cont. Atmosphere (GAS)	1.8E+02	µCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	µCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	µCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	1.7E-01	µCi/cc	RE-103	SGTS Effluent (GAS)	4.2E-02	µCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.7E-01	µCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	µCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	1.7E-01	µCi/cc	RE-11A	Annulus Exhaust (GAS)	1.8E+00	µCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	8.5E+06	µCi/sec	RE-11B	Annulus Exhaust (GAS)	1.0E+00	µCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	µCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	µCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	µCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	1.6E-03	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	1.7E-01	µCi/cc				

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 19.1x

Clock Time = 1235

Scenario Time = 04/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Emergency Director

A GENERAL EMERGENCY should be declared in accordance with EIP-2-001, "Classification of Emergencies", GE EAL 2, Initiating Condition 5, "Other Indications of Loss of Two of the Following With Potential Loss of the Third: Fuel Cladding, RCS Pressure Boundary, Containment Integrity".



1991 PRACTICE EXERCISE  
Message Number = 19.1x

Clock Time = 1235  
Scenario Time = 04/35

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Expected Actions:

Deliver this message only if a GENERAL EMERGENCY has not been declared, and the Emergency Director has not recognized that events have occurred which require the declaration of a GENERAL EMERGENCY, and no actions are being taken which would result in the declaration of a GENERAL EMERGENCY.

Emergency Director declares a GENERAL EMERGENCY.

1991 PRACTICE EXERCISE  
Message Number = 20

Clock Time = 1245  
Scenario Time = 04/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 20

Clock Time = 1245

Scenario Time = 04/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Reactor power is about 5%, and reactor pressure is approximately 11 psig.

Expected Actions:

Continue to maintain reactor level between -100" and -193".

Monitor containment radiation levels.

Continue to monitor the release and track the plume.

Continue efforts to restore SLC pump 'B'.

1991 PRACTICE EXERCISE  
 Message Number - 20

Clock Time - 1245  
 Scenario Time - 04/45

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

RHR A	RHR B	RHR C	LPCS	RCIC	HPCS	GRD A	GRD B	SIC A	SIC B	RPV	DIV I	DIV II	DIV III
Status	SPC	SPC	SS	SS	OOS	SS	OP	AV	Squib	Press	Level	Range	
Flow	5200	5200	0	0	0	0	0	0	0	11	-186"	FZR	

PANEL 601

SRV	RED	GRN	AC, MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF
MSIV	RED	GRN	
F022A	OFF	ON	
F022B	OFF	ON	
F022C	OFF	ON	
F022D	OFF	ON	
F028A	OFF	ON	
F028B	OFF	ON	
F028C	OFF	ON	
F028D	OFF	ON	

PANEL 680

POWER 5% APRM LEVEL -186"

CNS P1A OP FWS P1A OP  
 CNS P1B SS FWS P1B SS  
 CNS P1C SS FWS P1C SS

Total Feedwater Flow 7.9 Mlbs./hr

PANEL 808

DRYWELL Press 4.7 Temp 287°  
 CTMT 4.2 157°  
 SPR PL 201° 24'4"

PANEL 870/601

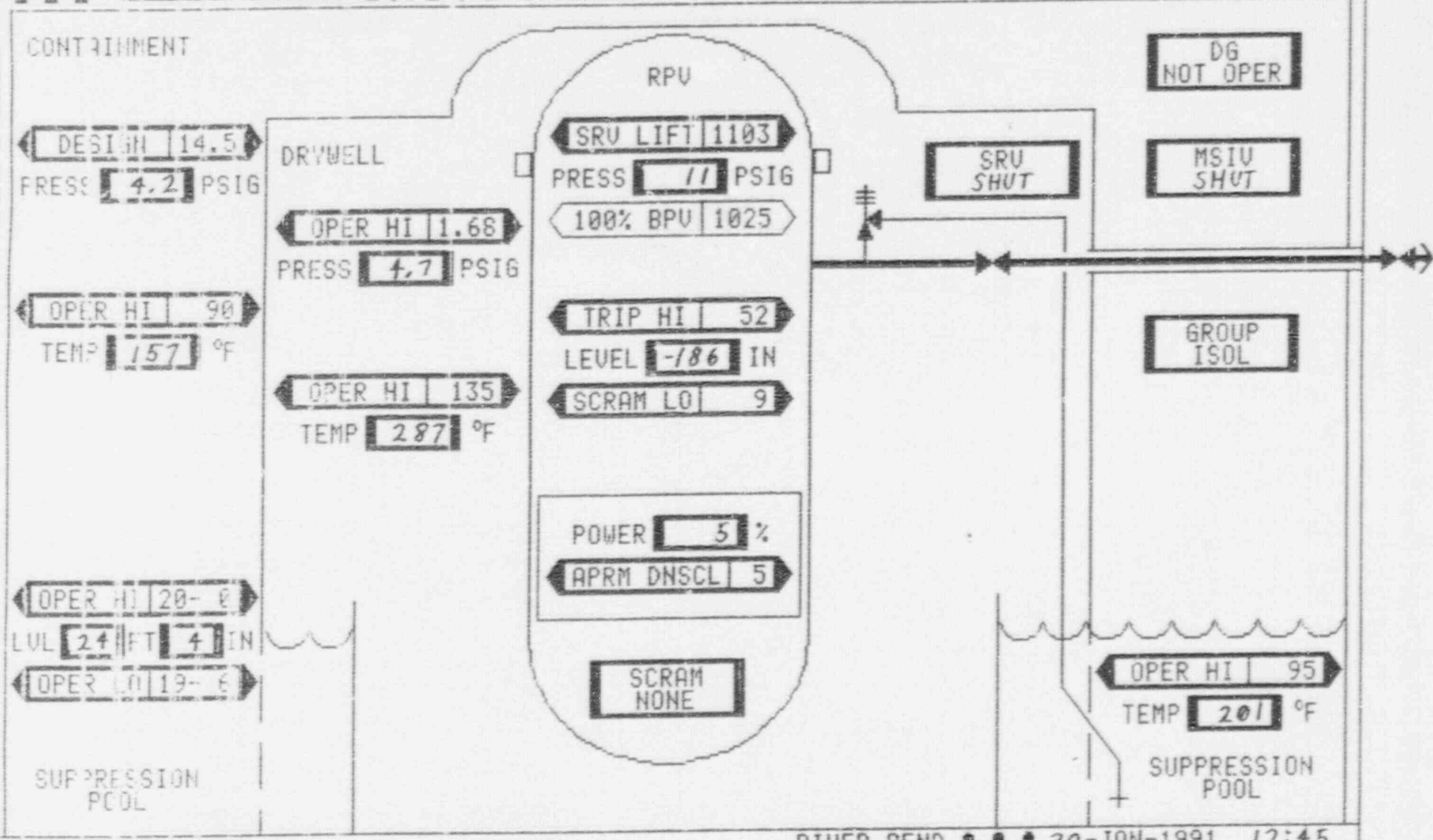
SWP P2A OP SWP P2C OP  
 SWP P2B OP SWP P2D OP

PANEL 863

SGTS A OP SGTS B SS  
 D/W COOLERS OPERATING ISOL  
 CTMT COOLERS OPERATING A

OP-OPERATING SR-STANDBY READY  
 OOS-OUT OF SERVICE SS-SECURED STATUS  
 AV-AVAILABLE ISOL-ISOLATED

011 [RPU ALARM] CRITICAL PLANT VARIABLES [CNTMT ALARM]



RIVER BEND ●●● 30-JAN-1991 12:45

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

CRD

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

RCIC

WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
-------------	-----------	----------	----------

HPCE

WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCE

WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
-------------	-----------	-------------	----------

LPCI

WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
-------------	-----------	-------------	----------

SHTDN COOLING

CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
-----------	-----------	-------------	----------

RWCL

COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
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TURBINE CONTROL

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
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TURBINE BYPASSES

CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
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MSL DRAINS

COOLING AVAILABLE	U. PWR NA	VALVE LN-UP	
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SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP RUN	
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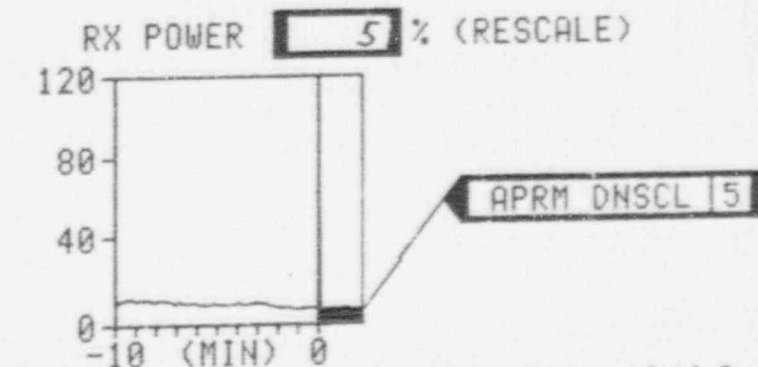
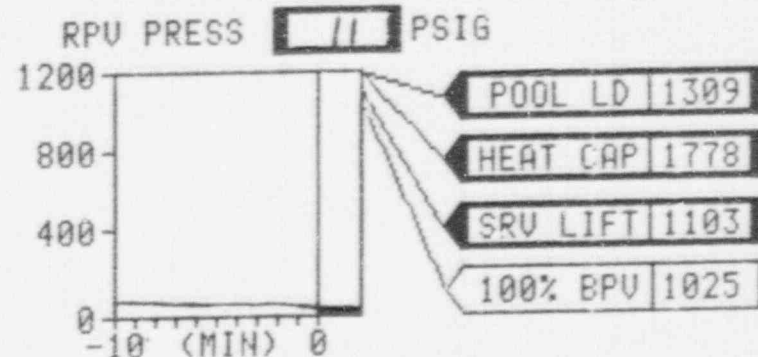
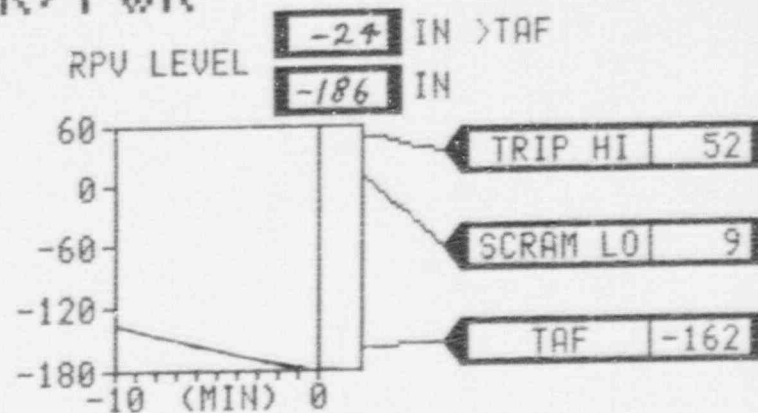
DG NOT OPER

SRU SHUT

MSIU SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 12:45

# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

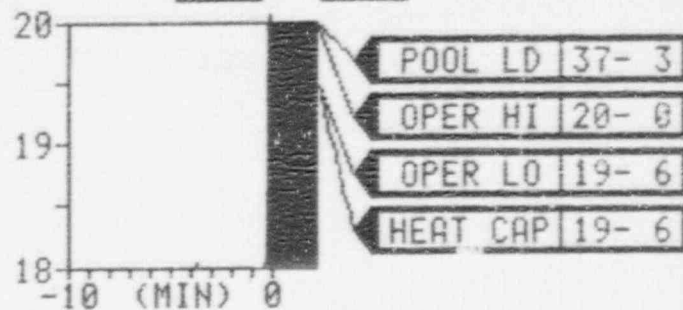
DG NOT OPER

SRV SHUT

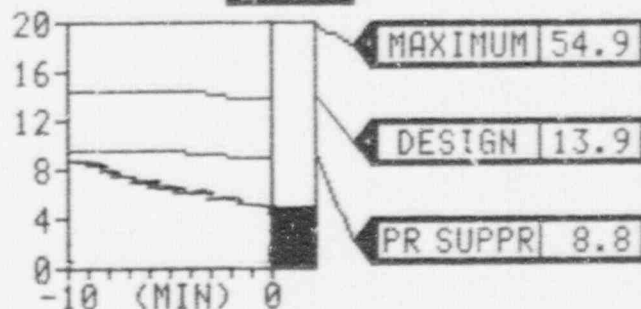
GROUP ISLN

SCRAM NONE

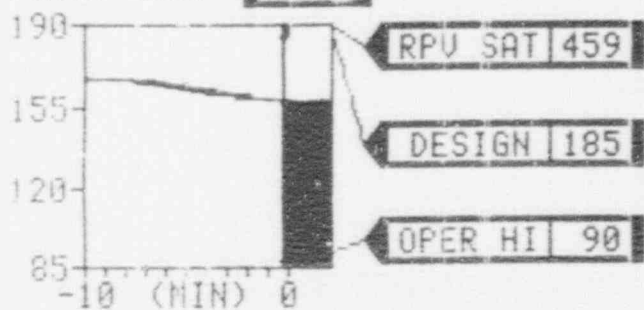
POOL LEVEL 24 FT 4 IN (RESCALE)



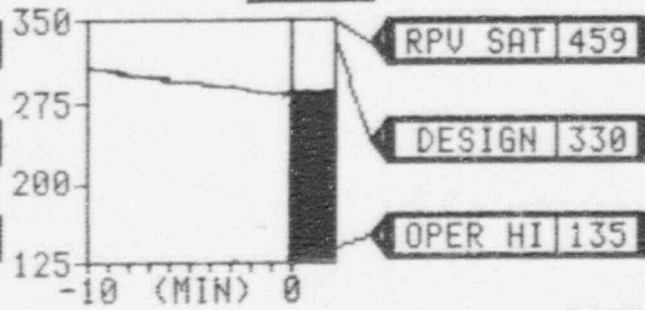
CNTMT PRESS 4.2 PSIG



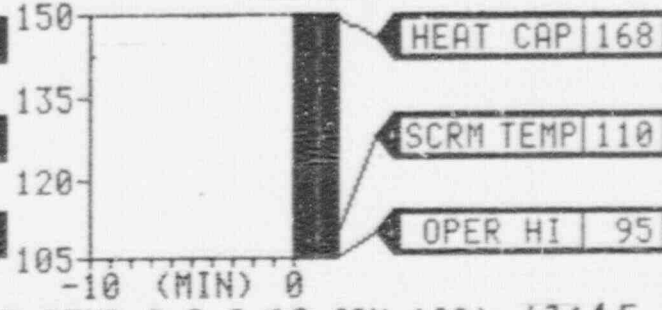
CNTMT TEMP 157 °F



DW TEMP 287 °F



POOL TEMP 201 °F



RIVER BEND 30-JAN-1991 12:45

1991 PRACTICE EXERCISE

Message Number: 20

Clock Time = 1245

Scenario Time = 04/45

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	3.3E3 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	125 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	44 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	125 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	3.3E6 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	125 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	125 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	33 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	30 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	30 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	30 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	30 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	30 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	125 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	125 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	125 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	30 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	30 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"



1991 PRACTICE EXERCISE

Message Number: 20

Clock Time = 1245  
Scenario Time = 04/45

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111P	Cont. Atmosphere (PART)	1.3E+01	µCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	µCi/sec	RE-111G	Cont. Atmosphere (GAS)	1.5E+02	µCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	µCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	µCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	µCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	1.4E-01	µCi/cc	RE-103	SGTS Effluent (GAS)	3.4E-02	µCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.4E-01	µCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	µCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	1.4E-01	µCi/cc	RE-11A	Annulus Exhaust (GAS)	1.5E+00	µCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	7.2E+06	µCi/sec	RE-11B	Annulus Exhaust (GAS)	1.5E+00	µCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	µCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	µCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	µCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	1.3E-03	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	1.4E-01	µCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE  
Message Number = 20.1x

Clock Time = -1250  
Scenario Time = -04/50

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Annunciators In Control Room include:

Indications in Control Room include:

SLC pump 'B' control switch in RUN; red light lit.

SLC squib valve C41-F001B white continuity light out.

SLC suction valve C41-F001B red light lit.

1991 PRACTICE EXERCISE

Message Number = 20.1x

Clock Time = 1250

Scenario Time = 04/50

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL. \*\*\*

Controller Information:

SLC pump 'B' has been restored, and is now pumping the Boron solution into the reactor vessel. When the minimum amount of Boron has been injected (78 lbs.), reactor level will begin to be raised. See Supplemental Scenario No. 5.

Deliver this message when SLC pump 'B' is restored.

Expected Actions:

Monitor SLC tank level to determine the amount of Boron being injected into the reactor vessel.

1991 PRACTICE EXERCISE

Message Number = 21

Clock Time = 1300

Scenario Time = 05/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 21

Clock Time = 1300

Scenario Time = 05/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

SLC continues to inject Boron into the vessel.

Containment pressure and temperature are decreasing slowly.  
Reactor power is 0%, with reactor pressure approximately 2 psig.

The radioactive release through SBGT continues.

Expected Actions:

Continue to monitor the release and track the plume.

Continue to maintain reactor level between -100" and -193".

Continue to monitor SLC tank level to determine the amount of Boron injection.

1991 PRACTICE EXERCISE  
 Message Number - 21

Clock Time - 1300  
 Scenario Time - 05/00

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/871

RHR A	Status	SPC	Press	Flow	SRV	RED	GRN	AC. MN
RHR B	SPC		5200	F041A	OFF	ON	OFF	
RHR C	SS		5200	F041B	OFF	ON	OFF	
LPCS	SS		0	F041C	OFF	ON	OFF	
			0	F041D	OFF	ON	OFF	
			0	F041F	OFF	ON	OFF	
RCIC	OOS		0	F041G	OFF	ON	OFF	
HPCS	SS		0	F041L	OFF	ON	OFF	
			0	F047A	OFF	ON	OFF	
CRD A	OP		1900	F047B	OFF	ON	OFF	
CRD B	AV		0	F047C	OFF	ON	OFF	
			0	F047D	OFF	ON	OFF	
SLC A	Squib		Level	F047F	OFF	ON	OFF	
SLC B	OOS		1490	F051B	OFF	ON	OFF	
	OFF		0	F051C	OFF	ON	OFF	
			21	F051D	OFF	ON	OFF	
			21	F051G	OFF	ON	OFF	
RPV	Press	2	Level	MSIV	RED	GRN		
			-156"	F022A	OFF	ON		
			FZR	F022B	OFF	ON		
DIV I	DIESEL		SS	F022C	OFF	ON		
DIV II	DIESEL		SS	F022D	OFF	ON		
DIV III	DIESEL		SS	F028A	OFF	ON		

PANEL 601

SRV	RED	GRN	AC. MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF

PANEL 680

POWER	0% APRM	LEVEL	-156"
CNS P1A	OP	FWS P1A	OP
CNS P1B	SS	FWS P1B	SS
CNS P1C	SS	FWS P1C	SS

Total Feedwater Flow \* Mibs./hr  
 \* - As Required

PANEL 808

Press	Temp	Level
DRYWELL 4.3	283°	
CTMT 2.7	138°	
SPR PL	197°	24'4"

PANEL 870/601

SWP P2A	OP	SWP P2C	OP
SWP P1B	OP	SWP P2D	OP

PANEL 863

SGTS A	OP	SGTS B	SS
D/W COOLERS	OPERATING	ISOL	
CTMT COOLERS	OPERATING	A	

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE  
 SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

# CRITICAL PLANT VARIABLES

CNTMT ALARM

RPV ALARM

CONTAINMENT

DESIGN HI 14.5  
PRESS 2.7 PSIG

OPER HI 90  
TEMP 138 °F

OPER HI 20-0  
LVL 2.4 FT 4 IN  
OPER LO 19-6

SUPPRESSION  
POOL

DRYWELL  
OPER HI 1.68  
PRESS 4.3 PSIG

OPER HI 135  
TEMP 283 °F

RPV

SRV LIFT 1103  
PRESS 2 PSIG  
100% BPV 1025

TRIP HI 52  
LEVEL -156 IN  
SCRAM LO 9

POWER 0 %  
APRM DNSCL 5

SCRAM NONE

SRV SHUT

DG NOT OPER

MSIV SHUT

GROUP ISOL

OPER HI 95  
TEMP 197 °F

SUPPRESSION  
POOL

RIVER BEND - JAN-1991 13:00

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCE	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDH COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP RUN	

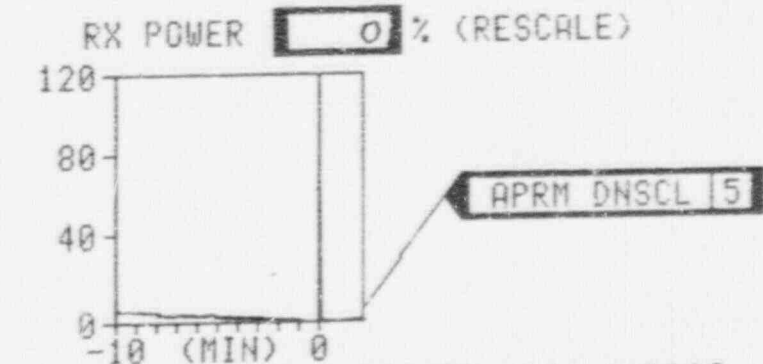
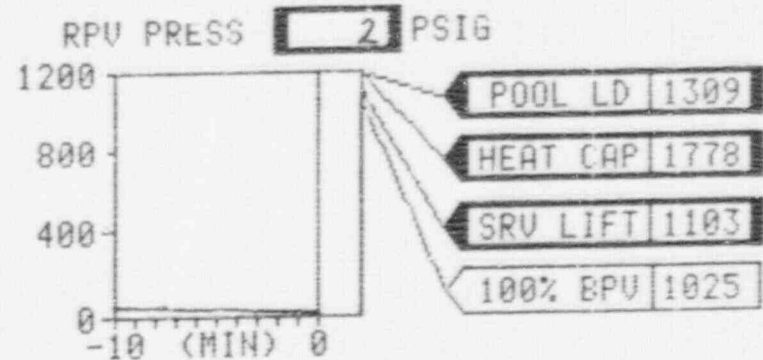
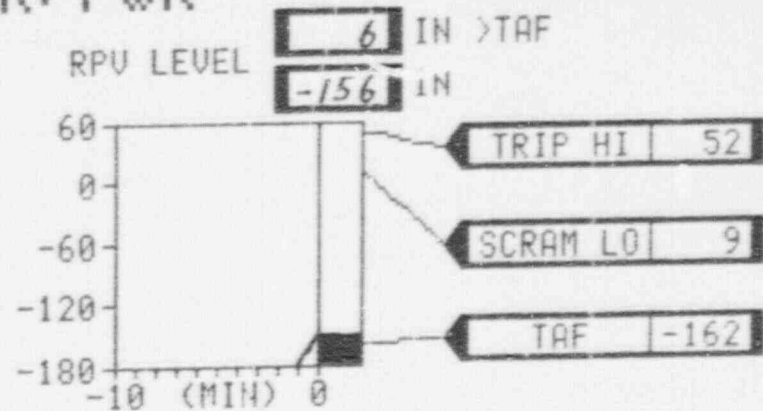
DG NOT OPER

SRU SHUT

MSIU SHUT

GROUP ISOL

SCRAM NONE



RIVER BEND ●●● 30-JAN-1991 13:00



# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

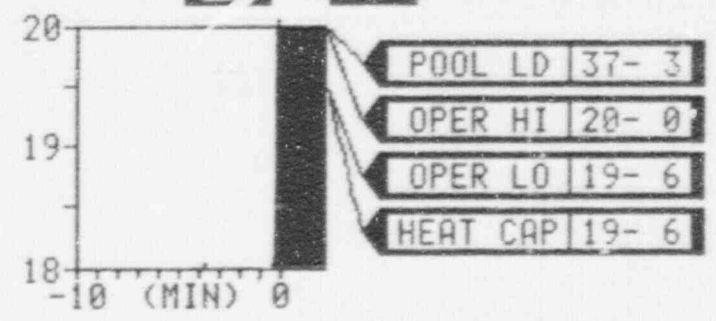
DG NOT OPER

SRU SHUT

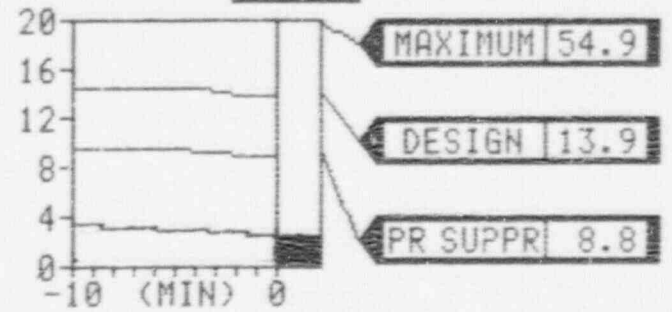
GROUP ISLN

SCRAM NONE

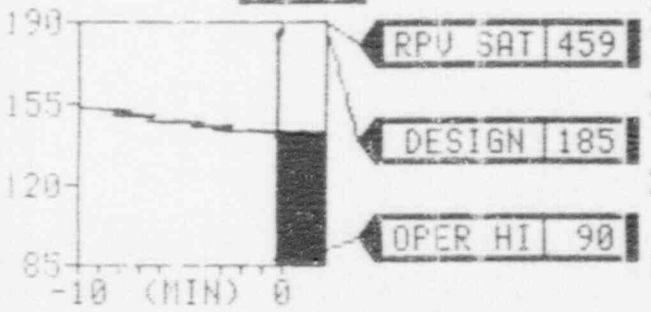
POOL LEVEL 24 FT 4 IN (RESCALE)



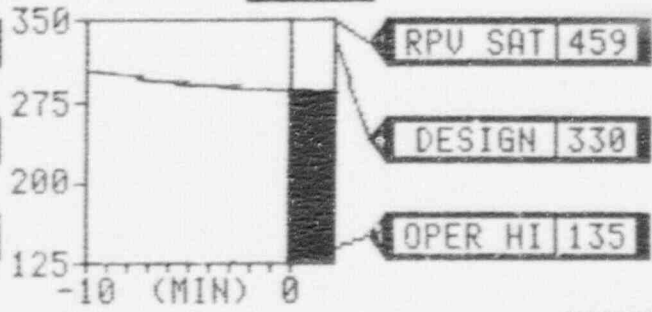
CNTMT PRESS 2.7 PSIG



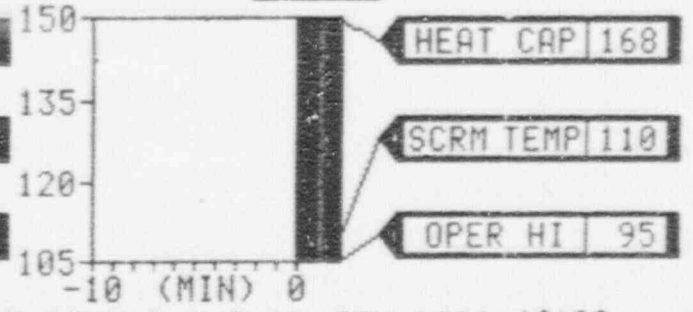
CNTMT TEMP 138 °F



DW TEMP 283 °F



POOL TEMP 197 °F



RIVER BEND ●●● 30-JAN-1991 13:00

1991 PRACTICE EXERCISE

Message Number: 21

Clock Time = 1300

Scenario Time = 05/00

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	2.4E3 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	90 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	32 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	90 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	2.4E6 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	90 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	90 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	24 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	25 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	25 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	25 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	25 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	25 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	90 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	90 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	90 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	23 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	25 mR/hr

☐ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 21

Clock Time = 1300  
 Scenario Time = 05/00

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111P	Cont. Atmosphere (PART)	8.2E+00 $\mu\text{Ci}/\text{cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci}/\text{sec}$	RE-111G	Cont. Atmosphere (GAS)	1.1E+02 $\mu\text{Ci}/\text{cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci}/\text{cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci}/\text{sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci}/\text{cc}$
1GE-125	Main Plant Exh. Duct (V/RGM)	1.0E-01 $\mu\text{Ci}/\text{cc}$	RE-103	SGTS Effluent (GAS)	2.6E-02 $\mu\text{Ci}/\text{cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.0E-01 $\mu\text{Ci}/\text{cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci}/\text{cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	1.0E-01 $\mu\text{Ci}/\text{cc}$	RE-11A	Annulus Exhaust (GAS)	1.1E+00 $\mu\text{Ci}/\text{cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	5.3E+06 $\mu\text{Ci}/\text{sec}$	RE-11B	Annulus Exhaust (GAS)	1.1E+00 $\mu\text{Ci}/\text{cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci}/\text{cc}$	Off Gas Pre-treatment Monitor	0	mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci}/\text{cc}$	Off Gas Post-treatment Monitor	0	cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu\text{Ci}/\text{cc}$	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	9.7E-04 $\mu\text{Ci}/\text{cc}$			
RE-126G	Main Plant Exh. Duct (GAS)	1.0E-01 $\mu\text{Ci}/\text{cc}$			

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 22

Clock Time = 13:5

Scenario Time = 05/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 22

Clock Time = 1315

Scenario Time = 05/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

The minimum amount of Boron has been injected (78 lbs.). Reactor level restoration should begin in order to bring level back into its normal operating band. Boron injection continues. See Supplemental Scenario No. 5 for table of injection requirements.

As level is restored, reactor power remains below 1%, and there is no sustained increase that is detected.

Reactor pressure is negligible, and steam blowdown into containment has ceased. Containment pressure has decayed off to about 1 psig. The release of fission products through the electrical penetrations has ended. See Supplemental Scenario No. 8.

Expected Actions:

Monitor reactor power, and restore level to approximately 40".

Monitor containment radiation levels, and verify that the release has been terminated.

Continue in EOP-1A.

Continue to track the plume.

1991 PRACTICE EXERCISE  
 Message Number - 22

Clock Time - 1315  
 Scenario Time - 05/15

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SPC</u>		<u>5200</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SS</u>		<u>0</u>
LPCS	<u>SS</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>

	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>

	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>866</u>
SLC B	<u>OFF</u>	<u>21</u>	

	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>1</u>	<u>-120"</u>	<u>FZR</u>

	<u>DIESEL</u>	<u>SS</u>
DIV I	<u>DIESEL</u>	<u>SS</u>
DIV II	<u>DIESEL</u>	<u>SS</u>
DIV III	<u>DIESEL</u>	<u>SS</u>

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MV</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>

MSIV	<u>RED</u>	<u>GRN</u>
F022A	<u>OFF</u>	<u>ON</u>
F022B	<u>OFF</u>	<u>ON</u>
F022C	<u>OFF</u>	<u>ON</u>
F022D	<u>OFF</u>	<u>ON</u>
F028A	<u>OFF</u>	<u>ON</u>
F028B	<u>OFF</u>	<u>ON</u>
F028C	<u>OFF</u>	<u>ON</u>
F028D	<u>OFF</u>	<u>ON</u>

POWER	<u>0% APRM</u>	LEVEL	<u>-120"</u>
CNS P1A	<u>OP</u>	FWS P1A	<u>OP</u>
CNS P1B	<u>SS</u>	FWS P1B	<u>SS</u>
CNS P1C	<u>SS</u>	FWS P1C	<u>SS</u>

Total Feedwater Flow \* Mlbs./hr  
 \* - As Required

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>3.8</u>	<u>269°</u>	
CTMT	<u>1.1</u>	<u>99°</u>	
SPR FL		<u>193°</u>	<u>24'4"</u>

PANEL 870/601

SWP P2A	<u>OP</u>	SWP P2C	<u>OP</u>
SWP P2B	<u>OP</u>	SWP P2D	<u>OP</u>

PANEL 863

SGTS A	<u>OP</u>	SGTS B	<u>SS</u>
D/W COOLERS OPERATING			<u>ISOL</u>
CTMT COOLERS OPERATING			<u>A</u>

011 RPU ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

CONTAINMENT

DESIGN 14.5  
PRESS 1.5 PSIG

DRYWELL

OPER HI 1.68  
PRESS 3.8 PSIG

OPER HI 90  
TEMP 99 °F

OPER HI 135  
TEMP 269 °F

OPER HI 20-8  
LVL 24 FT 4 IN

OPER LO 19-6

SUPPRESSION  
POOL

RPU

SRV LIFT 1103  
PRESS 1 PSIG  
100% BPV 1025

TRIP HI 52  
LEVEL -720 IN  
SCRAM LO 9

POWER 0 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

SRU  
SHUT

MSIU  
SHUT

GROUP  
ISOL

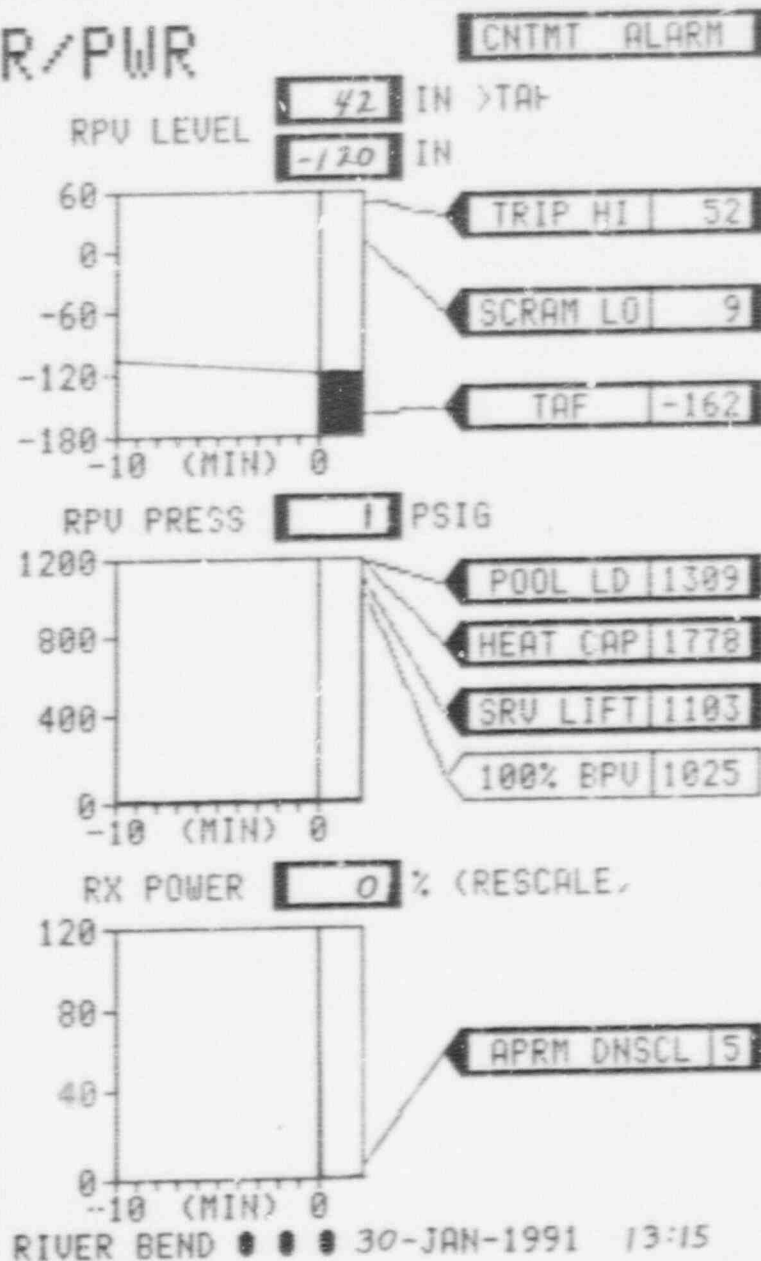
OPER HI 95  
TEMP 193 °F

SUPPRESSION  
POOL

013

## RPU CONTROL --WR/PWR

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCE	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASSES	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U. PWR NA	VALVE LN-UP	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP RUN	

DG  
NOT OPERSRV  
SHUTMSIU  
SHUTGROUP  
ISOLSCRAM  
NONE



# 027 RPU ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

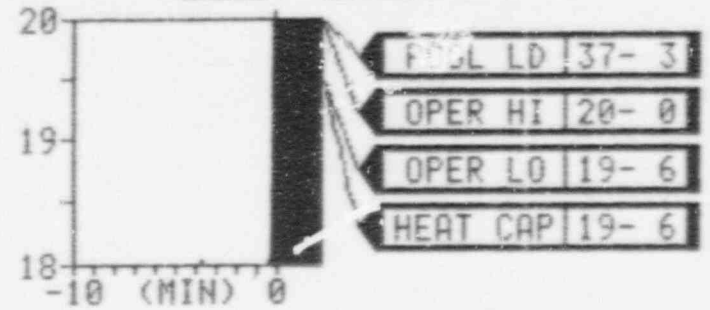
DG NOT OPER

SRU SHUT

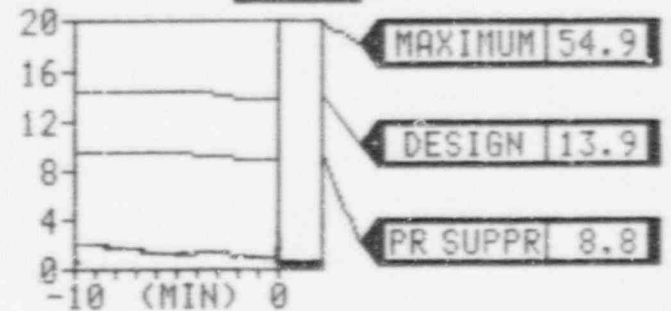
GROUP ISLN

SCRAM NONE

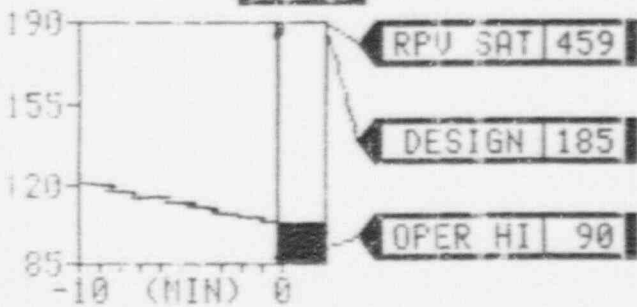
POOL LEVEL **24** FT **4** IN (RESCALE)



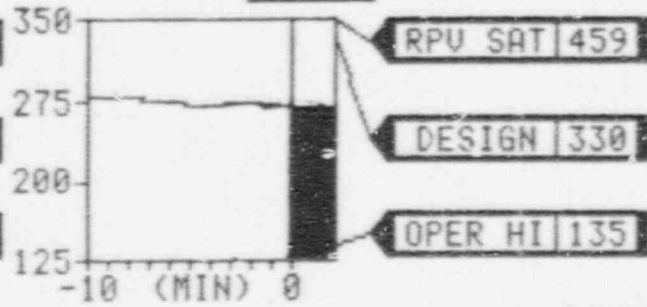
CNTMT PRESS **1.1** PSIG



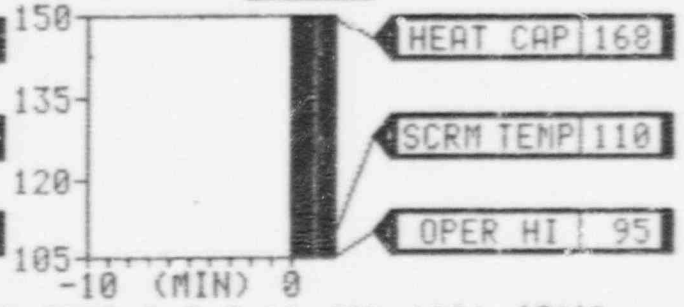
CNTMT TEMP **99** °F



DW TEMP **269** °F



POOL TEMP **193** °F



RIVER BEND ●●● 30-JAN-1991 13:15

1991 PRACTICE EXERCISE  
 Message Number: 22

Clock Time = 1315  
 Scenario Time = 05/15

RIVER BEND STATION  
 DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	5.0E2 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	20 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	10 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	20 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	5.0E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	20 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	20 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	5.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	5.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	5.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	5.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	5.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	5.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (A. & I)	20 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	20 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	20 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	5.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	5.0 mR/hr

☐ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other ARMs are "as read"

1991 PRACTICE EXERCISE  
 Message Number: 22

Clock Time = 1315  
 Scenario Time = 05/15

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	1.6E+00	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	2.3E+01	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6L	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	2.2E-02	μCi/cc	RE-103	SGTS Effluent (GAS)	5.4E-03	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	2.2E-02	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	2.2E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	2.2E-01	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	1.1E+06	μCi/sec	RE-11B	Annulus Exhaust (GAS)	2.2E-01	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	μCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	2.1E-04	μCi/cc				
RE-126G	Main Plant Exh. Duct (GAS)	2.2E-01	μCi/cc				

■ - Indicates Alarming  
 OSH - Indicates Offscale High  
 All other Process Monitors are "as read"

199: PRACTICE EXERCISE  
Message Number = 22.1x

Clock Time = 1320  
Scenario Time = 05/20

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Emergency Director from the KBR:

Recent information from General Electric shows that containment electrical penetrations associated with the BWR Mark III containment are prone to O-ring seal failures on the containment side when subjected to temperatures and/or pressures which exceed design parameters for the containment structure. This may lead to unacceptable leakage rates exceeding Technical Specification values, and potential loss of primary containment integrity.

1991 PRACTICE EXERCISE

Message Number = 22.1x

Clock Time = 10:09

Scenario Time = 10:09

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver this message to the Emergency Director.

Expected Actions:

1991 PRACTICE EXERCISE

Message Number = 22.1

Clock Time = 1325

Scenario Time = 05/25

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 22.1

Clock Time = 1325

Scenario Time = 05/25

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

---

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

111 lbs. of Boron has been injected into the reactor vessel. See table of injection requirements in Supplemental Scenario No. 5.

Operators should make preparations to establish long term shutdown cooling.

Expected Actions:

Operators should determine that 111 lbs. of Boron have been injected into the reactor vessel, and prepare to go into the Shutdown Cooling mode of RRS in accordance with EOP-1A.

1991 PRACTICE EXERCISE  
 Message Number - 22.1

Clock Time - 1325  
 Scenario Time - 05/25

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

Status	Press	Flow
RHR A SPC		5200
RHR B SPC		5200
RHR C SS		0
LPCS SS		0
RCIC OOS	0	0
HPCS SS	0	0
CRD A OP	1900	75
CRD B AV	0	0
SIG A OOS	Press	Level
SIG B OFF	0	446
	21	
RFV 1	Press	Range
	40"	WR
DIV I DIESEL	SS	
DIV II DIESEL	SS	
DIV III DIESEL	SS	

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE  
 SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

PANEL 601

SRV	RED	GRN	AC, MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF
MSIV	RED	GRN	
F022A	OFF	ON	
F022B	OFF	ON	
F022C	OFF	ON	
F022D	OFF	ON	
F028A	OFF	ON	
F028B	OFF	ON	
F028C	OFF	ON	
F028D	OFF	ON	

PANEL 680

POWER	DR APEM	LEVEL	40" NR
CNS P1A	OP	FWS P1A	OP
CNS P1B	SS	FWS P1B	SS
CNS P1C	SS	FWS P1C	SS

Total Feedwater Flow # Mibs./hr  
 \* - As Required

PANEL 808

	Press	Temp	Level
DRYWELL	2.9	257°	
CTMT	0.8	85°	
SFR FL		190°	24'4"

PANFL 870/601

SWP F2A	OP	SWP F7C	OP
SWP F2B	OP	SWP F7D	OP

PANEL 863

SGTS A	OP	SGTS B	SS
D/W COOLERS	OPERATING	ISOL	
CTMT COOLERS	OPERATING	A	



# 011 CONTAINMENT CRITICAL PLANT VARIABLES

CNTMT ALARM

CONTAINMENT

DESIGN 14.5  
PRESS 0.8 PSIG

OPER HI 90  
TEMP 85 °F

OPER HI 20-2  
LVL 24 FT 4 IN  
OPER LO 19-6

SUPPRESSION  
POOL

DRYWELL

OPER HI 1.68  
PRESS 2.9 PSIG

OPER HI 135  
TEMP 257 °F

RPU

SKU LIFT 1103  
PRESS 1 PSIG  
100% RPU 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 0 %  
APRM DNSCL 5

SCRAM  
NONE

DG  
NOT OPER

MSIU  
SHUT

SRU  
SHUT

GROUP  
ISOL

UPER HI 95  
TEMP 190 °F

SUPPRESSION  
POOL

RIVER BEND 30-JAN-1991 13:25

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCE	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCE	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PR HI	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL		POWER AVAIL	PUMP OFF
TURBINE CONTROL	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC AVAIL	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE		U. PWR NA	VALVE LN-UP
SLC	LIQUID AVAILABLE		POWER AVAIL	PUMP RUN

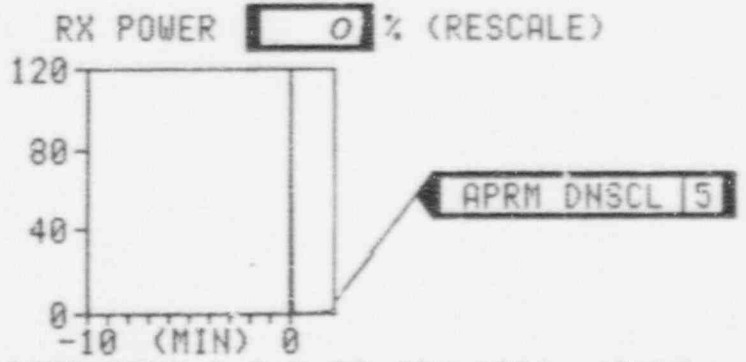
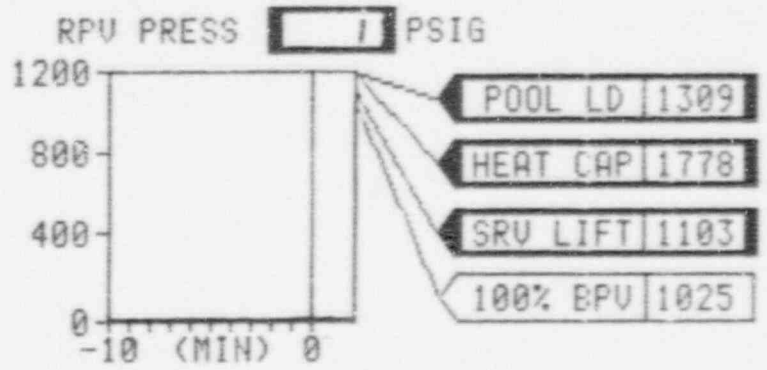
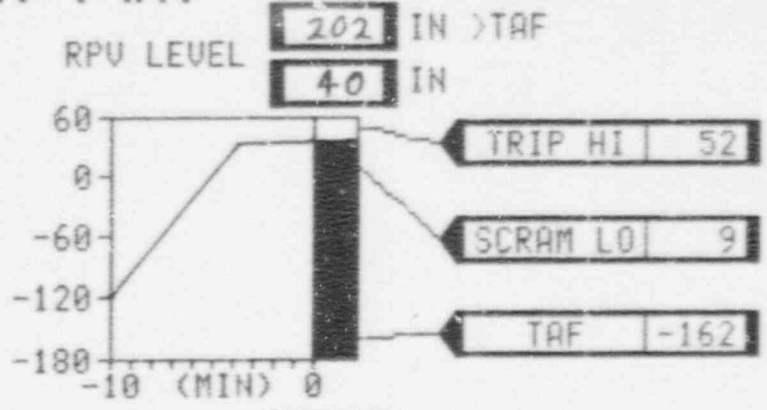
DG NOT OPER

SRV SHUT

MSIV SHUT

GROUP ISOL

SCRAM NONE



# 027 RPV ALARM CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

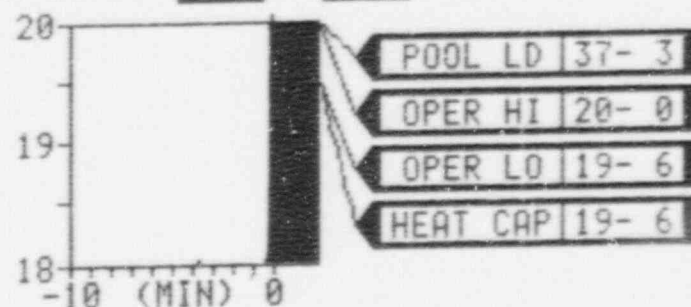
DG  
NOT OPER

SRU  
SHUT

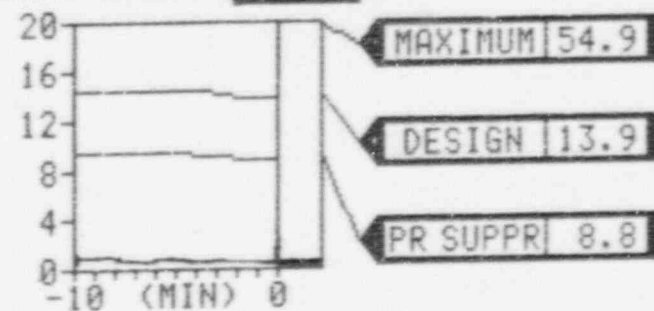
GROUP  
ISLN

SCRAM  
NONE

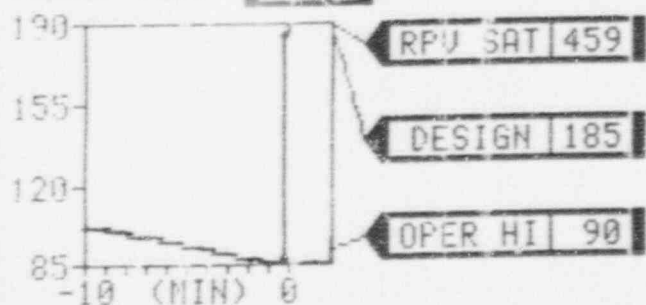
POOL LEVEL 24 FT 4 IN (RESCALE)



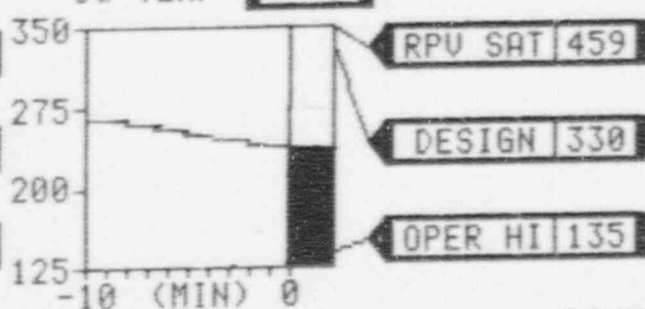
CNTMT PRESS 0.8 PSIG



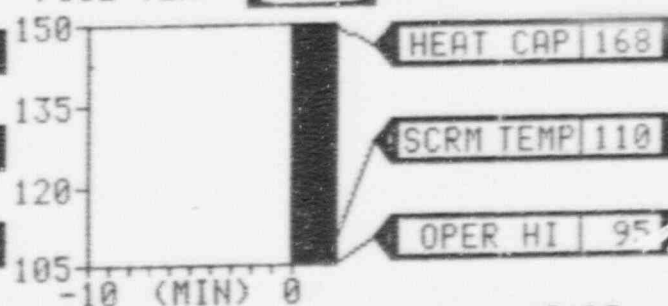
CNTMT TEMP 85 °F



DW TEMP 257 °F



POOL TEMP 190 °F



RIVER BEND ●●● 30-JAN-1991 13:25

1991 PRACTICE EXERCISE

Message Number = 23

Clock Time = 1330

Scenario Time = 05/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

---

\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 23

Clock Time = 1330

Scenario Time = 05/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant is in a cold shutdown condition. Boron injection has been terminated, all control rods inserted, reactor level restored, and shutdown cooling established.

Expected Actions:

Continue to monitor plant and environmental conditions.  
Formulate recovery plans.

1991 PRACTICE EXERCISE  
 Message Number - 23

Clock Time - 1330  
 Scenario Time - 05/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/81Z

RHR A	RHR B	RHR C	LPCS	RCIC	HPCS	CRD A	CRD B	SIC A	SIC B	RPV	DIV I	DIV II	DIV III
Status SPC	Status SPC	Status SS	Status SS	Status OOS	Status SS	Status OP	Status AV	Squib OOS	Squib OFF	Press 1	DIESEL	DIESEL	DIESEL
Flow 5200	Flow 5200	Flow 0	Flow 0	Flow 0	Flow 0	Flow 75	Flow 0	Level 320	Level 0	Range WR	SS	SS	SS
Press 0	Press 0	Press 0	Press 0	Press 0	Press 0	Press 1900	Press 0	Press 0	Press 0	Level 40"	SS	SS	SS

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE  
 SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

PANEL 601

SRV	RED	GRN	AC. MN
F041A	OFF	ON	OFF
F041B	OFF	ON	OFF
F041C	OFF	ON	OFF
F041D	OFF	ON	OFF
F041F	OFF	ON	OFF
F041G	OFF	ON	OFF
F041L	OFF	ON	OFF
F047A	OFF	ON	OFF
F047B	OFF	ON	OFF
F047C	OFF	ON	OFF
F047D	OFF	ON	OFF
F047F	OFF	ON	OFF
F051B	OFF	ON	OFF
F051C	OFF	ON	OFF
F051D	OFF	ON	OFF
F051G	OFF	ON	OFF

MSIV	F022A	F022B	F022C	F022D	F028A	F028B	F028C	F028D
RED	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
GRN	ON	ON	ON	ON	ON	ON	ON	ON

PANEL 680

POWER	0% AFPM	LEVEL	40" NR
CNS P1A	OP	FWS P1A	OP
CNS P1B	SS	FWS P1B	SS
CNS P1C	SS	FWS P1C	SS

Total Feedwater Flow \* --- Mlbs./hr  
 \* - As Required

PANEL 808

DRYWELL	CTMT	SPR PL	Press	Temp	Level
2.6	0.7	188°	2.6	253°	24'4"

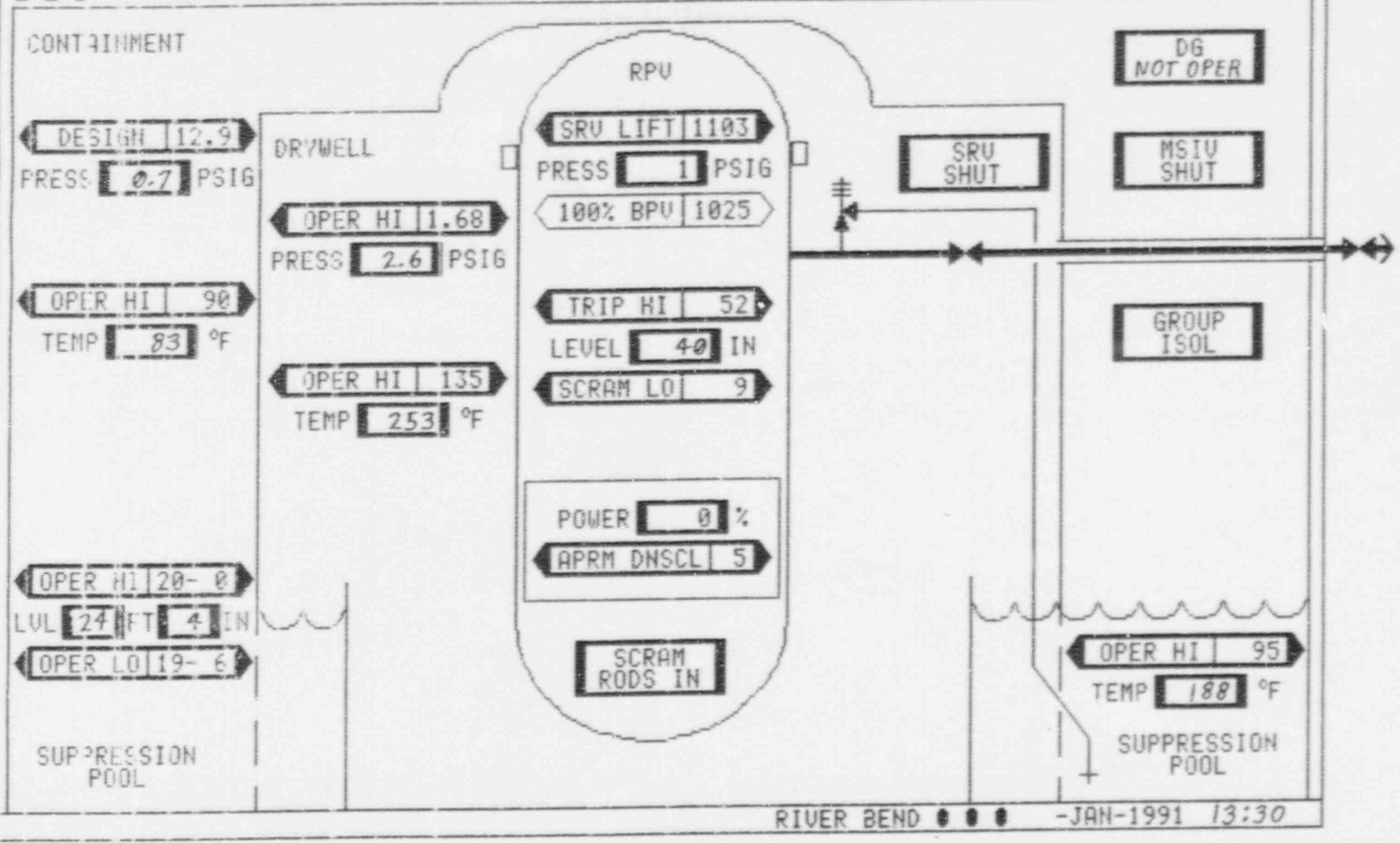
PANEL 870/601

SWP P2A	SWP P2B	SWP P2C	SWP P2D
OP	OP	OP	OP

PANEL 863

SGTS A	SGTS B	D/W COOLERS OPERATING	CTMT COOLERS OPERATING
OP	SS	ISOL	A

011 RPU NORMAL CRITICAL PLANT VARIABLES CNTMT ALARM

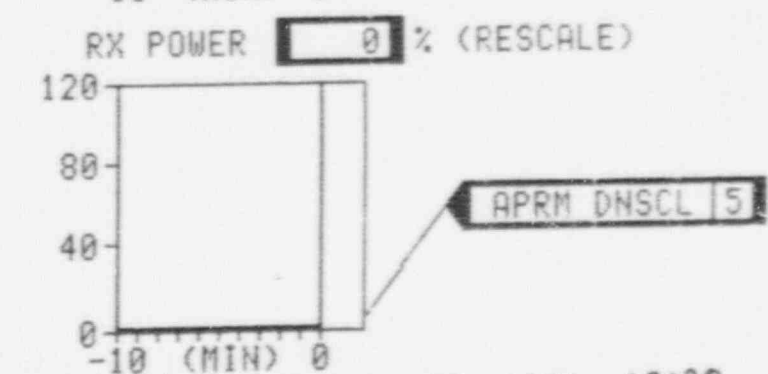
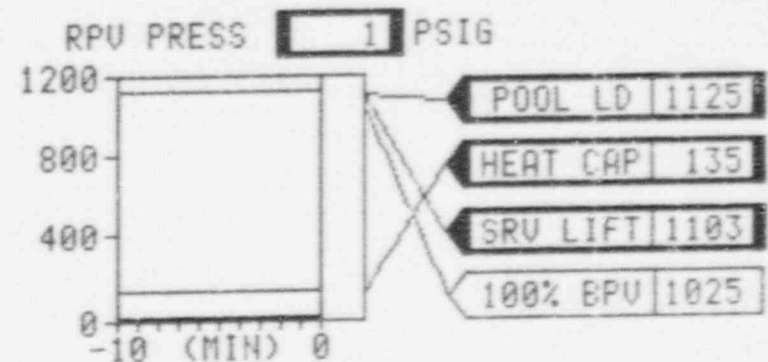
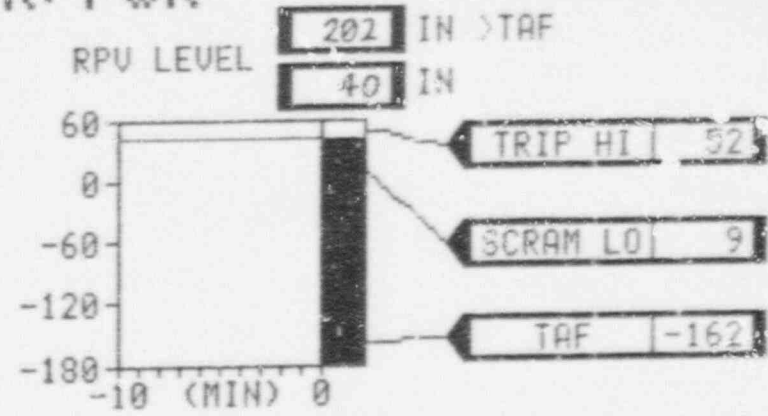


013

## RPV CONTROL--WR/PWR

CHIMT ALARM

CHDS/FW	WATER NA	RPV PR HI	POWER NA	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V. PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

DG  
NOT OPERSRV  
SHUTMSIV  
SHUTGROUP  
ISOLSCRAM  
RODS IN

RIVER BEND 000 30-JAN-1991 13:30



# 027 RPU NORMAL CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

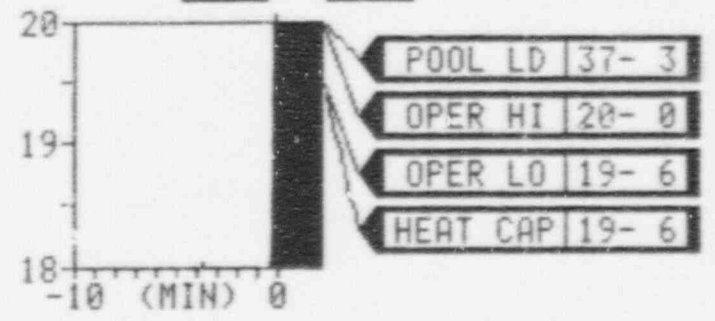
DG NOT OPER

SRU SHUT

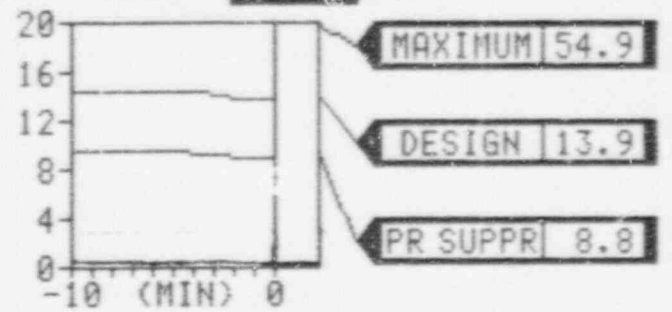
GROUP ISLN

SCRAM RODS IN

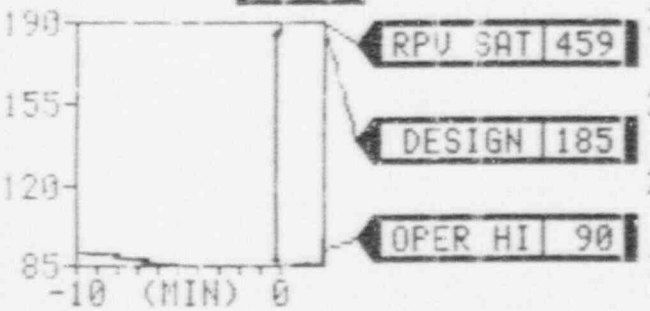
POOL LEVEL **24** FT **4** IN (RESCALE)



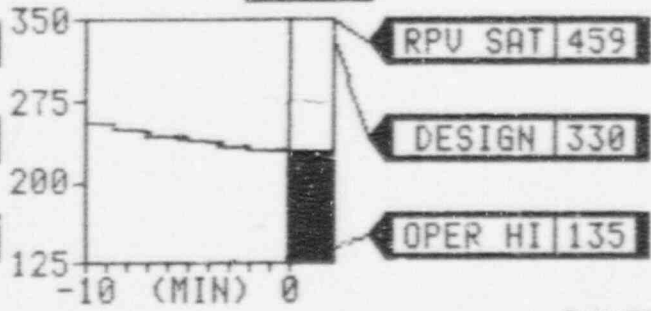
CNTMT PRESS **0.7** PSIG



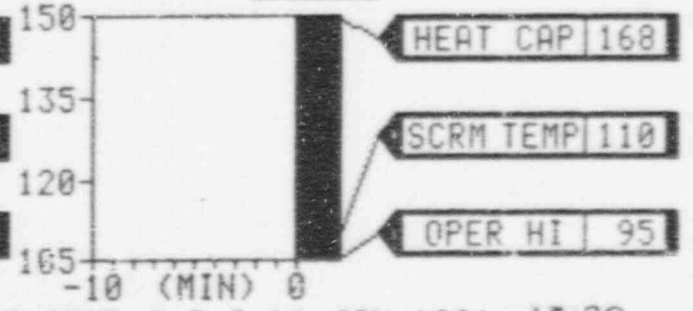
CNTMT TEMP **83** °F



DW TEMP **253** °F



POOL TEMP **188** °F



RIVER BEND ●●● 30-JAN-1991 13:30

1991 PRACTICE EXERCISE

Message Number: 23

Clock Time = 1330

Scenario Time = 05/30

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	1.9E2 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	8.0 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	4.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	8.0 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	1.9E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	8.0 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	8.0 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	2.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	2.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	2.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	2.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	7.5 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	8.0 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	7.5 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	2.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	2.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 23

Clock Time = 1330

Scenario Time = 05/30

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	6.4E-01 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	8.4E+00 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	8.7E-03 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.1E-03 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	8.7E-03 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	8.7E-03 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	8.8E-02 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	4.4E+05 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	8.8E-02 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor		0 mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc	Off Gas Post-treatment Monitor		0 cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		1000 mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		1000 mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		1000 mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu$ Ci/cc	Main Steam Line Radiation Monitor		1000 mR/hr
RE-126P	Main Plant Exh. Duct (PART)	8.1E-05 $\mu$ Ci/cc			
RE-126G	Main Plant Exh. Duct (GAS)	8.7E-03 $\mu$ Ci/cc			

☐ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 24

Clock Time = 1345

Scenario Time = 05/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 24

Clock Time = 1345

Scenario Time = 05/45

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant is in a cold shutdown condition.

Expected Actions:

Monitor plant and environmental conditions.

Consolidate recovery plans.

1991 PRACTICE EXERCISE  
 Message Number - 24

Clock Time - 1345  
 Scenario Time - 05/45

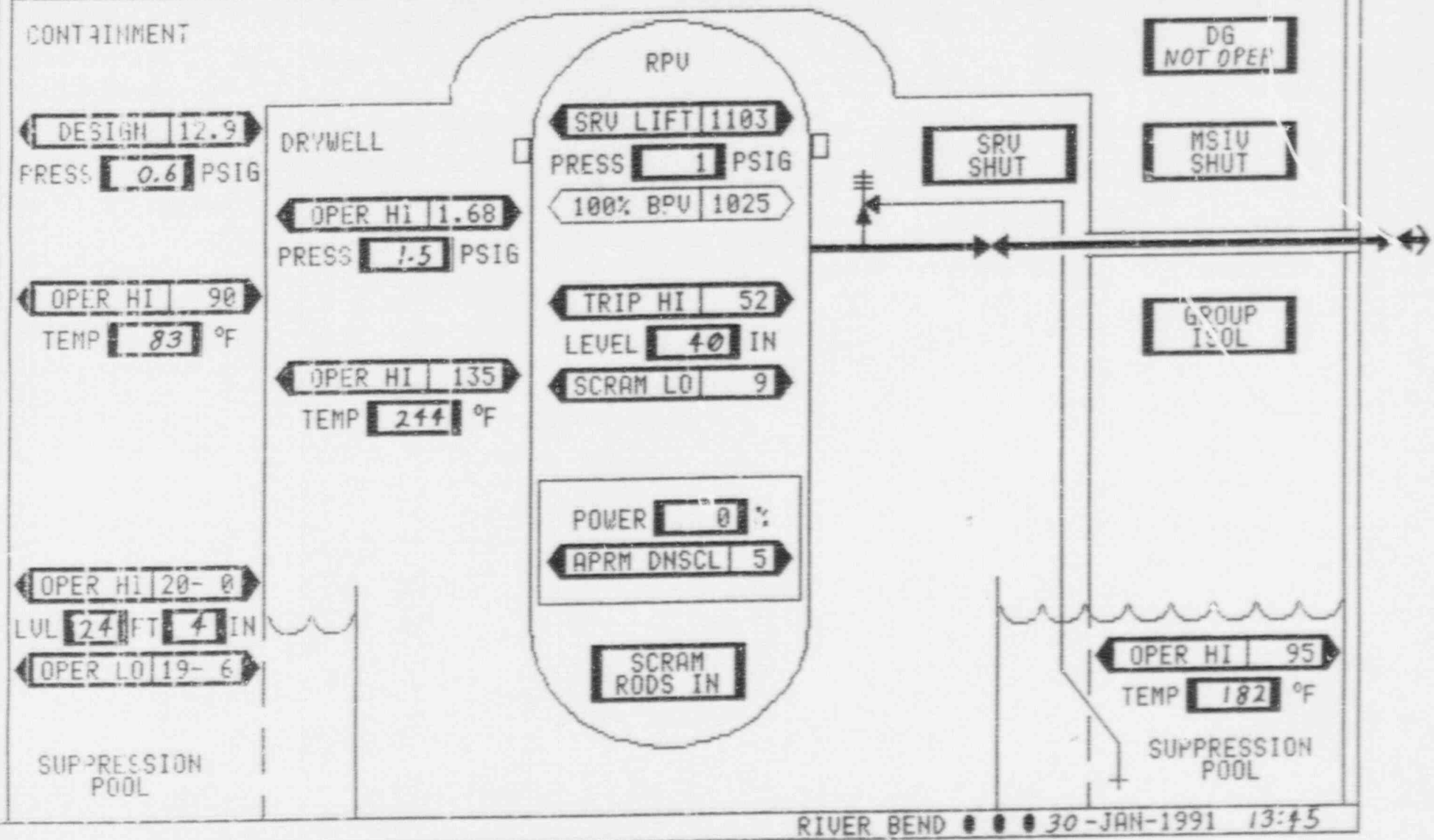
RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

<u>PANEL 601/877</u>				<u>PANEL 601</u>			<u>PANEL 680</u>					
	<u>Status</u>	<u>Press</u>	<u>Flow</u>	SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>	POWER	<u>On</u>	<u>APRM</u>	LEVEL	<u>40" NR</u>
RHR A	<u>SDC</u>		<u>5200</u>	F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CNS P1A	<u>OP</u>		FWS P1A	<u>OP</u>
RHR B	<u>SPC</u>		<u>5200</u>	F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CNS P1B	<u>SS</u>		FWS P1B	<u>SS</u>
RHR C	<u>SS</u>		<u>0</u>	F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CNS P1C	<u>SS</u>		FWS P1C	<u>SS</u>
LPCS	<u>SS</u>		<u>0</u>	F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	Total Feedwater Flow <u>*</u> Mlbs./hr				
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>	F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	* - As Required				
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>	F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 808</u>				
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>	F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>		<u>Press</u>		<u>Temp</u>	<u>Level</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>	F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	DRYWELL	<u>1.5</u>		<u>244°</u>	
	<u>Scrub</u>	<u>Press</u>	<u>Level</u>	F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	CTMT	<u>0.6</u>		<u>83°</u>	
SLC A	<u>OOS</u>	<u>0</u>	<u>320</u>	F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SPR PL			<u>182°</u>	<u>24'4"</u>
SLC B	<u>OFF</u>	<u>0</u>		F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 870/601</u>				
	<u>Press</u>	<u>Level</u>	<u>Range</u>	F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2A	<u>OP</u>		SWP P2C	<u>OP</u>
RPV	<u>1</u>	<u>40"</u>	<u>WR</u>	F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SWP P2B	<u>OP</u>		SWP P2D	<u>OP</u>
DIV I	DIESEL	<u>SS</u>		F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>PANEL 863</u>				
DIV II	DIESEL	<u>SS</u>		F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	SGTS A	<u>OP</u>		SGTS B	<u>SS</u>
DIV III	DIESEL	<u>SS</u>		F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	D/W COOLERS	OPERATING		ISOL	
				MSIV	<u>RED</u>	<u>GRN</u>		CTMT COOLERS	OPERATING		<u>A</u>	
				F022A	<u>OFF</u>	<u>ON</u>						
				F022B	<u>OFF</u>	<u>ON</u>						
				F022C	<u>OFF</u>	<u>ON</u>						
				F022D	<u>OFF</u>	<u>ON</u>						
				F028A	<u>OFF</u>	<u>ON</u>						
				F028B	<u>OFF</u>	<u>ON</u>						
				F028C	<u>OFF</u>	<u>ON</u>						
				F028D	<u>OFF</u>	<u>ON</u>						

OP-OPERATING  
 OOS-OUT OF SERVICE  
 AV-AVAILABLE

SR-STANDBY READY  
 SS-SECURED STATUS  
 ISOL-ISOLATED

011 RPU NORMAL CRITICAL PLANT VARIABLES CNTMT ALARM

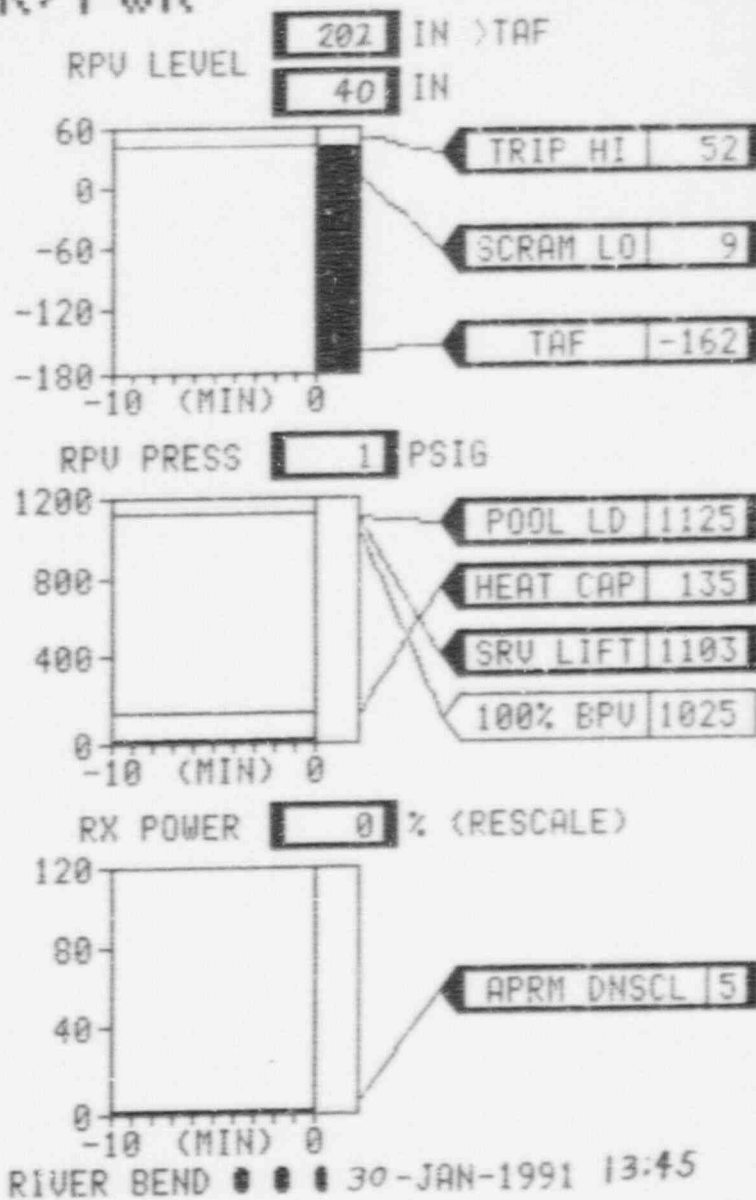


013

## RPV CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER NA	RPV PR HI	POWER NA	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	U.PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

DG  
NOT OPERSRU  
SHUTMSIU  
SHUTGROUP  
ISOLSCRAM  
RODS IN



# 027 RPV NORMAL CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

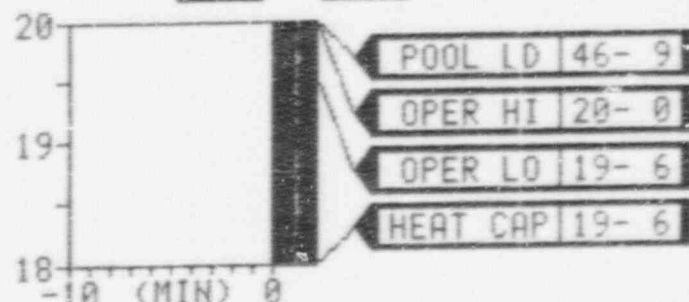
DG NOT OPER

SRU SHUT

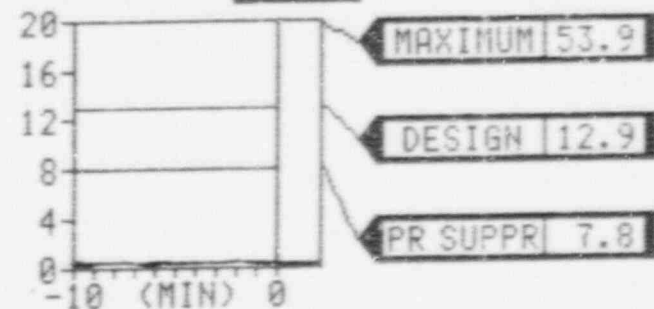
GROUP ISOL

SCRAM RODS IN

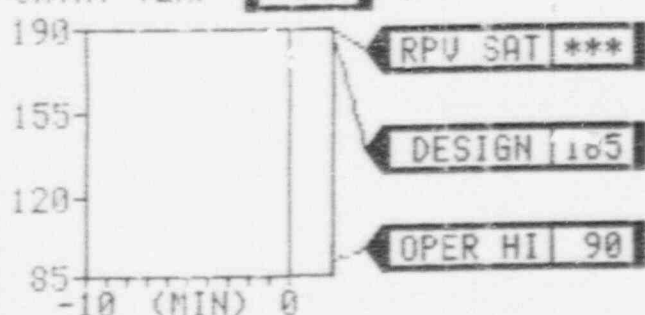
POOL LEVEL 24 FT 4 IN (RESCALE)



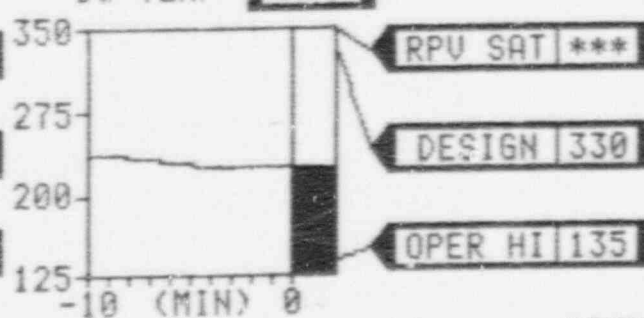
CNTMT PRESS 0.6 PSIG



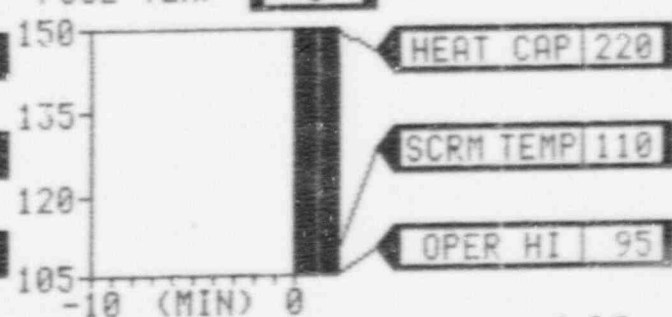
CNTMT TEMP 83 °F



DW TEMP 244 °F



POOL TEMP 182 °F



RIVER BEND ●●● 30-JAN-1991 13:45

1991 PRACTICE EXERCISE

Message Number: 24Clock Time = 1345Scenario Time = 05/45

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	1.9E2 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	8.0 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	4.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	8.0 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	1.9E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	8.0 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	8.0 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	2.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	2.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	2.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	2.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	7.5 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	8.0 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	7.5 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	2.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	2.0 mR/hr

☐ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 24Clock Time = 1345Scenario Time = 05/45RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	6.4E-01	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	8.2E+00	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	4.3E-05	μCi/cc	RE-103	SGTS Effluent (GAS)	1.1E-05	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	3.3E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	4.4E-04	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	2.2E+03	μCi/sec	RE-11B	Annulus Exhaust (GAS)	4.4E-04	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.9E-12	μCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	4.0E-07	μCi/cc				
RE-126G	Main Plant Exh. Duct (GAS)	4.3E-05	μCi/cc				

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 25

Clock Time = 1400

Scenario Time = 06/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 25

Clock Time = 1400

Scenario Time = 06/00

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant is in a cold shutdown cond. on.

Plume is dispersed within the 10 mile EPZ.

Expected Actions:

Monitor plant and environmental conditions.

Consolidate recovery plans.

1991 PRACTICE EXERCISE  
 Message Number - 25

Clock Time - 1400  
 Scenario Time - 06/00

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SDC</u>		<u>5200</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SS</u>		<u>0</u>
LPCS	<u>SS</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>320</u>
SLC B	<u>OFF</u>	<u>0</u>	
	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>1</u>	<u>40"</u>	<u>WR</u>
DIV I	<u>DIESEL</u>	<u>SS</u>	
DIV II	<u>DIESEL</u>	<u>SS</u>	
DIV III	<u>DIESEL</u>	<u>SS</u>	

PANEL 601

	<u>SRV</u>	<u>RED</u>	<u>GRN</u>	<u>AG.MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	
	<u>RED</u>	<u>GRN</u>		
MSIV	<u>OFF</u>	<u>ON</u>		
F022A	<u>OFF</u>	<u>ON</u>		
F022B	<u>OFF</u>	<u>ON</u>		
F022C	<u>OFF</u>	<u>ON</u>		
F022D	<u>OFF</u>	<u>ON</u>		
F028A	<u>OFF</u>	<u>ON</u>		
F028B	<u>OFF</u>	<u>ON</u>		
F028C	<u>OFF</u>	<u>ON</u>		
F028D	<u>OFF</u>	<u>ON</u>		

PANEL 680

<u>POWER</u>	<u>OP APRM</u>	<u>LEVEL</u>	<u>40" NR</u>
CNS P1A	<u>OP</u>	FWS P1A	<u>OP</u>
CNS P1B	<u>SS</u>	FWS P1B	<u>SS</u>
CNS P1C	<u>SS</u>	FWS P1C	<u>SS</u>

Total Feedwater Flow \* Mlbs./hr  
 \* - As Required

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>1.0</u>	<u>231°</u>	
CTMT	<u>0.6</u>	<u>83°</u>	
SPR PL		<u>175°</u>	<u>24'4"</u>

PANEL 870/601

SWP P2A	<u>OP</u>	SWP P2C	<u>OP</u>
SWP P2B	<u>OP</u>	SWP P2D	<u>OP</u>

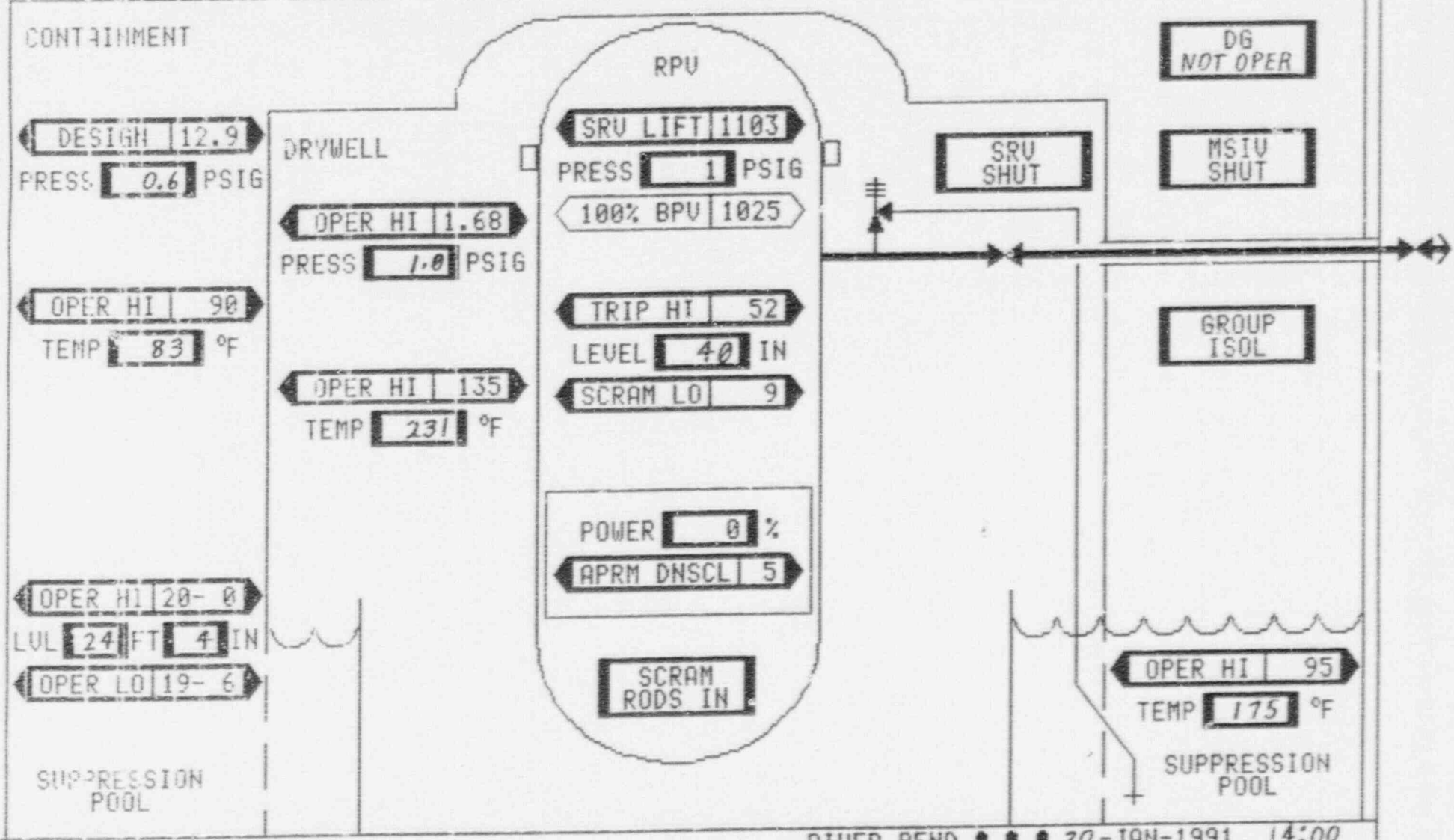
PANEL 863

SGTS A	<u>OP</u>	SGTS B	<u>SS</u>
D/W COOLERS OPERATING			<u>ISOL</u>
CTMT COOLERS OPERATING			<u>A</u>

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

011 RPU NORMAL CRITICAL PLANT VARIABLES CNTMT ALARM



CONTAINMENT

DESIGN 12.9  
PRESS. 0.6 PSIG

DRYWELL

OPER HI 1.68  
PRESS 1.0 PSIG

OPER HI 90  
TEMP 83 °F

OPER HI 135  
TEMP 231 °F

OPER HI 20-0  
LVL 24 FT 4 IN  
OPER LO 19-6

SUPPRESSION POOL

RPU

SRV LIFT 1103  
PRESS 1 PSIG  
100% BPV 1025

TRIP HI 52  
LEVEL 40 IN  
SCRAM LO 9

POWER 0 %  
APRM DNSCL 5

SCRAM RODS IN

DG NOT OPER

MSIV SHUT

GROUP ISOL

OPER HI 95  
TEMP 175 °F

SUPPRESSION POOL

013

# RPV CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW

WATER NA	RPV PR HI	POWER NA	PUMP RUN
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CRD

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
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RCIC

WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
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HPCS

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
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LPCS

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
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LPCI

WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
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SHTDN COOLING

CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
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RWCU

COOLING NOT AVAIL	POWER AVAIL	PUMP OFF
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TURBINE CONTROL

CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
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TURBINE BYPASS

CLG AVAIL	VAC NA	H. PWR AVAIL	VALVE SHUT
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MSL DRAINS

COOLING AVAILABLE	V. PWR NA	VALVE SHUT
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SLC

LIQUID AVAILABLE	POWER AVAIL	PUMP OFF
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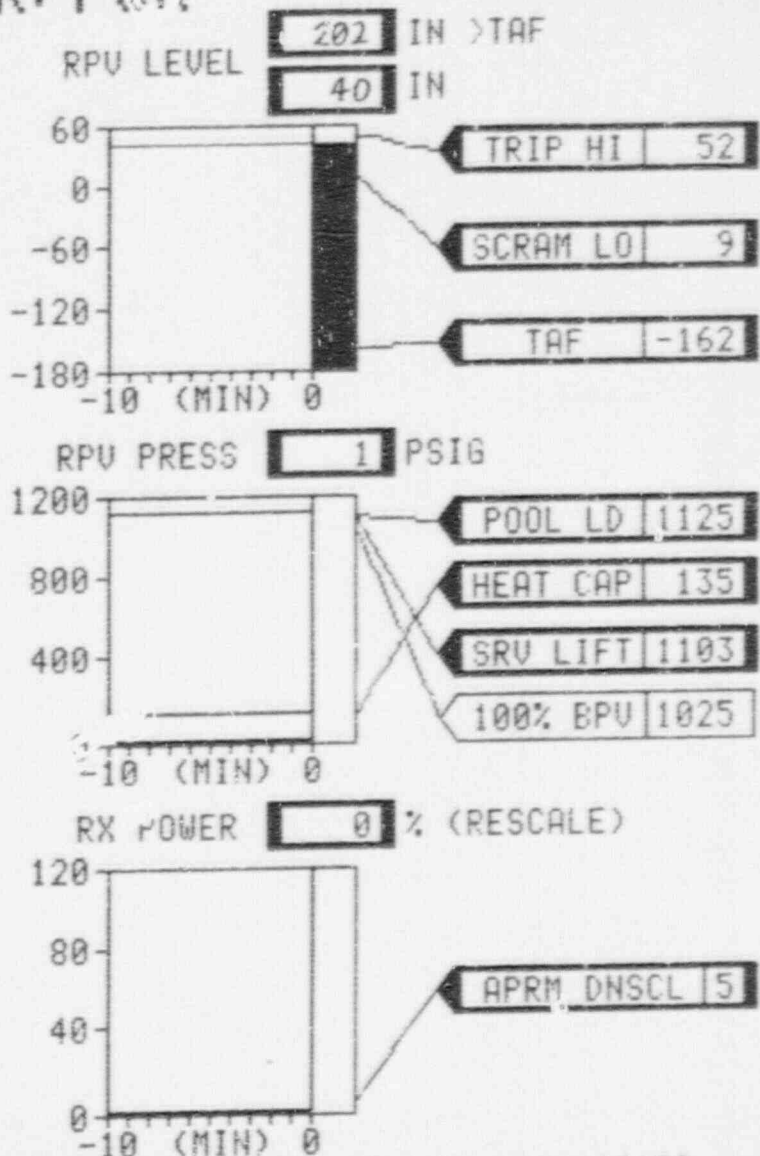
DG NOT OPER

SRV SHUT

MSIV SHUT

GROUP ISOL

SCRAM RODS IN



RIVER BEND 000 30-JAN-1991 14:00



# 027 RPU NORMAL CONTAINMENT CONTROL--UPSET/MR

POOL COOLING COOLING AVAILABLE POWER AVAIL PUMP RUN

DG NOT OPEN

DRYWELL COOLING NOT AVAIL POWER AVAIL FAN OFF

SRV SHUT

CNTMT COOLING AVAIL POWER AVAIL FAN RUN

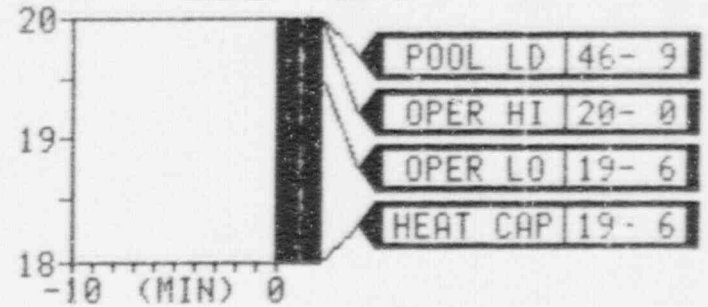
GROUP ISOL

PRESS CONTROL VALVE SHUT POWER AVAIL FAN OFF

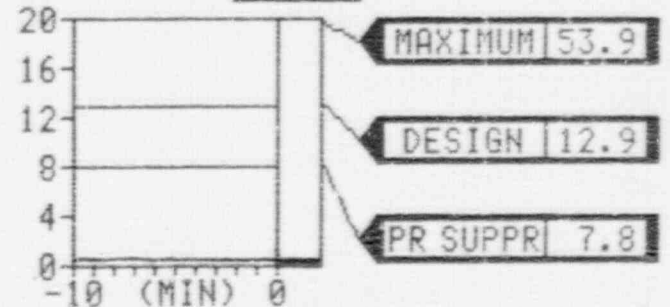
SBGT VALVE LINE-UP POWER AVAIL FAN RUN

SCRAM RODS IN

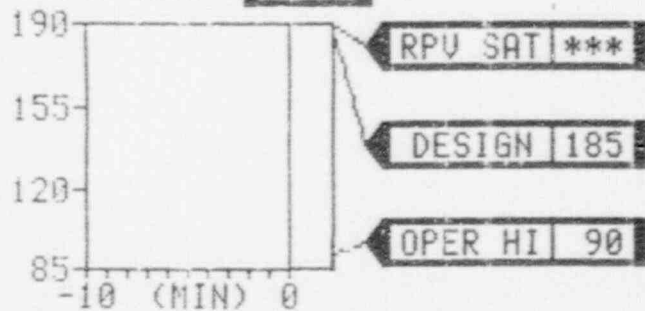
POOL LEVEL 24 FT 4 IN (RESCALE)



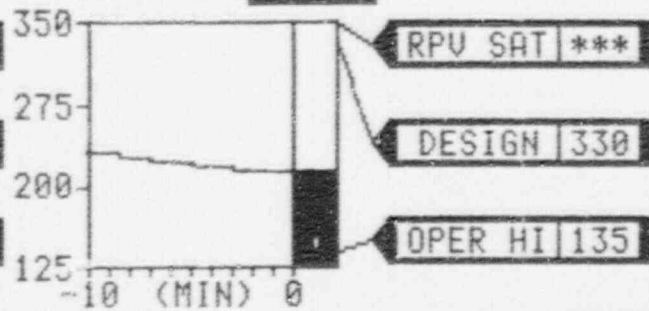
CNTMT PRESS 0.6 PSIG



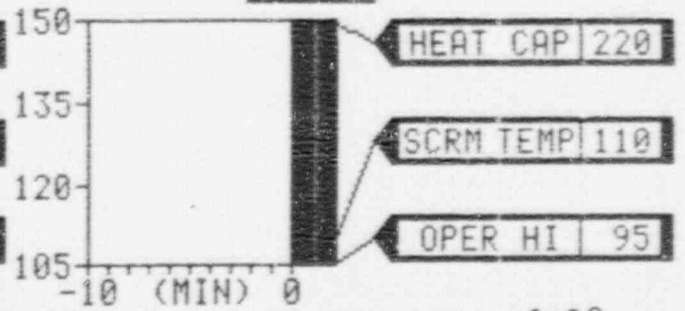
CNTMT TEMP 83 °F



DW TEMP 231 °F



POOL TEMP 175 °F



RIVER BEND 30-JAN-1991 14:00

1991 PRACTICE EXERCISE

Message Number: 25Clock Time = 1400Scenario Time = 06/00RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	1.9E2 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	8.0 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	4.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	8.0 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	1.9E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	8.0 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg. Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	8.0 mR/hr
RE-165	Cond. Demin. Regen. Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	2.0 mR/hr
RE-166	Cond. Demin. Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	2.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	2.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	2.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	7.5 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	8.0 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	7.5 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	2.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	2.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 25

Clock Time = 1400

Scenario Time = 06/00

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING		ID NUMBER	LOCATION (TYPE)	READING	
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111P	Cont. Atmosphere (PART)	6.4E-01	μCi/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00	μCi/sec	RE-111G	Cont. Atmosphere (GAS)	8.4E+00	μCi/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07	μCi/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01	μCi/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05	μCi/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.6E-07	μCi/cc	RE-103	SGTS Effluent (GAS)	2.0E-06	μCi/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04	μCi/cc	RE-116	Containment Purge (GAS)	3.0E-06	μCi/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02	μCi/cc	RE-11A	Annulus Exhaust (GAS)	6.8E-06	μCi/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.4E+01	μCi/sec	RE-11B	Annulus Exhaust (GAS)	6.2E-06	μCi/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12	μCi/cc				
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08	μCi/cc				
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11	μCi/cc	Off Gas Pre-treatment Monitor		0	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10	μCi/cc	Off Gas Post-treatment Monitor		0	cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	3.5E-10	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	5.6E-07	μCi/cc	Main Steam Line Radiation Monitor		1000	mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE

Message Number = 26

Clock Time = 1415

Scenario Time = 06/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Control Room

Plant Status Update

1991 PRACTICE EXERCISE

Message Number = 26

Clock Time = 1415

Scenario Time = 06/15

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Plant is in a cold shutdown condition.

Plume is dispersed within the 10 mile EPZ.

Expected Actions:

Monitor plant and environmental conditions.

Consolidate recovery plans.

1991 PRACTICE EXERCISE  
 Message Number - 26

Clock Time - 1415  
 Scenario Time - 06/15

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SDC</u>		<u>5200</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SS</u>		<u>0</u>
LPCS	<u>SS</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>
	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>320</u>
SLC B	<u>OFF</u>	<u>0</u>	
	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>1</u>	<u>40"</u>	<u>WR</u>
DIV I	<u>DIESEL</u>	<u>SS</u>	
DIV II	<u>DIESEL</u>	<u>SS</u>	
DIV III	<u>DIESEL</u>	<u>SS</u>	

SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
MSIV	<u>RED</u>	<u>GRN</u>	
F022A	<u>OFF</u>	<u>ON</u>	
F022B	<u>OFF</u>	<u>ON</u>	
F022C	<u>OFF</u>	<u>ON</u>	
F022D	<u>OFF</u>	<u>ON</u>	
F028A	<u>OFF</u>	<u>ON</u>	
F028B	<u>OFF</u>	<u>ON</u>	
F028C	<u>OFF</u>	<u>ON</u>	
F028D	<u>OFF</u>	<u>ON</u>	

POWER	<u>0% A/RM</u>	LEVEL	<u>40" NR</u>
CNS P1A	<u>OP</u>	FWS P1A	<u>OP</u>
CNS P1B	<u>SS</u>	FWS P1B	<u>SS</u>
CNS P1C	<u>SS</u>	FWS P1C	<u>SS</u>

Total Feedwater Flow \* Mlbs./hr  
 \* - As Required

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>1.0</u>	<u>231°</u>	
CTMT	<u>0.6</u>	<u>83°</u>	
SPR PL		<u>175°</u>	<u>24'4"</u>

PANEL 870/601

SWP P2A	<u>OP</u>	SWP P2C	<u>OP</u>
SWP P2B	<u>OP</u>	SWP P2D	<u>OP</u>

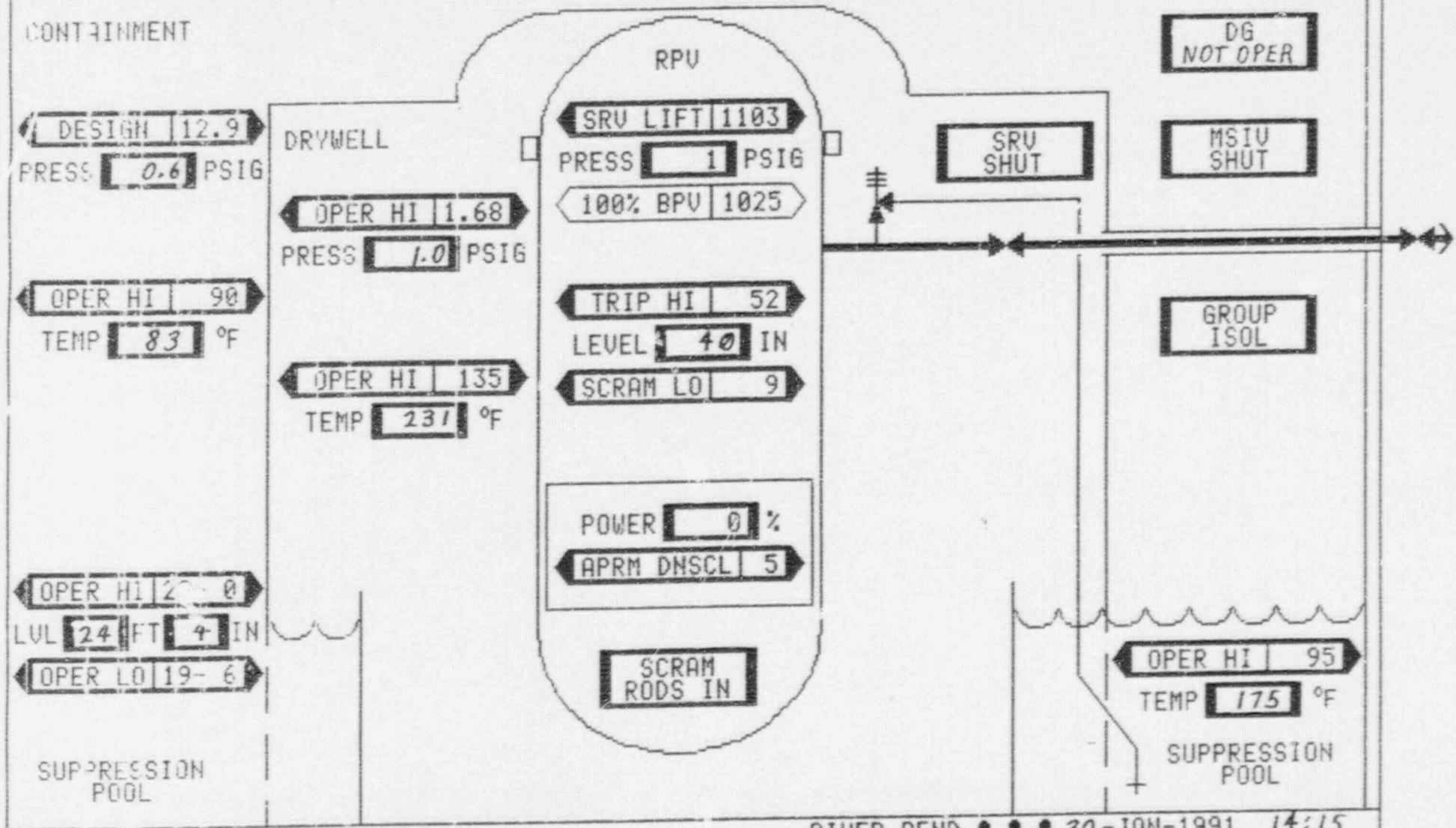
PANEL 863

SGTS A	<u>OP</u>	SGTS B	<u>SS</u>
D/W COOLERS OPERATING			<u>ISOL</u>
CTMT COOLERS OPERATING			<u>A</u>

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

011 RPU NORMAL CRITICAL PLANT VARIABLES CNTMT ALARM



013

# RPV CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER NA	RPV PR HI	POWER NA	PUMP RUN
CRD	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPV PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPV PRESS	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V.PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

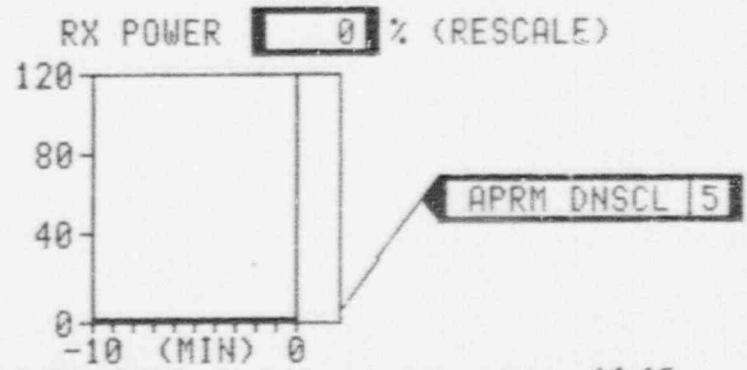
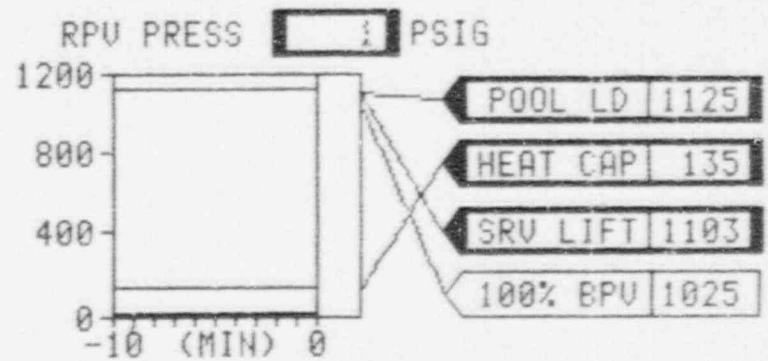
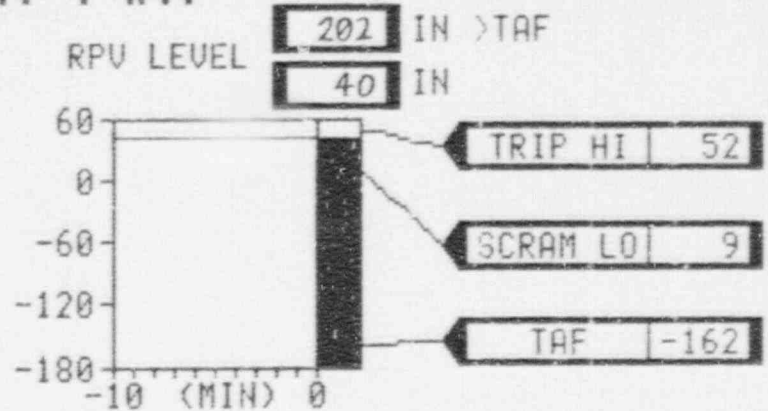
DG NOT OPER

SRV SHUT

MSIV SHUT

GROUP ISOL

SCRAM RODS IN



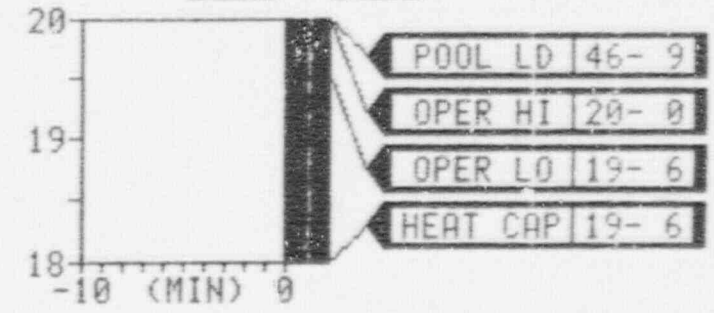


# 027 RPU NORMAL CONTAINMENT CONTROL--UPSET/MR

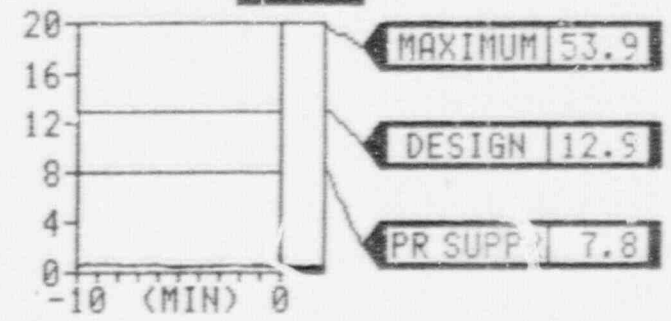
POOL COOLING	COOLING AVAILABLE	POWER AVAIL	PUMP RUN
DRYWELL COOLING	COOLING NOT AVAIL	POWER AVAIL	FAN OFF
CNTMT COOLING	COOLING AVAIL	POWER AVAIL	FAN RUN
PRESS CONTROL	VALVE SHUT	POWER AVAIL	FAN OFF
SBGT	VALVE LINE-UP	POWER AVAIL	FAN RUN

- DG NOT OPER
- SRV SHUT
- GROUP ISOL
- SCRAM RODS IN

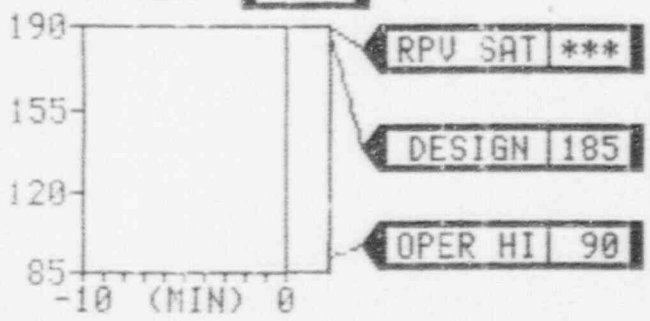
POOL LEVEL **24** FT **4** IN (RESCALE)



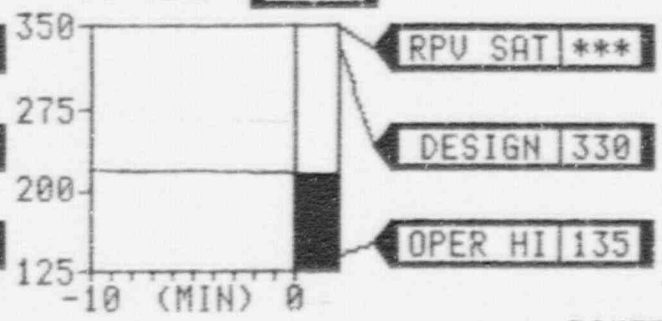
CNTMT PRESS **0.6** PSIG



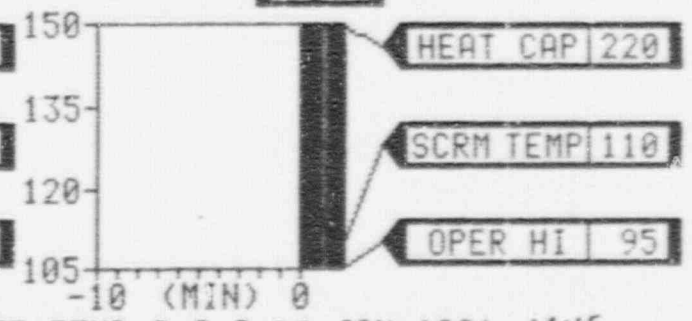
CNTMT TEMP **83** °F



DW TEMP **231** °F



POOL TEMP **175** °F



RIVER BEND ●●● 30-JAN-1991 14:15

1991 PRACTICE EXERCISE

Message Number: 26

Clock Time = 1415

Scenario Time = 06/15

RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	1.9E2 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	3.0 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	4.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	8.0 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	1.9E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	8.0 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	8.0 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	2.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	2.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	2.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	2.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	7.5 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	8.0 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	7.5 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	2.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	2.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 26

Clock Time = 1415  
Scenario Time = 06/15

RIVER BEND STATION  
PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111P	Cont. Atmosphere (PART)	6.4E-01 $\mu$ Ci/cc
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu$ Ci/sec	RE-111G	Cont. Atmosphere (GAS)	8.4E+00 $\mu$ Ci/cc
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu$ Ci/cc
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu$ Ci/sec	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu$ Ci/cc
1GE-125	Main Plant Exh. Duct (WRGM)	5.6E-07 $\mu$ Ci/cc	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu$ Ci/cc
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu$ Ci/cc	RE-116	Containment Purge (GAS)	3.0E-06 $\mu$ Ci/cc
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu$ Ci/cc	RE-11A	Annulus Exhaust (GAS)	3.5E-06 $\mu$ Ci/cc
4GE-125	Main Plant Exh. Duct (WRGM)	3.4E+01 $\mu$ Ci/sec	RE-11B	Annulus Exhaust (GAS)	3.5E-06 $\mu$ Ci/cc
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu$ Ci/cc	Off Gas Pre-treatment Monitor	0	mR/hr
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu$ Ci/cc	Off Gas Post-treatment Monitor	0	cpm
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu$ Ci/cc	Main Steam Line Radiation Monitor	1000	mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10 $\mu$ Ci/cc			
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu$ Ci/cc			

■ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

1991 PRACTICE EXERCISE  
Message Number = 27

Clock Time = 1430  
Scenario Time = 06/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
MESSAGE

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\*\*\* THIS IS A DRILL \*\*\*

Message To: Recovery Manager

The Exercise may be terminated with concurrence from the Lead Exercise Controller.

1991 PRACTICE EXERCISE

Message Number = 27

Clock Time = 1430

Scenario Time = 06/30

RIVER BEND STATION  
EMERGENCY PREPAREDNESS PRACTICE EXERCISE  
CONTROLLER INFORMATION

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\*\*\* THIS IS A DRILL \*\*\*

Controller Information:

Deliver this message after all objectives have been evaluated.

Expected Actions:

Announce termination on Gaitronics and commence facility critiques.

1991 PRACTICE EXERCISE  
 Message Number - 27

Clock Time - 1430  
 Scenario Time - 06/30

RIVER BEND STATION  
 EMERGENCY PREPAREDNESS EXERCISE  
 CONTROL ROOM DATA

PANEL 601/877

PANEL 601

PANEL 680

	<u>Status</u>	<u>Press</u>	<u>Flow</u>
RHR A	<u>SDC</u>		<u>5200</u>
RHR B	<u>SPC</u>		<u>5200</u>
RHR C	<u>SS</u>		<u>0</u>
LPCS	<u>SS</u>		<u>0</u>
RCIC	<u>OOS</u>	<u>0</u>	<u>0</u>
HPCS	<u>SS</u>	<u>0</u>	<u>0</u>
CRD A	<u>OP</u>	<u>1900</u>	<u>75</u>
CRD B	<u>AV</u>	<u>0</u>	<u>0</u>

	<u>Squib</u>	<u>Press</u>	<u>Level</u>
SLC A	<u>OOS</u>	<u>0</u>	<u>320</u>
SLC B	<u>OFF</u>	<u>0</u>	

	<u>Press</u>	<u>Level</u>	<u>Range</u>
RPV	<u>1</u>	<u>40"</u>	<u>WR</u>

DIV I DIESEL SS  
 DIV II DIESEL SS  
 DIV III DIESEL SS

SRV	<u>RED</u>	<u>GRN</u>	<u>AC.MN</u>
F041A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F041L	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047A	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F047F	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051B	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051C	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051D	<u>OFF</u>	<u>ON</u>	<u>OFF</u>
F051G	<u>OFF</u>	<u>ON</u>	<u>OFF</u>

MSIV	<u>RED</u>	<u>GRN</u>
F022A	<u>OFF</u>	<u>ON</u>
F022B	<u>OFF</u>	<u>ON</u>
F022C	<u>OFF</u>	<u>ON</u>
F022D	<u>OFF</u>	<u>ON</u>
F028A	<u>OFF</u>	<u>ON</u>
F028B	<u>OFF</u>	<u>ON</u>
F028C	<u>OFF</u>	<u>ON</u>
F028D	<u>OFF</u>	<u>ON</u>

POWER	<u>0% APRM</u>	LEVEL	<u>40" NR</u>
CNS P1A	<u>OP</u>	FWS P1A	<u>OP</u>
CNS P1B	<u>SS</u>	FWS P1B	<u>SS</u>
CNS P1C	<u>SS</u>	FWS P1C	<u>SS</u>

Total Feedwater Flow \*  Mlbs./hr  
 \* - As Required

PANEL 808

	<u>Press</u>	<u>Temp</u>	<u>Level</u>
DRYWELL	<u>1.0</u>	<u>231°</u>	
CTMT	<u>0.6</u>	<u>83°</u>	
SPR PL		<u>175°</u>	<u>24'4"</u>

PANEL 870/601

SWP P2A	<u>OP</u>	SWP P2C	<u>OP</u>
SWP P2B	<u>OP</u>	SWP P2D	<u>OP</u>

PANEL 863

SGTS A	<u>OP</u>	SGTS B	<u>SS</u>
D/W COOLERS OPERATING		ISOL	<u>ISOL</u>
CTMT COOLERS OPERATING			<u>A</u>

OP=OPERATING  
 OOS=OUT OF SERVICE  
 AV=AVAILABLE

SR=STANDBY READY  
 SS=SECURED STATUS  
 ISOL=ISOLATED

011 RPU NORMAL CRITICAL PLANT VARIABLES CNTMT ALARM

CONTAINMENT

DESIGN 12.9  
PRESS 0.6 PSIG

DRYWELL

OPER HI 1.68  
PRESS 1.0 PSIG

OPER HI 90  
TEMP 83 °F

OPER HI 135  
TEMP 231 °F

OPER HI 20-0  
LVL 24 FT 4 IN

OPER LO 19-6

SUPPRESSION POOL

RPU

SRV LIFT 1103  
PRESS 1 PSIG

100% BPU 1025

TRIP HI 52

LEVEL 40 IN

SCRAM LO 9

POWER 0 %

APRM DNSCL 5

SCRAM RODS IN

SRV SHUT

DG NOT OPER

MSIV SHUT

GROUP ISOL

OPER HI 95

TEMP 175 °F

SUPPRESSION POOL

013

# RPU CONTROL--WR/PWR

CNTMT ALARM

CHDS/FW	WATER NA	RPU PR HI	POWER NA	PUMP RUN
CRD	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RCIC	WATER AVAIL	RPU PRESS	POWER NA	PUMP OFF
HPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCS	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP OFF
LPCI	WATER AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
SHTDN COOLING	CLG AVAIL	RPU PRESS	POWER AVAIL	PUMP RUN
RWCU	COOLING NOT AVAIL	POWER AVAIL	PUMP OFF	
TURBINE CONTROL	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
TURBINE BYPASS	CLG AVAIL	VAC NA	H.PWR AVAIL	VALVE SHUT
MSL DRAINS	COOLING AVAILABLE	V.PWR NA	VALVE SHUT	
SLC	LIQUID AVAILABLE	POWER AVAIL	PUMP OFF	

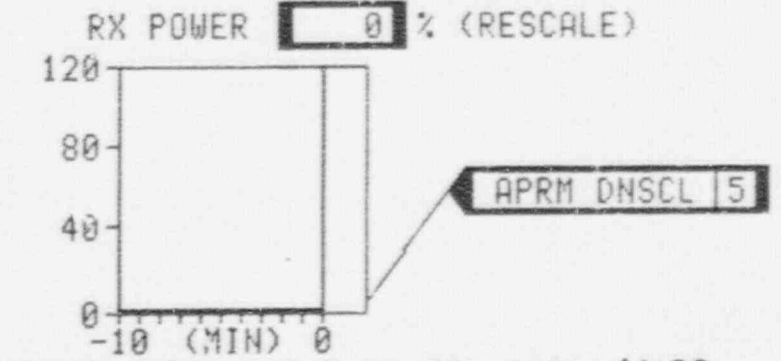
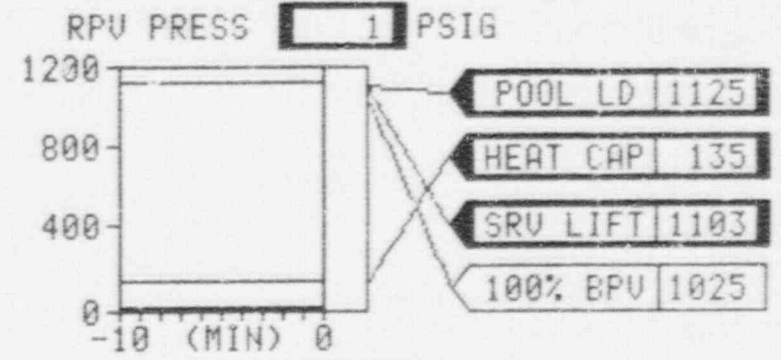
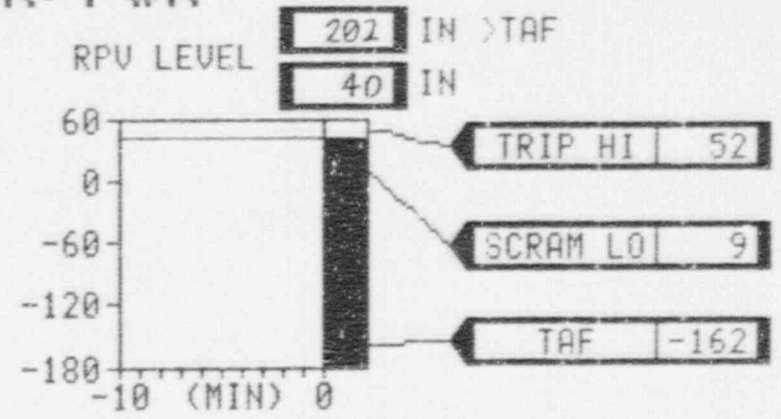
DG NOT OPER

SRU SHUT

MSIV SHUT

GROUP ISOL

SCRAM RODS IN



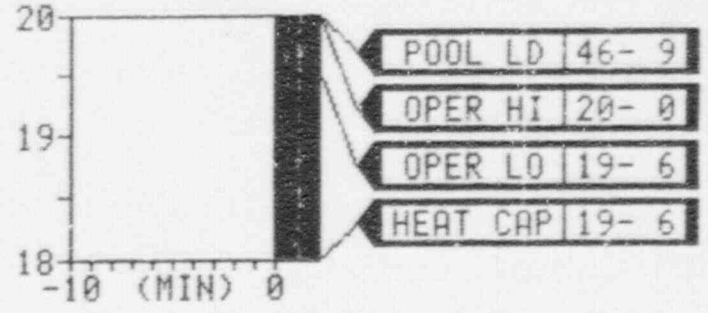
RIVER BEND ●●● 30-JAN-1991 14:30



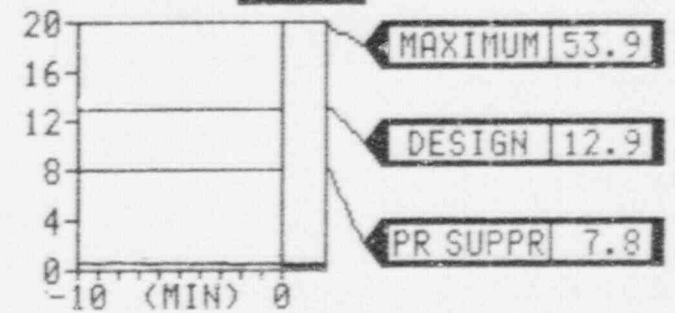
# 027 RPV NORMAL CONTAINMENT CONTROL--UPSET/MR

POOL COOLING	<span style="border: 1px solid black; padding: 2px;">COOLING AVAILABLE</span>	<span style="border: 1px solid black; padding: 2px;">POWER AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">PUMP RUN</span>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">DG NOT OPER</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">SRV SHUT</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">GROUP ISOL</div> <div style="border: 1px solid black; padding: 5px;">SCRAM RODS IN</div>
DRYWELL COOLING	<span style="border: 1px solid black; padding: 2px;">COOLING NOT AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">POWER AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">FAN OFF</span>	
CNTMT COOLING	<span style="border: 1px solid black; padding: 2px;">COOLING AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">POWER AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">FAN RUN</span>	
PRESS CONTROL	<span style="border: 1px solid black; padding: 2px;">VALVE SHUT</span>	<span style="border: 1px solid black; padding: 2px;">POWER AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">FAN OFF</span>	
SBGT	<span style="border: 1px solid black; padding: 2px;">VALVE LINE-UP</span>	<span style="border: 1px solid black; padding: 2px;">POWER AVAIL</span>	<span style="border: 1px solid black; padding: 2px;">FAN RUN</span>	

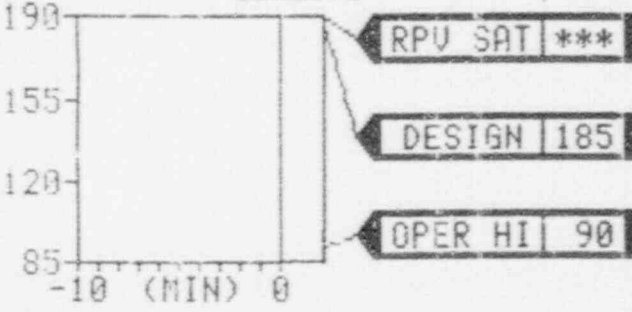
POOL LEVEL 24 FT 4 IN (RESCALE)



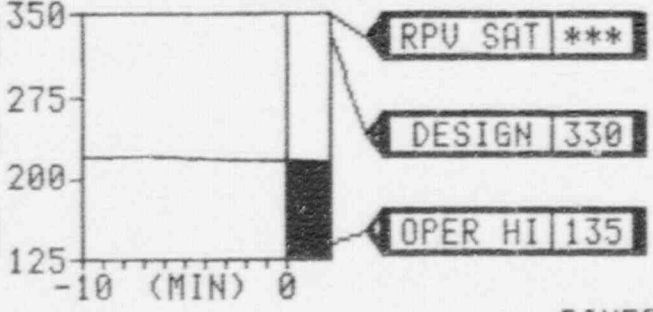
CNTMT PRESS 0.6 PSIG



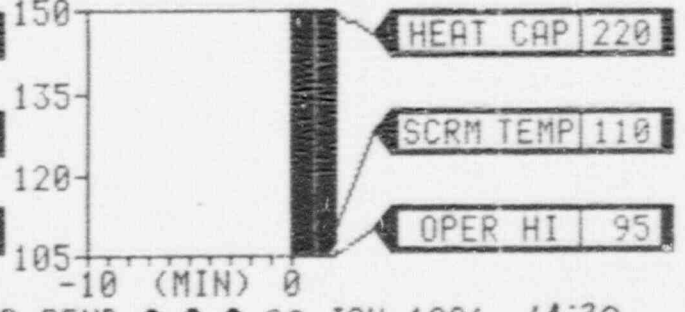
CNTMT TEMP 83 °F



DW TEMP 231 °F



POOL TEMP 175 °F



1991 PRACTICE EXERCISE

Message Number: 27

Clock Time = 1430

Scenario Time = 06/30RIVER BEND STATION  
DRMS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-16A,B	Ctmt. PAM R.B. 186' (DHRRM)	1.9E2 R/hr	RE-194	Supt. Rm. Trans. Tube F.B. 123' (ARM)	8.0 mR/hr
RE-20A,B	Drywell PAM D.W. 114' (DHRRM)	4.0 R/hr	RE-195	Sample Sink Area F.B. 95' (ARM)	8.0 mR/hr
RE-21A,B	Ctmt. Purge Isol. R.B. 141' (ARM)	1.9E5 mR/hr	RE-196	Equip. Drain Sump F.B. 70' (ARM)	8.0 mR/hr
RE-139	Annul. Near Trans. Tube 114' (ARM)	OSH mR/hr	RE-200	North Hoist Area T.B. 123' (ARM)	12 mR/hr
RE-141	Refuel. Floor South R.B. 186' (ARM)	OSH mR/hr	RE-201	Cond. Air Removal Pmp. Area T.B. 95' (ARM)	0.2 mR/hr
RE-146	Containment Airlock F.B. 114' (ARM)	OSH mR/hr	RE-202	Rx Feedwater Pump Area T.B. 67' (ARM)	1.5 mR/hr
RE-151	Sample Station Area R.B. 162' (ARM)	OSH mR/hr	RE-203	Turb. Bldg. Sample Rm. T.B. 67' (ARM)	0.1 mR/hr
RE-162	O.G. Bldg. Regen. Area O.G. 67' (ARM)	0.4 mR/hr	RE-204	Cond. Demin. Sample Rack T.B. 95' (ARM)	0.1 mR/hr
RE-164	O.G. Bldg Sample Area O.G. 123' (ARM)	2.0 mR/hr	RE-210	PASS Panel A.B. 114' (ARM)	8.0 mR/hr
RE-165	Cond Demin Regen Area O.G. 67' (ARM)	9.2 mR/hr	RE-211	Control Rod Drive A.B. 95' (ARM)	2.0 mR/hr
RE-166	Cond Demin Strnr. Area O.G. 95' (ARM)	0.3 mR/hr	RE-212	HPCS Area East A.B. 70' (ARM)	2.0 mR/hr
RE-167	O.G. Bldg. Valve Area O.G. 137' (ARM)	28 mR/hr	RE-213	RHR A Area West A.B. 70' (ARM)	2.0 mR/hr
RE-182	Recovery Sample Tank R.W. 65' (ARM)	0.4 mR/hr	RE-214	RHR B Area East A.B. 70' (ARM)	2.0 mR/hr
RE-185	Storage Tank Area R.W. 90' (ARM)	0.2 mR/hr	RE-215	RHR C Area A.B. 70' (ARM)	2.0 mR/hr
RE-186	Floor Drain Sump Area R.W. 65' (ARM)	0.5 mR/hr	RE-216	LPCS Area West A.B. 70' (ARM)	2.0 mR/hr
RE-187	High Cond. Sump Area R.W. 65' (ARM)	0.3 mR/hr	RE-217	HPCS Penetration Area East A.B. 70' (ARM)	7.5 mR/hr
RE-192	Refuel Floor South F.B. 113' (ARM)	8.0 mR/hr	RE-218	LPCS Penetration Area West A.B. 70' (ARM)	7.5 mR/hr
RE-193	Refuel Floor North F.B. 113' (ARM)	2.0 mR/hr	RE-219	RCIC Area West A.B. 70' (ARM)	2.0 mR/hr

■ - Indicates Alarming

OSH - Indicates Offscale High

All other ARMs are "as read"

1991 PRACTICE EXERCISE

Message Number: 27

Clock Time = 1430  
 Scenario Time = 06/30

RIVER BEND STATION  
 PROCESS MONITORS

ID NUMBER	LOCATION (TYPE)	READING	ID NUMBER	LOCATION (TYPE)	READING
RE-5A	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111P	Cont. Atmosphere (PART)	6.4E-01 $\mu\text{Ci/cc}$
RE-5B	Fuel Bldg. Vent Exh. (WRGM)	1.3E+00 $\mu\text{Ci/sec}$	RE-111G	Cont. Atmosphere (GAS)	8.4E+00 $\mu\text{Ci/cc}$
RE-6A	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112P	Drywell Atmosphere (PART)	6.7E-07 $\mu\text{Ci/cc}$
RE-6B	Radwaste Bldg. Vent Exh. (WRGM)	5.7E-01 $\mu\text{Ci/sec}$	RE-112G	Drywell Atmosphere (GAS)	3.3E-05 $\mu\text{Ci/cc}$
1GE-125	Main Plant Exh. Duct (WRGM)	5.6E-07 $\mu\text{Ci/cc}$	RE-103	SGTS Effluent (GAS)	2.0E-06 $\mu\text{Ci/cc}$
2GE-125	Main Plant Exh. Duct (WRGM)	1.2E-04 $\mu\text{Ci/cc}$	RE-116	Containment Purge (GAS)	3.0E-06 $\mu\text{Ci/cc}$
3GE-125	Main Plant Exh. Duct (WRGM)	4.3E-02 $\mu\text{Ci/cc}$	RE-11A	Annulus Exhaust (GAS)	1.9E-07 $\mu\text{Ci/cc}$
4GE-125	Main Plant Exh. Duct (WRGM)	3.4E+01 $\mu\text{Ci/sec}$	RE-11B	Annulus Exhaust (GAS)	1.9E-07 $\mu\text{Ci/cc}$
RE-110P	Aux. Bldg. Vent (PART)	2.0E-12 $\mu\text{Ci/cc}$			
RE-110G	Aux. Bldg. Vent (GAS)	3.0E-08 $\mu\text{Ci/cc}$			
RE-118P	Turbine Bldg. Vent (PART)	3.0E-11 $\mu\text{Ci/cc}$	Off Gas Pre-treatment Monitor		0 mR/hr
RE-118G	Turbine Bldg. Vent (GAS)	1.0E-10 $\mu\text{Ci/cc}$	Off Gas Post-treatment Monitor		0 cpm
RE-124P	C.D./O.G. Bldg. Vent (PART)	2.0E-10 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor		1000 mR/hr
RE-124G	C.D./O.G. Bldg. Vent (GAS)	2.0E-08 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor		1000 mR/hr
RE-126P	Main Plant Exh. Duct (PART)	6.0E-10 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor		1000 mR/hr
RE-126G	Main Plant Exh. Duct (GAS)	7.4E-07 $\mu\text{Ci/cc}$	Main Steam Line Radiation Monitor		1000 mR/hr

█ - Indicates Alarming

OSH - Indicates Offscale High

All other Process Monitors are "as read"

SECTION 8.2

SUPPLEMENTAL SCENARIOS

## SUPPLEMENTAL SCENARIOS: 1991 PRACTICE EXERCISE

### SCENARIO NUMBER

### DESCRIPTION

1. Air leakage across turbine seals, loss of condenser vacuum.
2. Loss of offgas pre-filter loop seal; Offgas building high airborne radiation levels.
3. RCIC governor malfunction; RCIC trip.
4. Scram/ATWS.
5. SLC "B" trip and restoration.
6. Loss of instrument air/Loss of feedwater.
7. HPCS Transient, LPCI Line Break.
8. Containment breach.

In general each supplemental scenario package provides the following information:

Approximate time the event is postulated to be initiated;

Location(s);

Brief descriptions of events and a discussion of the significance to the overall scenario;

Description of any pre-staging required to support the scenario;

Methods by which drill participants are initially notified of the events (e.g., Control Room annunciator(s), phone call, local indications, etc.);

Detailed supporting information/data, including radiological data specific to the supplemental scenario and any messages to be handed out to participants;

Controller notes to ensure that controllers have appropriate background and other supporting information to ensure that accurate data is provided to players;

Restoration guidelines, which identify any constraints regarding whether and when the system or equipment may be made available to support the response, or the sequence of events terminated.

1991 RBS DRESS REHEARSAL EXERCISE

SUPPLEMENTAL SCENARIO NO.1

LOSS OF MAIN CONDENSER VACUUM

**Approximate Time(s):**

Initial Conditions (0730): Increased air leakage identified as a pre-existing condition.

(0800): Air leakage worsens further, but operators are able to maintain vacuum above minimum setpoint.

(0945): Condenser low vacuum alarm (25" Hg).

(1015): Turbine trip/scram due to low vacuum (22.3" Hg).

**Location(s):**

Main Condenser/Turbine Building

**Description of Events:**

Excessive air leakage across the turbine shaft seals (indicated by an increase in offgas flow) is identified in the initial conditions provided to players at the onset of the exercise. Corrective actions (increasing gland sealing steam pressure) have been successful, and condenser vacuum has remained constant as a result. Data do not reflect operation of a second set of steam jet air ejectors.

As the exercise is initiated (0800), the seal leakage worsens; vacuum decreases and offgas flow increases further as a result. Operators will be able to maintain vacuum above minimum by reducing the turbine load, and an operator is dispatched to investigate the problem with condenser vacuum.

By 0945, the leakage is increased enough to cause vacuum to decrease to 25", and the "Loss of Condenser Vacuum" alarm is received in the Control Room. Operators will begin to rapidly reduce reactor power/turbine load, but by 1015, the turbine will trip on low vacuum.

**Pre-staging:**

None

**Initial Indications:**

See Control Room annunciators delineated on message forms.

Refer to the attached graph of condenser vacuum for value/trend at any time between 0800 and 1030.

**Supporting Information:**

The cause of the excessive air leakage and loss of vacuum is postulated to be damaged seals on the LP turbine shaft. One of the springs holding the seal section together has broken, allowing excessive movement and wear; and allowing additional air leakage past the seals into the condenser.

**Controller Notes:**

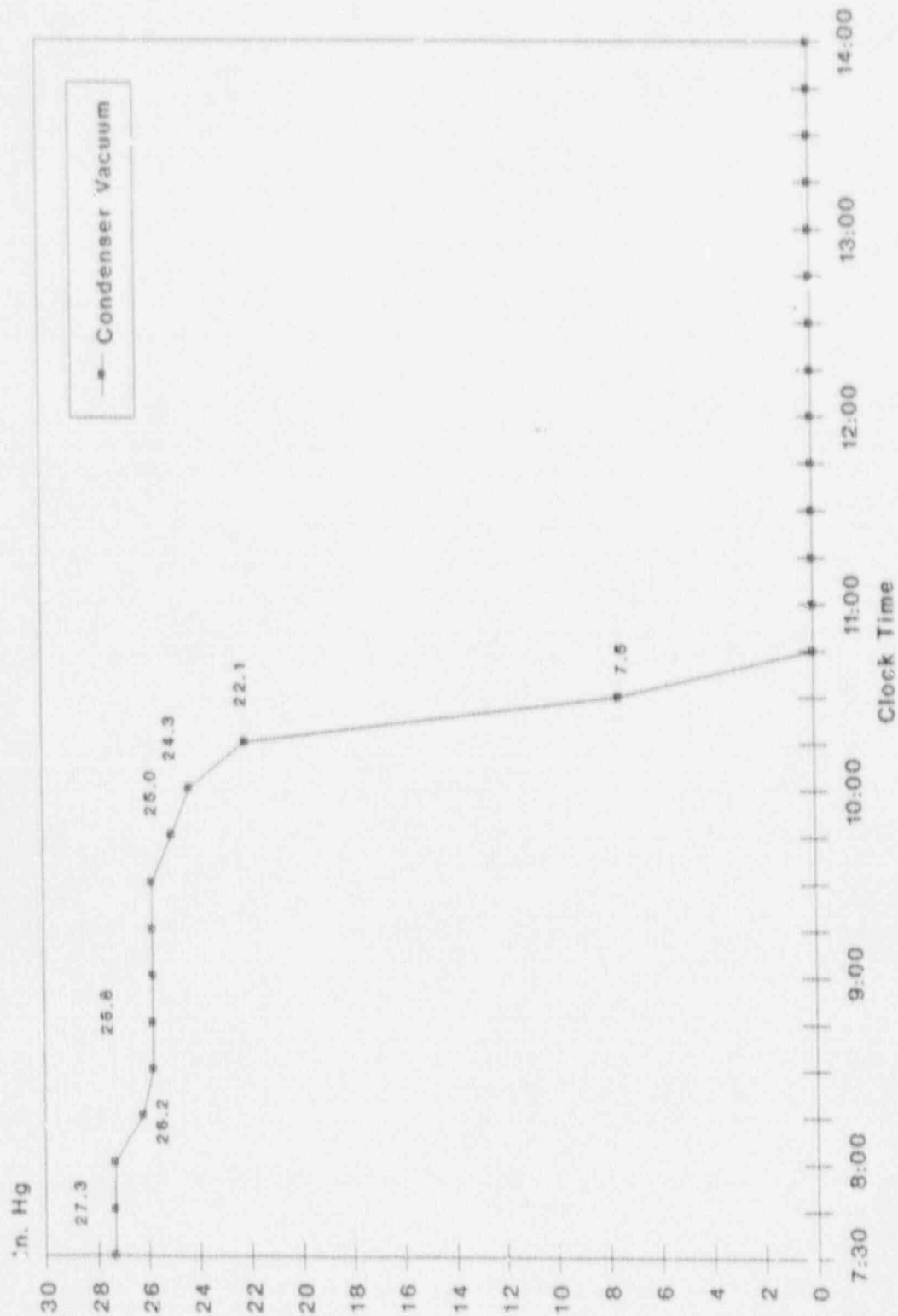
Data regarding condenser vacuum are based on assumed responses by the Control Room. If their response differs, data will have to be modified to remain consistent with their actions. As long as reactor power is approximately 40% at the time of the trip (1015), the response may be free played.

**Restoration Guidelines:**

None. The damaged seals will not be reparable during the exercise, but should be reflected in recovery discussions/planning.

# RBS 1991 PRACTICE EXERCISE

Condenser Vacuum





## 1991 PRACTICE EXERCISE

### SUPPLEMENTAL SCENARIO NO. 2

#### LOSS OF OFFGAS PRE-FILTER LOOP SEAL/ HIGH AIRBORNE RADIATION LEVELS

**Approximate Time(s):**

0800

**Location:**

Condensate Demineralizer Regeneration area of the Offgas Building.

**Description of Events:**

The increase in offgas flow results in a temporary pressure increase, which forces the water out of the loop seal in the inlet to the Offgas pre-filter. The automatic low level isolation failed to close N64-F048, and exhaust gases from the condenser are now being blown directly into dirty waste sump (1CND-TK12) and out the tank vent, into the Turbine Building atmosphere. The activity in these gases is significantly higher than normal, due to the leakage of fission products from the fuel, and radiation monitors in the area reflect a significant increase.

**Pre-staging:**

None

**Initial Indications:**

Operators are provided with an annunciator that indicates a low water level in the loop seal, as well as position indications for the two valves in the line (N64-F054 [prefilter inlet drain valve] and N64-F048 [prefilter loop seal drain valve]; see attached diagram).

N64-F054 indication: red light on (stuck open).

N64-F048 indication: no lights on (failed open--control power lost)

**Supporting Information:**

**OPERATIONS:**

Valve N64-F048 has failed in the open position [due to a loss of control power] after having failed to shut as it should have when the water level in the loop seal decreased. It must now be manually closed to isolate the release path. Valve N64-F054, which would also isolate the release path, is stuck in the open position and cannot be closed from the Control Room.

After determining that they are unable to isolate the loop seal (and terminate the discharge of gases into the turbine building) from the Control Room, the Control Room will have to dispatch an operator to manually operate the valve(s). Due to the high concentrations of airborne activity, no one should be allowed into the area prior to survey(s) being taken, without adequate respiratory protection.

## RADIOLOGICAL:

DRMS Monitors (see data sheets) reflect increases on RE-118P and RE-118G (Turbine Bldg. Ventilation) by a factor of more than  $10^3$ . When the increases are detected by the Control Room, they should request confirmation by H.P. that the indications are accurate. Once the confirmation is received, the Shift Supervisor should declare an ALERT.

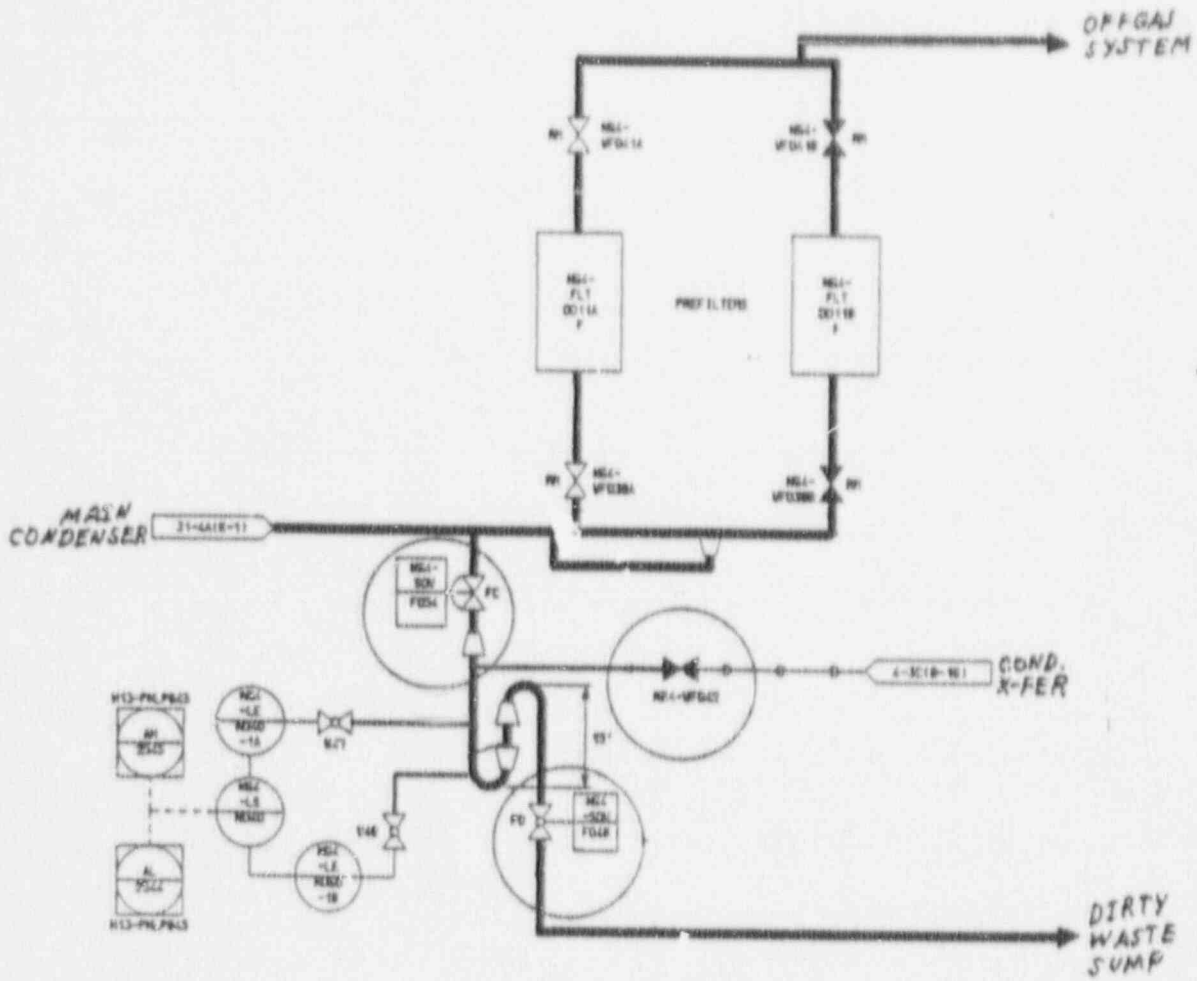
Health physics personnel arriving on the scene should be provided the data in Table 9.2.16 and the area description in Figure 9.2.16. General area readings in the cross-hatched area C are 35 mR/hr. Ten minute air sample results yield cartridge iodine readings of  $6.3E+03$  cpm (net), which equates to an air concentration in that area of  $5.0E-08$   $\mu$ Ci/cc. Readings for the 95' level directly above the condenser are provided in Table 9.2.15 and the area description is provided in Figure 9.1.15. General area readings in area C of the 95' level are 20 mR/hr. If personnel attempt to decontaminate the areas, contamination levels will drop to  $<100$  dpm/100 cm.

## Controller Notes:

NOTE: Operators must not be allowed to be successful in closing N64-F054 until at least 15 minutes after the Shift Supervisor has declared an ALERT, or 0915, whichever occurs first. Data reflect isolation of the loop seal and termination of this release at approximately 0915, and must be modified if isolation occurs at a different time.

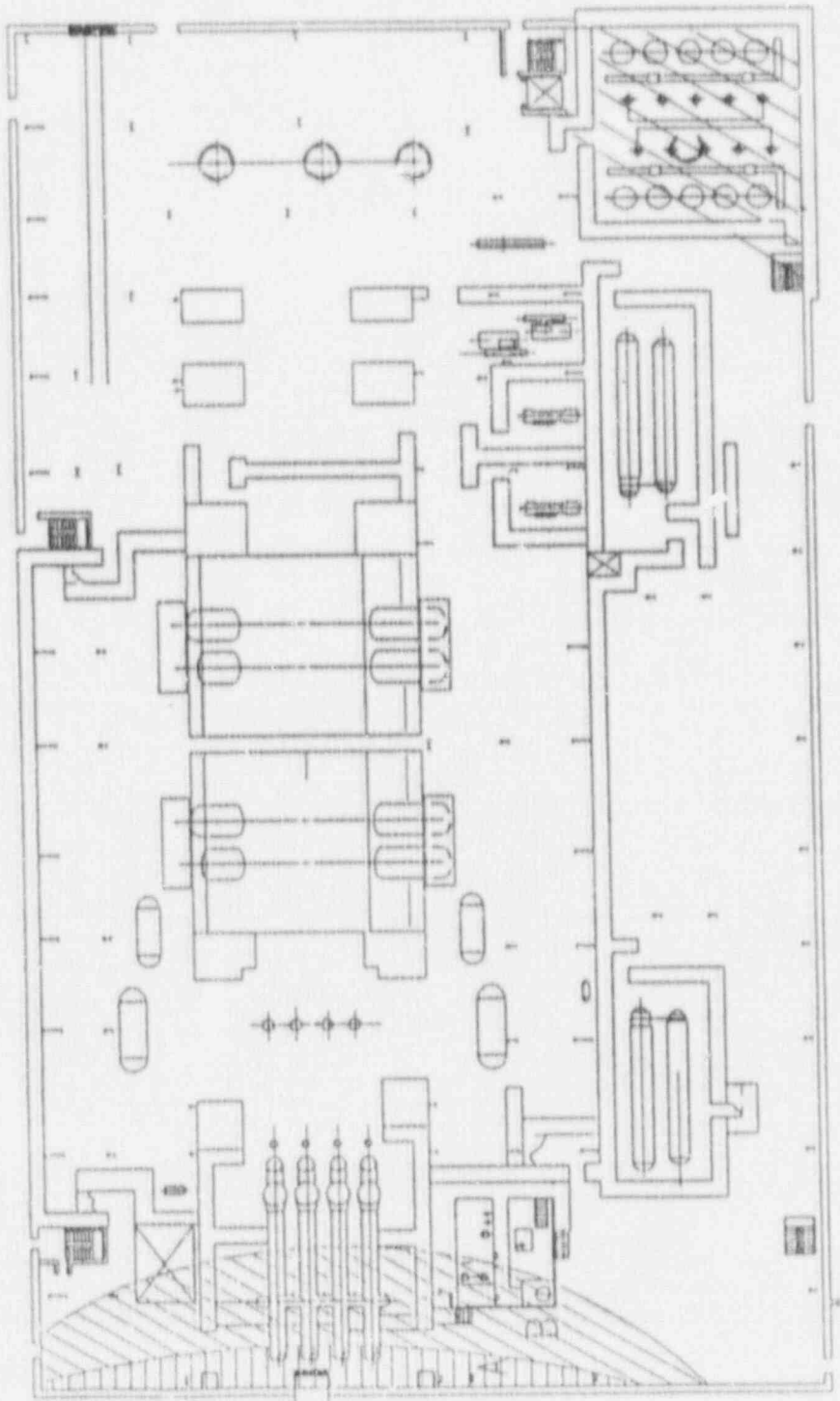
## Restoration Guidelines:

Closing either F054 or F048 will terminate the release of radioactivity to the drain tank and the building atmosphere. Once the loop seal is isolated by closing F048, water level can be restored by opening fill valve F042 [on the 123' level of the Turbine Building].



OFFGAS PREFILTER  
LOOP SEAL

Figure 9.2.15



TURBINE BLDG. EL. 95'

1991 PRACTICE EXERCISE

Table 9.2.15  
River Bend Station  
Turb. Blog. EL. '95\*

	0805	0830	0900	0930	0945	1000	1015	1030	1045	1100	1115	1130
<u>Ambient Radiation Level</u> (mr/hr)												
ZONE A	As Found	----	----	----	----	----	2	2	2	2	2	2
ZONE B	As Found	----	----	----	----	----	0.5	0.5	0.5	0.5	0.5	0.5
ZONE C	20	20	20	As Found	----	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----	----
ARM RE-201	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-204	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>												
ZONE C	3000	3000	3000	3000	3000*	3000	3000	3000	3000	3000	3000	3000
General Areas	As Found	----	----	----	----	----	----	----	----	----	----	----
<u>Airborne Levels (cpm)</u> ( $\mu$ Ci/cc)												
ZONE C	5.0E+03 (4.0E-08)	5.0E+03 (4.0E-08)	5.0E+03 (4.0E-08)	5.0E+03 (4.0E-08)	As Found	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----	----

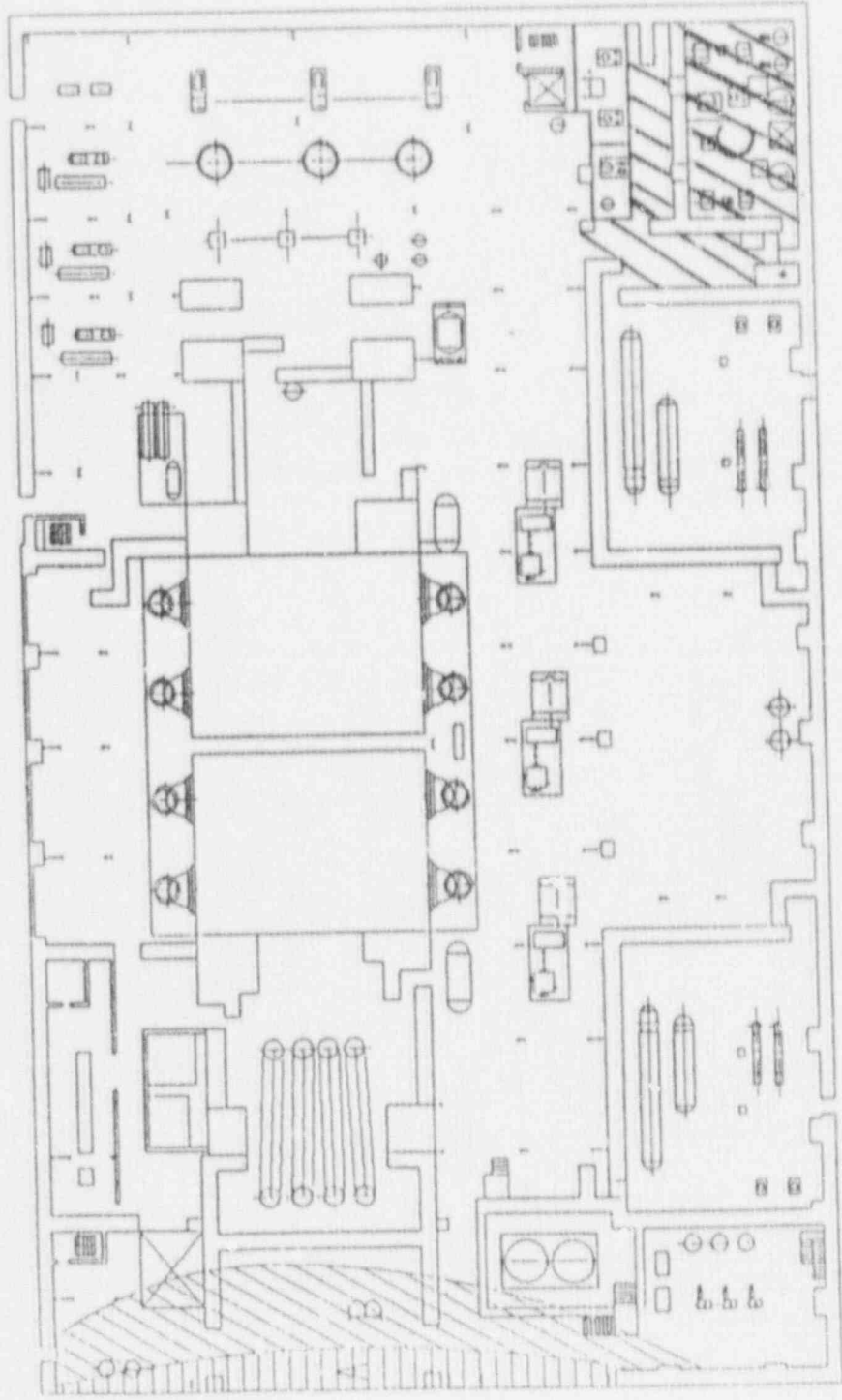
\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.

Table 9.2.15  
River Bend Station  
Turb. Bldg. El. 95'

	1130 1145	1145 1200	1200 1215	1215 1230	1230 1245	1245 1300	1300 1315	1315 1330	1330 1400	1400 1430	1430 1500
<u>Ambient Radiation Level (mr/hr)</u>											
ZONE A	2	30	30	30	30	30	30	30	30	30	30
ZONE B	0.5	12	12	12	12	12	12	12	12	12	12
ZONE C	As Found	----	----	----	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
ARM RE-201	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-204	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>											
ZONE C	3000*	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
<u>Airborne Levels (cpm)</u>											
ZONE C	As Found	----	----	----	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.

Figure 9.2.16



← N

TURBINE BLDG. EL. 65'

## 1991 PRACTICE EXERCISE

Table 9.2.16  
River Bend Station  
Turb. Bldg. EL. 65'

	0805 0830	0830 0900	0900 0930	0930 0945	0945 1000	1000 1015	1015 1030	1030 1045	1045 1100	1100 1115	1115 1130
<u>Ambient Radiation Level</u> (mr/hr)											
ZONE A	As Found	----	----	----	0.5	0.5	2	2	2	2	2
ZONE B	As Found	----	----	----	----	0.5	0.5	0.5	0.5	0.5	0.5
ZONE C	35	35	35	As Found	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
ARM RE-162	5	5	5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-165	35	35	35	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-202	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>											
ZONE C	4502	4500	4500	4500	4500*	4500	4500	4500	4500	4500	4500
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
<u>Airborne Levels (cpm)</u> ( $\mu$ Ci/cc)											
ZONE C	6.3E+03 (5.0E-08)	6.3E+03 (5.0E-08)	6.3E+03 (5.0E-08)	6.3E+03 (5.0E-08)	As Found	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.



Table 9.2.16  
River Bend Station  
Turb. Bldg. El. 65'

	1130 1145	1145 1200	1200 1215	1215 1230	1230 1245	1245 1300	1300 1315	1315 1330	1330 1400	1400 1430	1430 1500
<u>Ambient Radiation Level (mr/hr)</u>											
ZONE A	5	5	4.8	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6
ZONE B	2	2	1	1	1	1	1	1	1	1	1
ZONE C	As Found	----	----	----	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
ARM RE-162	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-165	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-202	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Contamination Levels (dpm/100cm<sup>2</sup>)

ZONE C	4500*	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
General Areas	As Found	----	----	----	----	----	----	----	----	----	----

Airborne Levels (cpm)

General Areas	As Found	----	----	----	----	----	----	----	----	----	----
---------------	----------	------	------	------	------	------	------	------	------	------	------

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.

1991 PRACTICE EXERCISE

**SUPPLEMENTAL SCENARIO NO. 3**

RCIC GOVERNOR MALFUNCTION/LOSS OF RCIC

**Approximate Time(s):**

1015 (ECCS initiation after scram RPV level transient)

**Location(s):**

RCIC Room

**Pre-staging:**

None

**Initial Indications:**

The Control Room will be given indications of RCIC initiating in response to an auto-start signal, followed by wide fluctuations in turbine RPM, resulting in an overspeed trip.

**Supporting Information:**

The RCIC turbine will auto-start in response to the level transient that occurs during the scram/ATWS. The turbine will experience severe oscillations, and will trip on overspeed. The trip cannot be reset; if they operators attempt to control turbine RPM by manually operating the trip throttle, the turbine will continue to trip on overspeed, due to the inability to adequately control steam to the turbine with the trip throttle valve.

The cause of the trip is postulated to be a failure of the speed reference signal in the RCIC controller. This results in a loss of the signal providing flow comparison data for proper speed adjustment; the turbine will overspeed, and lock out the trip throttle valve.

**Controller Information:**

Operators may attempt to establish manual control with flow controller R600 on Panel P601-21B, but this loss of the speed reference signal prevents manual as well as automatic control of the RCIC turbine.

**Restoration Guidelines:**

The RCIC turbine cannot be returned to service for the duration of the drill.

1991 PRACTICE EXERCISE  
SUPPLEMENTAL SCENARIO NO. 4  
SCRAM/ATWS

Approximate Time(s):

1015

Location(s):

Control Room

Pre-staging:

None

Initial Indications:

Refer to Control Room message for indications and annunciators.

Supporting Information:

There are 62 Control Rod Drive Mechanisms that are scheduled to be rebuilt during the upcoming refueling outage, due to excessive drive piston leakage. When adjusting control rod position, it has been necessary to increase drive pressure in order for the rods to move incrementally from one notch position to the next.

When a scram signal is received after the turbine trip (with the reactor at approximately 40% power), not all control rods completely insert, and power stabilizes at approximately 30%. Insertion of a manual scram signal and initiating ARI (Alternate Rod Insertion) are both unsuccessful in inserting rods and shutting down the reactor. Control rods are postulated to be hydraulically locked in position, and can only be individually selected and inserted into the core.

Controller Information:

Power will decrease very slowly as rods are individually inserted; it will remain in the power range until sufficient boron has been injected to achieve sub-criticality (approximately 1315). Refer to the attached graph and to plant data sheets provided to the Control Room for power level at any given time between 1015 and 1315.

Restoration Guidelines:

All rods fully inserted (approximately 1330).

1991 PRACTICE EXERCISE

SUPPLEMENTAL SCENARIO NO. 5

SLC PUMP "B" TRIP AND RESTORATION

**Approximate Time(s):**

1015

**Location(s):**

Supply breaker: 1EHS\*MCC2B, Aux. Bldg. 141E

**Pre-staging:**

None

**Initial Indications:**

Immediately upon manual initiation of SLC flow, the Control Room will be given indications that the "B" SLC pump breaker has tripped, and of zero discharge pressure from the pump. Refer to attached table for SLC tank level.

**Supporting Information:**

An operator (or an OSC team) should be dispatched to the pump and an electrician to the breaker to investigate the problem. The cause of the SLC pump trip is postulated to be failure of the overload heaters. No problems will be identified with the pump or the motor, but the overcurrent relays will be tripped at the breaker, and they will not reset. Troubleshooting should be initiated to determine the reason(s) for the overcurrent condition. Investigation will reveal that the overload heaters will not reset, and the control transformer is open. The breaker should be repaired with (simulated) parts from the warehouse.

Refer to Control Room message forms for additional indications and annunciators.

**Controller Information:**

None

**Restoration Guidelines:**

The SLC pump must be returned to service no earlier than 1230 and no later than 1245.

STANDBY LIQUID CONTROL  
INJECTION REQUIREMENTS

TANK LEVEL PRIOR TO INJECTION GAL	TANK LEVEL AFTER INJECTION OF 78 lb B.10 GAL	TANK LEVEL AFTER INJECTION OF 111 lb B-10 GAL
1550	704	346
1575	715	352
1600	727	358
1625	738	363
1650	750	369
1675	761	374
1700	772	380
1725	784	386
1750	795	391
1775	806	397
1800	818	402
1825	829	408
1850	840	413
1875	852	419
1900	863	425
1925	875	430
1950	886	436
1975	897	441
2000	909	447
2025	920	453
2050	931	458
2075	945	464
2100	954	469
2125	965	475
2150	977	481
2175	988	486
2200	1000	492
2225	1011	497
2250	1022	503
2275	1034	509
2300	1045	514
2325	1056	520
2350	1068	525
2375	1079	531
2400	1090	537
2425	1102	542
2450	1113	548

NOTE - AT A PUMPING RATE OF 42 GPM, IT WILL TAKE APPROXIMATELY  
26MINUTES TO INJECT 78 LBS. OF B. 10, AND 37 MINUTES TO  
INJECT 111 LBS.

1991 PRACTICE EXERCISE

SUPPLEMENTAL SCENARIO NO. 6

LOSS OF INSTRUMENT AIR/LOSS OF FEEDWATER

**Approximate Time(s):**

1135

**Location(s):**

Turbine Building/Condensate Bay

**Pre-staging:**

None

**Initial Indications:**

See Control Room indications/annunciators.

**Supporting Information:**

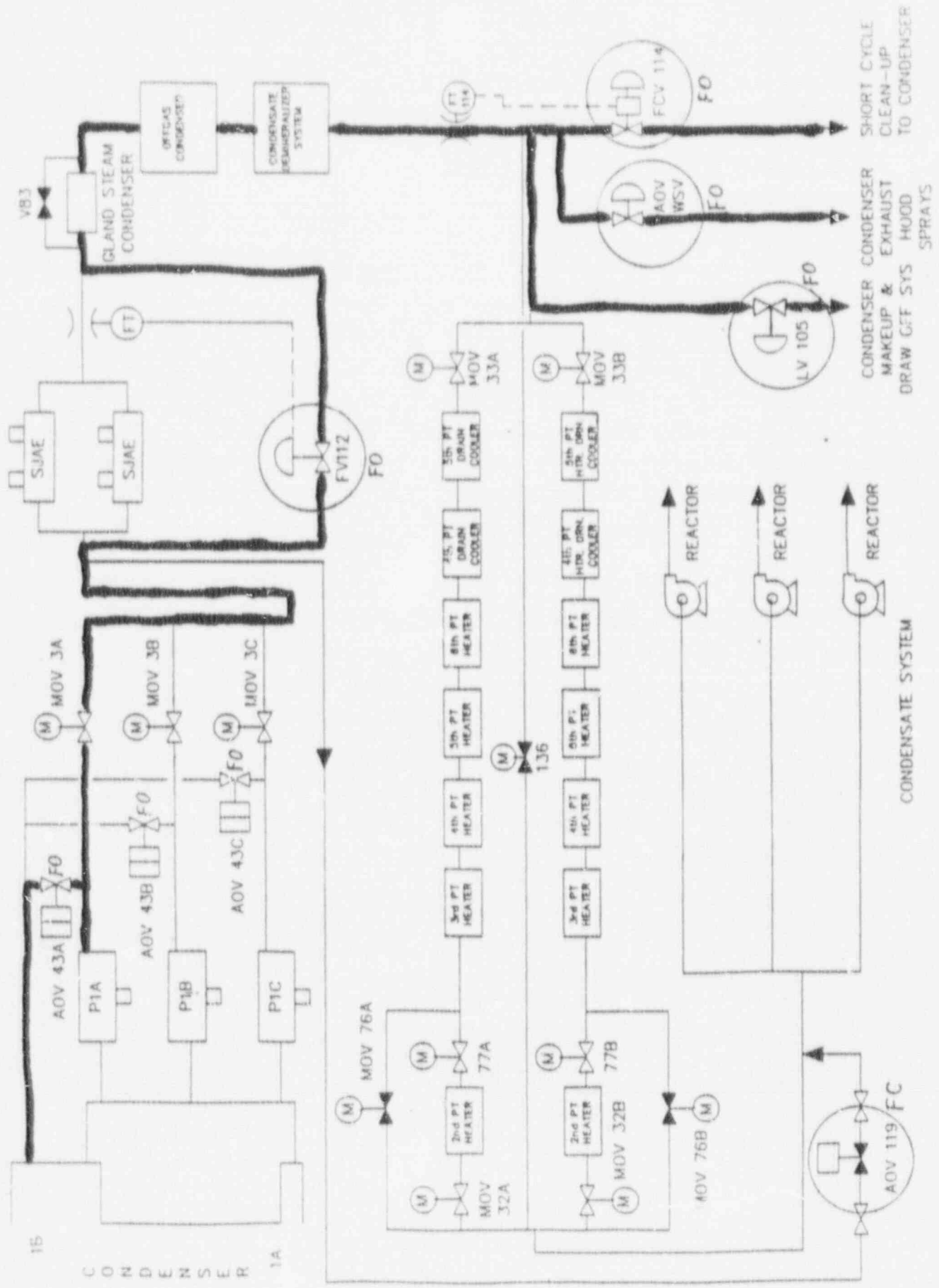
In response to the inability to scram all rods, the operators have entered EOP-1A, and lowered RPV level to control reactor power. The procedure calls for them to maintain RPV level between -100" and -193". At approximately 1135, an air line break results in a localized loss of instrument air, repositioning several air-operated valves in the condensate system (see attached diagram), and diverting condensate flow from the feed pump suction. Until the system can be re-aligned, there is insufficient NPSH to operate the feed pumps. When feedwater is lost, HPCS is the only viable option for restoring level.

**Controller Information:**

None

**Restoration Guidelines:**

Operators should be dispatched to re-align the air-operated valves in the Condensate system to restore suction to the feed pumps. These actions will be successful; feed pumps may be restored and used for future makeup to the RPV.



1991 PRACTICE EXERCISE  
SUPPLEMENTAL SCENARIO NO. 7  
HPCS TRANSIENT/ LPCI LINE BREAK

**Approximate Time(s):**

1145

**Location(s):**

Drywell and Containment

**Pre-staging:**

None

**Initial Indications:**

Refer to Control Room message form.

**Supporting Information:**

When HPCS flow is first initiated, and the operators attempt to throttle flow with valve E22\*F004, it will fail fully open, dumping approximately 5000 gpm of approximately 200°F water inside the shroud, directly on the core. As this relatively cold water hits the fuel, a significant localized power transient occurs, followed immediately by a pressure spike as a result of the steam produced. This causes further fuel cladding damage, and the release of additional fission product gases to the coolant.

The vibration and pressure shocks resulting from this hydraulic transient cause severe internal damage to check valve E12\*F041C and injection isolation valve E12\*F042C, and crack the LPCI "C" injection line in containment. The breach allows steam and fission product materials to vent directly into the primary containment from the reactor vessel.

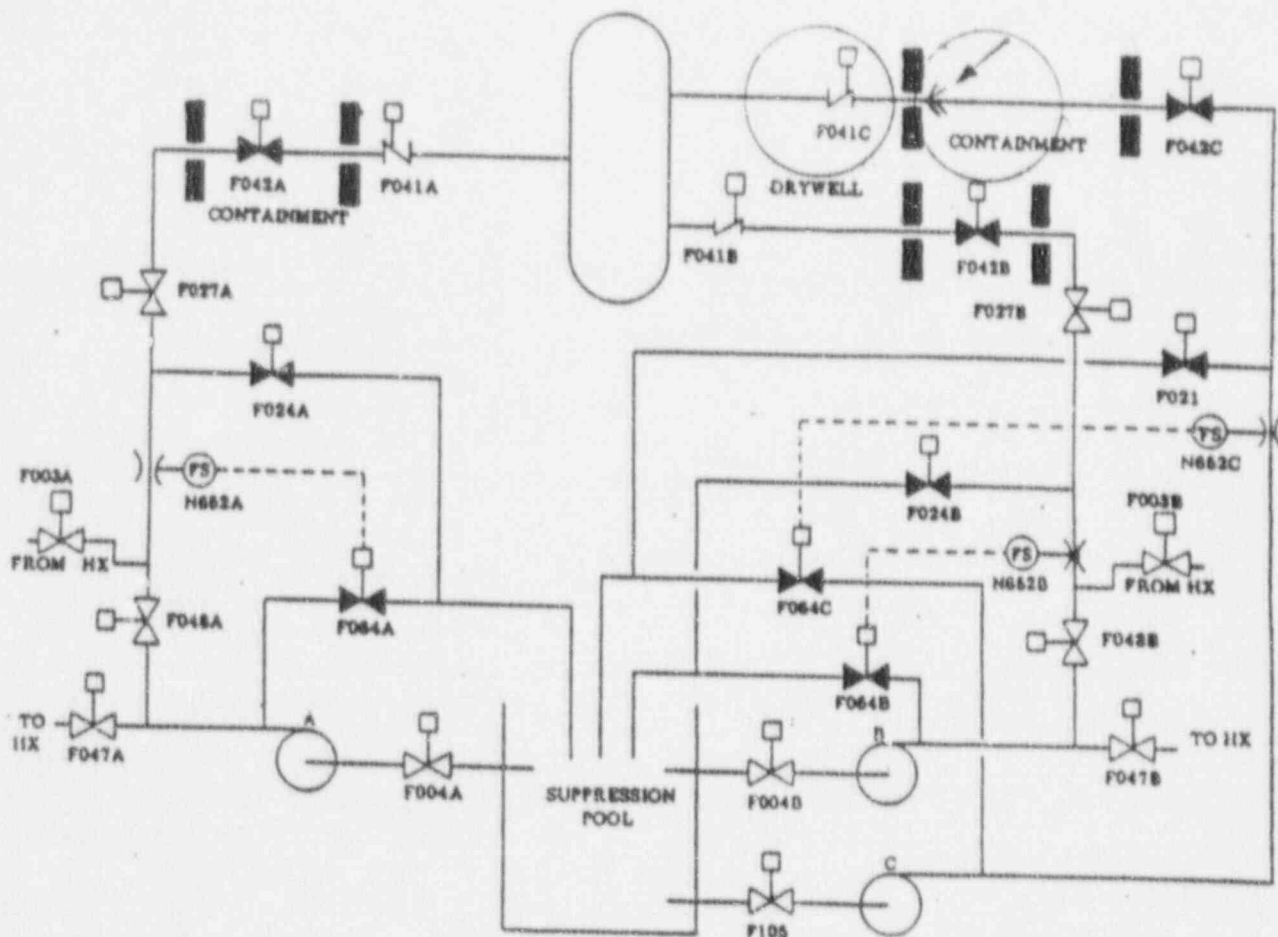
**Controller Information:**

Refer to attached diagrams for additional information on the location of the line break.

**Restoration Guidelines:**

The line break cannot be repaired during the exercise, and should be identified as an outstanding item in the recovery discussions.





LPCI Mode/RHR Sys.  
 (PIPE BREAK INTO CONTAINMENT)

1991 PRACTICE EXERCISE  
SUPPLEMENTAL SCENARIO NO. 8  
CONTAINMENT BREACH

**Approximate Time(s):**

1215

**Location(s):**

Containment

**Pre-staging:**

Information Notice identifying susceptibility of penetration "O" rings to deterioration at conditions exceeding design pressure/temperature (e.g., high temperature and humidity).

**Initial Indications:**

The first indications to response personnel of the containment breach will be increased pressure in the annulus and increases on the radiation monitors in the annulus and the Standby Gas Treatment effluent monitors, both of which will reflect increases as the activity in the containment is released.

**Supporting Information:**

The energy from the continuing power generation due to the ATWS is being released to the suppression pool through the SRVs, and to the containment by way of the breached LPCI "C" line. Containment pressure will peak at approximately 19 psig. These conditions (i.e., sustained high temperature, pressure and humidity) have contributed to the failures of the "O" ring seals for several containment electrical penetrations.

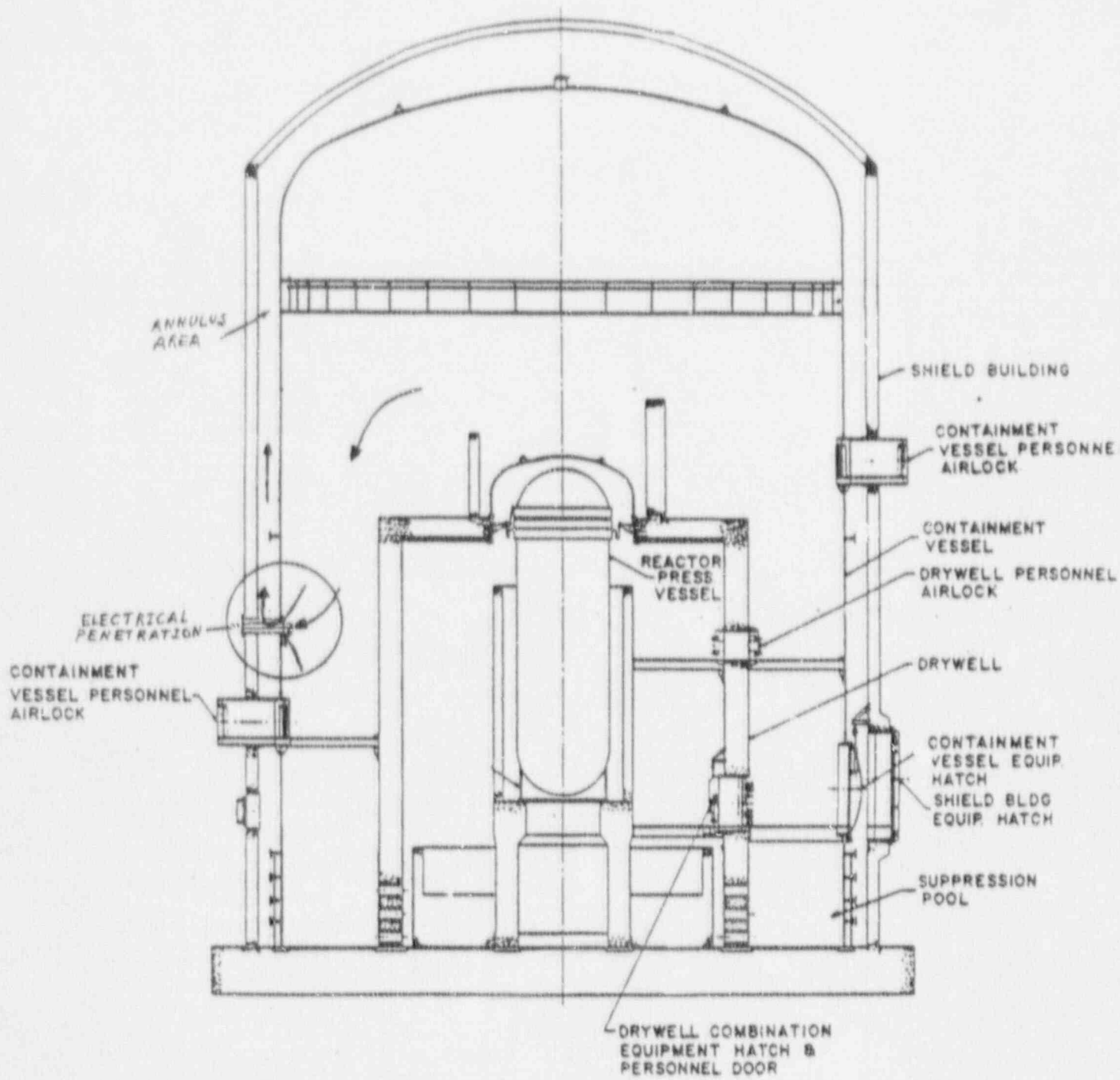
Activity in the containment is now being released through the penetrations, into the annulus, and to the outside environment by way of SGTS.

**Controller Information:**

None

**Restoration Guidelines:**

The release of activity to the environment will terminate when the containment returns to normal (atmospheric) pressure, and the motive force driving the flow out of containment is removed. No repairs can be made to restore containment integrity for the duration of the drill. It will be considered adequate if players are able to identify a course of action to identify the specific source(s) of the leakage, and what actions and resources are required to repair/replace the defective components.



Containment  
 (LEAKAGE FROM CONTAINMENT INTO ANNULUS)

SECTION 9

RADIOCHEMISTRY SAMPLE AND ON-SITE RADIATION DATA

## SECTION 9: Radiochemistry Sample and On-Site Radiation Data

### 9.0 Introduction

### 9.1 Radiochemistry Sample Data

Table 9.1.1:	Reactor Coolant Sample Data
Table 9.1.2:	Drywell Atmosphere Sample Data
Table 9.1.4:	Suppression Pool Liquid Sample Data
Table 9.1.3:	Containment Atmosphere Sample Data
Table 9.1.5:	Stack Sample Data
Table 9.1.6:	PASS Radiation Data

### 9.2 Area Radiation Data

Table 9.2.1:	Area Radiation Monitor Trend Data
Figure/Table 9.2.2:	Aux. Building (El. 170'-185')
Figure/Table 9.2.3:	Aux. Building (El. 141')
Figure/Table 9.2.4:	Aux. Building (El. 114')
Figure/Table 9.2.5:	Aux. Building (El. 114' PASS Station)
Figure/Table 9.2.6:	Aux. Building (El. 95')
Figure/Table 9.2.7:	Aux. Building (El. 70')
Figure/Table 9.2.8:	Fuel Building (Roof)
Figure/Table 9.2.9:	Fuel Building (El. 148')
Figure/Table 9.2.10:	Fuel Building (El. 113')
Figure/Table 9.2.11:	Fuel Building (El. 95')
Figure/Table 9.2.12:	Fuel Building (El. 70')
Figure/Table 9.2.13:	Turbine Building (El. 123' and Above)
Figure/Table 9.2.14:	Turbine Building (El. 123')
Figure/Table 9.2.15:	Turbine Building (El. 95')
Figure/Table 9.2.16:	Turbine Building (El. 65')
Figure/Table 9.2.17:	Off Gas Building
Table 9.2.18:	Outside Areas (Plume Whole Body Dose Rates)

### 9.3 Process Monitor Trend Data

SECTION 9.0  
INTRODUCTION

## 9.0 INTRODUCTION

This section provides the information necessary for participants to evaluate the extent of core/clad damage and the effect of the release upon the in-plant environment and to respond appropriately.

Section 9 furnishes scenario controllers the specific data necessary for providing participants the information that simulates the radiochemical and environmental conditions of the postulated event. Section 9.1 includes radiochemistry sample tables with the information used to assess the extent of the core/clad damage, stack sample data, PASS radiation data, and off gas sample data. Section 9.2 gives plant specific maps and tables containing area radiation levels, airborne activities, and contamination levels found throughout the affected areas of the plant. Section 9.3 gives process monitor trend data.

SECTION 9.1

RADIOCHEMISTRY SAMPLE DATA





























PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1015

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	8.53E+01
		1 foot	None	5.92E-01
		1 inch	2inch Pb	8.53E+00
		1 foot	2inch Pb	5.92E-02
		1 inch	4inch Pb	8.53E-01
		1 foot	4inch Pb	5.92E-03
Rx Coolant	0.10	1 inch	None	8.53E-01
		1 foot	None	5.92E-03
		1 inch	2inch Pb	8.53E-02
		1 foot	2inch Pb	5.92E-04
		1 inch	4inch Pb	8.53E-03
		1 foot	4inch Pb	5.92E-05
Gas From Rx Coolant	1.0	1 inch	None	8.53E+00
		1 foot	None	5.92E-02
		1 inch	2inch Pb	8.53E-01
		1 foot	2inch Pb	5.92E-03
		1 inch	4inch Pb	8.53E-02
		1 foot	4inch Pb	5.92E-04
Suppression Pool Liquid	10.0	1 inch	None	8.12E-02
		1 foot	None	5.64E-04
		1 inch	2inch Pb	8.12E-03
		1 foot	2inch Pb	5.64E-05
		1 inch	4inch Pb	8.12E-04
		1 foot	4inch Pb	5.64E-06
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	1.71E+01
		1 foot	None	1.18E-01
		1 inch	2inch Pb	1.71E+00
		1 foot	2inch Pb	1.18E-02
		1 inch	4inch Pb	1.71E-01
		1 foot	4inch Pb	1.18E-03

NOTE: Assume All Readings < 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1030

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	8.47E+01
		1 foot	None	5.88E-01
		1 inch	2inch Pb	8.47E+00
		1 foot	2inch Pb	5.88E-02
		1 inch	4inch Pb	8.47E-01
		1 foot	4inch Pb	5.88E-03
		Rx Coolant	0.10	1 inch
1 foot	None			5.88E-03
1 inch	2inch Pb			8.47E-02
1 foot	2inch Pb			5.88E-04
1 inch	4inch Pb			8.47E-03
1 foot	4inch Pb			5.88E-05
Gas From Rx Coolant	1.0			1 inch
		1 foot	None	5.88E-02
		1 inch	2inch Pb	8.47E-01
		1 foot	2inch Pb	5.88E-03
		1 inch	4inch Pb	8.47E-02
		1 foot	4inch Pb	5.88E-04
		Suppression Pool Liquid	10.0	1 inch
1 foot	None			6.77E-04
1 inch	2inch Pb			9.75E-03
1 foot	2inch Pb			6.77E-05
1 inch	4inch Pb			9.75E-04
1 foot	4inch Pb			6.77E-06
Drywell Atm: sphere	10.0			1 inch
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
		Containment Atmosphere	10.0	1 inch
1 foot	None			1.38E-01
1 inch	2inch Pb			1.99E+00
1 foot	2inch Pb			1.38E-02
1 inch	4inch Pb			1.99E-01
1 foot	4inch Pb			1.38E-03

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1045

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	8.47E+01
		1 foot	None	5.88E-01
		1 inch	2inch Pb	8.47E+00
		1 foot	2inch Pb	5.88E-02
		1 inch	4inch Pb	8.47E-01
		1 foot	4inch Pb	5.88E-03
Rx Coolant	0.10	1 inch	None	8.47E-01
		1 foot	None	5.88E-03
		1 inch	2inch Pb	8.47E-02
		1 foot	2inch Pb	5.88E-04
		1 inch	4inch Pb	8.47E-03
		1 foot	4inch Pb	5.88E-05
Gas From Rx Coolant	1.0	1 inch	None	8.47E+00
		1 foot	None	5.88E-02
		1 inch	2inch Pb	8.47E-01
		1 foot	2inch Pb	5.88E-03
		1 inch	4inch Pb	8.47E-02
		1 foot	4inch Pb	5.88E-04
Suppression Pool Liquid	10.0	1 inch	None	1.10E-01
		1 foot	None	7.61E-04
		1 inch	2inch Pb	1.10E-02
		1 foot	2inch Pb	7.61E-05
		1 inch	4inch Pb	1.10E-03
		1 foot	4inch Pb	7.61E-06
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	2.16E+01
		1 foot	None	1.50E-01
		1 inch	2inch Pb	2.16E+00
		1 foot	2inch Pb	1.50E-02
		1 inch	4inch Pb	2.16E-01
		1 foot	4inch Pb	1.50E-03

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1100

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	8.47E+01
		1 foot	None	5.88E-01
		1 inch	2inch Pb	8.47E+00
		1 foot	2inch Pb	5.88E-02
		1 inch	4inch Pb	8.47E-01
		1 foot	4inch Pb	5.88E-03
Rx Coolant	0.10	1 inch	None	8.47E-01
		1 foot	None	5.88E-03
		1 inch	2inch Pb	8.47E-02
		1 foot	2inch Pb	5.88E-04
		1 inch	4inch Pb	8.47E-03
		1 foot	4inch Pb	5.88E-05
Gas From Rx Coolant	1.0	1 inch	None	8.47E+00
		1 foot	None	5.88E-02
		1 inch	2inch Pb	8.47E-01
		1 foot	2inch Pb	5.88E-03
		1 inch	4inch Pb	8.47E-02
		1 foot	4inch Pb	5.88E-04
Suppression Pool Liquid	10.0	1 inch	None	1.14E-01
		1 foot	None	7.90E-04
		1 inch	2inch Pb	1.14E-02
		1 foot	2inch Pb	7.90E-05
		1 inch	4inch Pb	1.14E-03
		1 foot	4inch Pb	7.90E-06
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	2.39E+01
		1 foot	None	1.66E-01
		1 inch	2inch Pb	2.39E+00
		1 foot	2inch Pb	1.66E-02
		1 inch	4inch Pb	2.39E-01
		1 foot	4inch Pb	1.66E-03

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd



## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1115

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	8.47E+01
		1 foot	None	5.88E-01
		1 inch	2inch Pb	8.47E+00
		1 foot	2inch Pb	5.88E-02
		1 inch	4inch Pb	8.47E-01
		1 foot	4inch Pb	5.88E-03
Rx Coolant	0.10	1 inch	None	8.47E-01
		1 foot	None	5.88E-03
		1 inch	2inch Pb	8.47E-02
		1 foot	2inch Pb	5.88E-04
		1 inch	4inch Pb	8.47E-03
		1 foot	4inch Pb	5.88E-05
Gas From Rx Coolant	1.0	1 inch	None	8.47E+00
		1 foot	None	5.88E-02
		1 inch	2inch Pb	8.47E-01
		1 foot	2inch Pb	5.88E-03
		1 inch	4inch Pb	8.47E-02
		1 foot	4inch Pb	5.88E-04
Suppression Pool Liquid	10.0	1 inch	None	1.26E-01
		1 foot	None	8.74E-04
		1 inch	2inch Pb	1.26E-02
		1 foot	2inch Pb	8.74E-05
		1 inch	4inch Pb	1.26E-03
		1 foot	4inch Pb	8.74E-06
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	2.67E+01
		1 foot	None	1.86E-01
		1 inch	2inch Pb	2.67E+00
		1 foot	2inch Pb	1.86E-02
		1 inch	4inch Pb	2.67E-01
		1 foot	4inch Pb	1.86E-03

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1130

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	8.47E+01
		1 foot	None	5.88E-01
		1 inch	2inch Pb	8.47E+00
		1 foot	2inch Pb	5.88E-02
		1 inch	4inch Pb	8.47E-01
		1 foot	4inch Pb	5.88E-03
Rx Coolant	0.10	1 inch	None	8.47E-01
		1 foot	None	5.88E-03
		1 inch	2inch Pb	8.47E-02
		1 foot	2inch Pb	5.88E-04
		1 inch	4inch Pb	8.47E-03
		1 foot	4inch Pb	5.88E-05
Gas From Rx Coolant	1.0	1 inch	None	8.47E+00
		1 foot	None	5.88E-02
		1 inch	2inch Pb	8.47E-01
		1 foot	2inch Pb	5.88E-03
		1 inch	4inch Pb	8.47E-02
		1 foot	4inch Pb	5.88E-04
Suppression Pool Liquid	10.0	1 inch	None	1.46E-01
		1 foot	None	1.02E-03
		1 inch	2inch Pb	1.46E-02
		1 foot	2inch Pb	1.02E-04
		1 inch	4inch Pb	1.46E-03
		1 foot	4inch Pb	1.02E-05
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	2.90E+01
		1 foot	None	2.01E-01
		1 inch	2inch Pb	2.90E+00
		1 foot	2inch Pb	2.01E-02
		1 inch	4inch Pb	2.90E-01
		1 foot	4inch Pb	2.01E-03

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1145

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.77E+00
		1 foot	None	4.70E-02
		1 inch	2inch Pb	6.77E-01
		1 foot	2inch Pb	4.70E-03
		1 inch	4inch Pb	6.77E-02
		1 foot	4inch Pb	4.70E-04
		Rx Coolant	0.10	1 inch
1 foot	None			4.70E-04
1 inch	2inch Pb			6.77E-03
1 foot	2inch Pb			4.70E-05
1 inch	4inch Pb			6.77E-04
1 foot	4inch Pb			4.70E-06
Gas From Rx Coolant	1.0			1 inch
		1 foot	None	4.70E-03
		1 inch	2inch Pb	6.77E-02
		1 foot	2inch Pb	4.70E-04
		1 inch	4inch Pb	6.77E-03
		1 foot	4inch Pb	4.70E-05
		Suppression Pool Liquid	10.0	1 inch
1 foot	None			2.99E+00
1 inch	2inch Pb			4.30E+01
1 foot	2inch Pb			2.99E-01
1 inch	4inch Pb			4.30E+00
1 foot	4inch Pb			2.99E-02
Drywell atmosphere	10.0			1 inch
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
		Containment atmosphere	10.0	1 inch
1 foot	None			1.13E+01
1 inch	2inch Pb			1.62E+02
1 foot	2inch Pb			1.13E+00
1 inch	4inch Pb			1.62E+01
1 foot	4inch Pb			1.13E-01

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1200

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.77E+00
		1 foot	None	4.70E-02
		1 inch	2inch Pb	6.77E-01
		1 foot	2inch Pb	4.70E-03
		1 inch	4inch Pb	6.77E-02
		1 foot	4inch Pb	4.70E-04
Rx Coolant	0.10	1 inch	None	6.77E-02
		1 foot	None	4.70E-04
		1 inch	2inch Pb	6.77E-03
		1 foot	2inch Pb	4.70E-05
		1 inch	4inch Pb	6.77E-04
		1 foot	4inch Pb	4.70E-06
Gas From Rx Coolant	1.0	1 inch	None	6.77E-01
		1 foot	None	4.70E-03
		1 inch	2inch Pb	6.77E-02
		1 foot	2inch Pb	4.70E-04
		1 inch	4inch Pb	6.77E-03
		1 foot	4inch Pb	4.70E-05
Suppression Pool Liquid	10.0	1 inch	None	4.43E+02
		1 foot	None	3.07E+00
		1 inch	2inch Pb	4.43E+01
		1 foot	2inch Pb	3.07E-01
		1 inch	4inch Pb	4.43E+00
		1 foot	4inch Pb	3.07E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	1.42E+03
		1 foot	None	9.87E+00
		1 inch	2inch Pb	1.42E+02
		1 foot	2inch Pb	9.87E-01
		1 inch	4inch Pb	1.42E+01
		1 foot	4inch Pb	9.87E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLER TIME: 1215

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.77E+00
		1 foot	None	4.70E-02
		1 inch	2inch Pb	6.77E-01
		1 foot	2inch Pb	4.70E-03
		1 inch	4inch Pb	6.77E-02
		1 foot	4inch Pb	4.70E-04
		Rx Coolant	0.10	1 inch
1 foot	None			4.70E-04
1 inch	2inch Pb			6.77E-03
1 foot	2inch Pb			4.70E-05
1 inch	4inch Pb			6.77E-04
1 foot	4inch Pb			4.70E-06
Gas From Rx Coolant	1.0			1 inch
		1 foot	None	4.70E-03
		1 inch	2inch Pb	6.77E-02
		1 foot	2inch Pb	4.70E-04
		1 inch	4inch Pb	6.77E-03
		1 foot	4inch Pb	4.70E-05
		Suppression Pool Liquid	10.0	1 inch
1 foot	None			3.13E+00
1 inch	2inch Pb			4.51E+01
1 foot	2inch Pb			3.13E-01
1 inch	4inch Pb			4.51E+00
1 foot	4inch Pb			3.13E-02
Drywell Atmosphere	10.0			1 inch
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
		Containment Atmosphere	10.0	1 inch
1 foot	None			8.29E+00
1 inch	2inch Pb			1.19E+02
1 foot	2inch Pb			8.29E-01
1 inch	4inch Pb			1.19E+01
1 foot	4inch Pb			8.29E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1230

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.77E+00
		1 foot	None	4.70E-02
		1 inch	2inch Pb	6.77E-01
		1 foot	2inch Pb	4.70E-03
		1 inch	4inch Pb	6.77E-02
		1 foot	4inch Pb	4.70E-04
Rx Coolant	0.10	1 inch	None	6.77E-02
		1 foot	None	4.70E-04
		1 inch	2inch Pb	6.77E-03
		1 foot	2inch Pb	4.70E-05
		1 inch	4inch Pb	6.77E-04
		1 foot	4inch Pb	4.70E-05
Gas From Rx Coolant	1.0	1 inch	None	6.77E-01
		1 foot	None	4.70E-03
		1 inch	2inch Pb	6.77E-02
		1 foot	2inch Pb	4.70E-04
		1 inch	4inch Pb	6.77E-03
		1 foot	4inch Pb	4.70E-05
Suppression Pool Liquid	10.0	1 inch	None	4.51E+02
		1 foot	None	3.13E+00
		1 inch	2inch Pb	4.51E+01
		1 foot	2inch Pb	3.13E-01
		1 inch	4inch Pb	4.51E+00
		1 foot	4inch Pb	3.13E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	1.02E+03
		1 foot	None	7.11E+00
		1 inch	2inch Pb	1.02E+02
		1 foot	2inch Pb	7.11E-01
		1 inch	4inch Pb	1.02E+01
		1 foot	4inch Pb	7.11E-02

NOTES: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1245

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.71E+00
		1 foot	None	4.66E-02
		1 inch	2inch Pb	6.71E-01
		1 foot	2inch Pb	4.66E-03
		1 inch	4inch Pb	6.71E-02
		1 foot	4inch Pb	4.66E-04
Rx Coolant	0.10	1 inch	None	6.71E-02
		1 foot	None	4.66E-04
		1 inch	2inch Pb	6.71E-03
		1 foot	2inch Pb	4.66E-05
		1 inch	4inch Pb	6.71E-04
		1 foot	4inch Pb	4.66E-06
Gas From Rx Coolant	1.0	1 inch	None	6.71E-01
		1 foot	None	4.66E-03
		1 inch	2inch Pb	6.71E-02
		1 foot	2inch Pb	4.66E-04
		1 inch	4inch Pb	6.71E-03
		1 foot	4inch Pb	4.66E-05
Suppression Pool Liquid	10.0	1 inch	None	4.67E+02
		1 foot	None	3.24E+00
		1 inch	2inch Pb	4.67E+01
		1 foot	2inch Pb	3.24E-01
		1 inch	4inch Pb	4.67E+00
		1 foot	4inch Pb	3.24E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	9.89E+02
		1 foot	None	6.87E+00
		1 inch	2inch Pb	9.89E+01
		1 foot	2inch Pb	6.87E-01
		1 inch	4inch Pb	9.89E+00
		1 foot	4inch Pb	6.87E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1300

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.71E+00
		1 foot	None	4.66E-02
		1 inch	2inch Pb	6.71E-01
		1 foot	2inch Pb	4.66E-03
		1 inch	4inch Pb	6.71E-02
		1 foot	4inch Pb	4.66E-04
Rx Coolant	0.10	1 inch	None	6.71E-02
		1 foot	None	4.66E-04
		1 inch	2inch Pb	6.71E-03
		1 foot	2inch Pb	4.66E-05
		1 inch	4inch Pb	6.71E-04
		1 foot	4inch Pb	4.66E-06
Gas From Rx Coolant	1.0	1 inch	None	6.71E-01
		1 foot	None	4.66E-03
		1 inch	2inch Pb	6.71E-02
		1 foot	2inch Pb	4.66E-04
		1 inch	4inch Pb	6.71E-03
		1 foot	4inch Pb	4.66E-05
Suppression Pool Liquid	10.0	1 inch	None	4.79E+02
		1 foot	None	3.33E+00
		1 inch	2inch Pb	4.79E+01
		1 foot	2inch Pb	3.33E-01
		1 inch	4inch Pb	4.79E+00
		1 foot	4inch Pb	3.33E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	9.55E+02
		1 foot	None	6.63E+00
		1 inch	2inch Pb	9.55E+01
		1 foot	2inch Pb	6.63E-01
		1 inch	4inch Pb	9.55E+00
		1 foot	4inch Pb	6.63E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd



## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1315

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.71E+00
		1 foot	None	4.66E-02
		1 inch	2inch Pb	6.71E-01
		1 foot	2inch Pb	4.66E-03
		1 inch	4inch Pb	6.71E-02
		1 foot	4inch Pb	4.66E-04
Rx Coolant	0.10	1 inch	None	6.71E-02
		1 foot	None	4.66E-04
		1 inch	2inch Pb	6.71E-03
		1 foot	2inch Pb	4.66E-05
		1 inch	4inch Pb	6.71E-04
		1 foot	4inch Pb	4.66E-06
Gas From Rx Coolant	1.0	1 inch	None	6.71E-01
		1 foot	None	4.66E-03
		1 inch	2inch Pb	6.71E-02
		1 foot	2inch Pb	4.66E-04
		1 inch	4inch Pb	6.71E-03
		1 foot	4inch Pb	4.66E-05
Suppression Pool Liquid	10.0	1 inch	None	4.87E+02
		1 foot	None	3.38E+00
		1 inch	2inch Pb	4.87E+01
		1 foot	2inch Pb	3.38E-01
		1 inch	4inch Pb	4.87E+00
		1 foot	4inch Pb	3.38E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment atmosphere	10.0	1 inch	None	9.15E+02
		1 foot	None	6.36E+00
		1 inch	2inch Pb	9.15E+01
		1 foot	2inch Pb	6.36E-01
		1 inch	4inch Pb	9.15E+00
		1 foot	4inch Pb	6.36E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1330

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.65E+00
		1 foot	None	4.62E-02
		1 inch	2inch Pb	6.65E-01
		1 foot	2inch Pb	4.62E-03
		1 inch	4inch Pb	6.65E-02
		1 foot	4inch Pb	4.62E-04
Rx Coolant	0.10	1 inch	None	6.65E-02
		1 foot	None	4.62E-04
		1 inch	2inch Pb	6.65E-03
		1 foot	2inch Pb	4.62E-05
		1 inch	4inch Pb	6.65E-04
		1 foot	4inch Pb	4.62E-06
Gas From Rx Coolant	1.0	1 inch	None	6.65E-01
		1 foot	None	4.62E-03
		1 inch	2inch Pb	6.65E-02
		1 foot	2inch Pb	4.62E-04
		1 inch	4inch Pb	6.65E-03
		1 foot	4inch Pb	4.62E-05
Suppression Pool Liquid	10.0	1 inch	None	4.87E+02
		1 foot	None	3.38E+00
		1 inch	2inch Pb	4.87E+01
		1 foot	2inch Pb	3.38E-01
		1 inch	4inch Pb	4.87E+00
		1 foot	4inch Pb	3.38E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	8.76E+07
		1 foot	None	6.08E+06
		1 inch	2inch Pb	8.76E+01
		1 foot	2inch Pb	6.08E-01
		1 inch	4inch Pb	8.76E+00
		1 foot	4inch Pb	6.08E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1345

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.59E+00
		1 foot	None	4.58E-02
		1 inch	2inch Pb	6.59E-01
		1 foot	2inch Pb	4.58E-03
		1 inch	4inch Pb	6.59E-02
		1 foot	4inch Pb	4.58E-04
Rx Coolant	0.10	1 inch	None	6.59E-02
		1 foot	None	4.58E-04
		1 inch	2inch Pb	6.59E-03
		1 foot	2inch Pb	4.58E-05
		1 inch	4inch Pb	6.59E-04
		1 foot	4inch Pb	4.58E-06
Gas from Rx Coolant	1.0	1 inch	None	6.59E-01
		1 foot	None	4.58E-03
		1 inch	2inch Pb	6.59E-02
		1 foot	2inch Pb	4.58E-04
		1 inch	4inch Pb	6.59E-03
		1 foot	4inch Pb	4.58E-05
Suppression Pool Liquid	10.0	1 inch	None	4.75E+02
		1 foot	None	3.30E+00
		1 inch	2inch Pb	4.75E+01
		1 foot	2inch Pb	3.30E-01
		1 inch	4inch Pb	4.75E+00
		1 foot	4inch Pb	3.30E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	8.36E+02
		1 foot	None	5.80E+00
		1 inch	2inch Pb	8.36E+01
		1 foot	2inch Pb	5.80E-01
		1 inch	4inch Pb	8.36E+00
		1 foot	4inch Pb	5.80E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1400

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.48E+00
		1 foot	None	4.50E-02
		1 inch	2inch Pb	6.48E-01
		1 foot	2inch Pb	4.50E-03
		1 inch	4inch Pb	6.48E-02
		1 foot	4inch Pb	4.50E-04
Ex Coolant	0.10	1 inch	None	6.48E-02
		1 foot	None	4.50E-04
		1 inch	2inch Pb	6.48E-03
		1 foot	2inch Pb	4.50E-05
		1 inch	4inch Pb	6.48E-04
		1 foot	4inch Pb	4.50E-06
Gas From Rx Coolant	1.0	1 inch	None	6.48E-01
		1 foot	None	4.50E-03
		1 inch	2inch Pb	6.48E-02
		1 foot	2inch Pb	4.50E-04
		1 inch	4inch Pb	6.48E-03
		1 foot	4inch Pb	4.50E-05
Suppression Pool Liquid	10.0	1 inch	None	4.67E+02
		1 foot	None	3.24E+00
		1 inch	2inch Pb	4.67E+01
		1 foot	2inch Pb	3.24E-01
		1 inch	4inch Pb	4.67E+00
		1 foot	4inch Pb	3.24E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	8.24E+02
		1 foot	None	5.72E+00
		1 inch	2inch Pb	8.24E+01
		1 foot	2inch Pb	5.72E-01
		1 inch	4inch Pb	8.24E+00
		1 foot	4inch Pb	5.72E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1415

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.48E+00
		1 foot	None	4.50E-02
		1 inch	2inch Pb	6.48E-01
		1 foot	2inch Pb	4.50E-03
		1 inch	4inch Pb	6.48E-02
		1 foot	4inch Pb	4.50E-04
Rx Coolant	0.10	1 inch	None	6.48E-02
		1 foot	None	4.50E-04
		1 inch	2inch Pb	6.48E-03
		1 foot	2inch Pb	4.50E-05
		1 inch	4inch Pb	6.48E-04
		1 foot	4inch Pb	4.50E-06
Gas From Rx Coolant	1.0	1 inch	None	6.48E-01
		1 foot	None	4.50E-03
		1 inch	2inch Pb	6.48E-02
		1 foot	2inch Pb	4.50E-04
		1 inch	4inch Pb	6.48E-03
		1 foot	4inch Pb	4.50E-05
Suppression Pool Liquid	10.0	1 inch	None	4.59E+02
		1 foot	None	3.19E+00
		1 inch	2inch Pb	4.59E+01
		1 foot	2inch Pb	3.19E-01
		1 inch	4inch Pb	4.59E+00
		1 foot	4inch Pb	3.19E-02
Drywell Ataosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
vent here	10.0	1 inch	None	8.19E+02
		1 foot	None	5.69E+00
		1 inch	2inch Pb	8.19E+01
		1 foot	2inch Pb	5.69E-01
		1 inch	4inch Pb	8.19E+00
		1 foot	4inch Pb	5.69E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1430

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.42E+00
		1 foot	None	4.46E-02
		1 inch	2inch Pb	6.42E-01
		1 foot	2inch Pb	4.46E-03
		1 inch	4inch Pb	6.42E-02
		1 foot	4inch Pb	4.46E-04
Rx Coolant	0.10	1 inch	None	6.42E-02
		1 foot	None	4.46E-04
		1 inch	2inch Pb	6.42E-03
		1 foot	2inch Pb	4.46E-05
		1 inch	4inch Pb	6.42E-04
		1 foot	4inch Pb	4.46E-06
Gas From Rx Coolant	1.0	1 inch	None	6.42E-01
		1 foot	None	4.46E-03
		1 inch	2inch Pb	6.42E-02
		1 foot	2inch Pb	4.46E-04
		1 inch	4inch Pb	6.42E-03
		1 foot	4inch Pb	4.46E-05
Suppression Pool Liquid	10.0	1 inch	None	4.51E+02
		1 foot	None	3.13E+00
		1 inch	2inch Pb	4.51E+01
		1 foot	2inch Pb	3.13E-01
		1 inch	4inch Pb	4.51E+00
		1 foot	4inch Pb	3.13E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	8.07E+02
		1 foot	None	5.61E+00
		1 inch	2inch Pb	8.07E+01
		1 foot	2inch Pb	5.61E-01
		1 inch	4inch Pb	8.07E+00
		1 foot	4inch Pb	5.61E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

## PASS RADIATION READINGS (mR/hr)

SAMPLE TIME: 1445

SAMPLE	VOLUME(ml)	DISTANCE	SHIELDING	READING
Rx Coolant	10.0	1 inch	None	6.42E+00
		1 foot	None	4.46E-02
		1 inch	2inch Pb	6.42E-01
		1 foot	2inch Pb	4.46E-03
		1 inch	4inch Pb	6.42E-02
		1 foot	4inch Pb	4.46E-04
Rx Coolant	0.10	1 inch	None	6.42E-02
		1 foot	None	4.46E-04
		1 inch	2inch Pb	6.42E-03
		1 foot	2inch Pb	4.46E-05
		1 inch	4inch Pb	6.42E-04
		1 foot	4inch Pb	4.46E-06
Gas From Rx Coolant	1.0	1 inch	None	6.42E-01
		1 foot	None	4.46E-03
		1 inch	2inch Pb	6.42E-02
		1 foot	2inch Pb	4.46E-04
		1 inch	4inch Pb	6.42E-03
		1 foot	4inch Pb	4.46E-05
Suppression Pool Liquid	10.0	1 inch	None	4.43E+02
		1 foot	None	3.07E+00
		1 inch	2inch Pb	4.43E+01
		1 foot	2inch Pb	3.07E-01
		1 inch	4inch Pb	4.43E+00
		1 foot	4inch Pb	3.07E-02
Drywell Atmosphere	10.0	1 inch	None	1.88E-04
		1 foot	None	1.30E-06
		1 inch	2inch Pb	1.88E-05
		1 foot	2inch Pb	1.30E-07
		1 inch	4inch Pb	1.88E-06
		1 foot	4inch Pb	1.30E-08
Containment Atmosphere	10.0	1 inch	None	8.07E+02
		1 foot	None	5.61E+00
		1 inch	2inch Pb	8.07E+01
		1 foot	2inch Pb	5.61E-01
		1 inch	4inch Pb	8.07E+00
		1 foot	4inch Pb	5.61E-02

NOTE: Assume All Readings &lt; 1.00E-02 mR/hr as Bkgd

SECTION 9.2

RADIATION AREA DATA



Table 9.2.1.a

1991 RIVIERA BEND STATION PRACTICE EXERCISE  
DRMS MONITOR TREND DATA

	Drill Time:	00/00	00/05	00/30	01/00	01/15	01/30	01/45	02/00	02/15	02/30	02/45	03/00
	Clock Time:	0800	0805	0830	0900	0915	0930	0945	1000	1015	1030	1045	1100
ID Number	Location (Units)												
RE-16	A,B Containment PAM R.B. 186'(R/hr)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	500	500	500	500
RE-20	A,B Drywell PAM D.W. 114'(R/hr)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	10.0	10.0	10.0	10.0
RE-21	A,B Cont. Purge Monitor R.B. 141(mR/hr)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	5.0E5	5.0E5	5.0E5	5.0E5
RE-139	Inside Annulus 114'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	OSH	OSH	OSH	OSH
RE-141	Refuel Floor South R.B. 186'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	OSH	OSH	OSH	OSH
RE-146	Containment Airlock F.B. 114'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	OSH	OSH	OSH	OSH
RE-151	Sample Station Area R.B. 162'(mR/hr)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	OSH	OSH	OSH	OSH
RE-162	O.G.Bldg.Regen Area O.G. 67' (mR/hr)	0.4	5.0	5.0	5.0	5.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-164	O.G.Bldg.Smpl. Area O.G. 123'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
RE-165	Cond.Demin Rgn. Area O.G. 67'(mR/hr)	9.2	35	35	35	35	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-166	Cond.Demin Str. Area O.G. 95'(mR/hr)	0.3	20	20	20	20	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-167	O.G. Bldg.Viv. Area O.G. 137'(mR/hr)	28	28	28	28	28	28	28	28	28	28	28	28
RE-182	Recovery Sample Area R.W. 65'(mR/hr)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-185	Storage Tank Area R.W. 90'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-186	Floor Drain Sump R.W. 65'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
RE-187	High Cond. Sump Area R.W. 65'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-192	Refuel Floor South F.B. 113'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	20	20	20
RE-193	Refuel Floor North F.B. 113'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.0	5.0	5.0	5.0
RE-194	Supt Rm Trans. Tube F.B. 123'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	20	20	20
RE-195	Sample Sink Area F.B. 95'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	20	20	20
RE-196	Equip. Drain Sump F.B. 70'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	20	20	20	20
RE-200	North Hoist Area T.B. 123'(mR/hr)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5
RE-201	Air Removal Pump T.B. 95'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-202	Rx Feed Pump Area T.B. 67'(mR/hr)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	Turb. Bldg Samp Rm T.B. 67'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-204	Cond Demin Samp Rack T.B. 95'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-210	PASS Panel A.B. 114'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	20	20	20	20
RE-211	Control Rod Drive A.B. 95'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.0	5.0	5.0	5.0
RE-212	HPCS Area East A.B. 70'(mR/hr)	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	5.0	5.0	5.0	5.0
RE-213	RHR A Area West A.B. 70'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	5.0	5.0	5.0
RE-214	RHR B Area East A.B. 70'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	5.0	5.0	5.0
RE-215	RHR C Area A.B. 70'(mR/hr)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0	5.0	5.0	5.0
RE-216	LPCS Area West A.B. 70'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	5.0	5.0	5.0	5.0
RE-217	HPCS Penetration East A.B. 70'(mR/hr)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	20	20	20	20
RE-218	LPCS Penetration West A.B. 70'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	20	20	20	20
RE-219	RCIC Area West A.B. 70'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.0	5.0	5.0	5.0

Note: OSH - Off Scale High

T : 9.2.1.b

1991 RIVERBEND STATION PRACTICE EXERCISE  
DRMS MONITOR TREND DATA

ID Number	Location (Units)	03/15	03/30	03/45	04/00	04/15	04/30	04/45	05/00	05/15	05/30	05/45
		Drill Time: Clock Time:										
RE-16	A,B Containment PAM R.B. 186'(R/hr)	500	500	7.5E3	7.5E3	4.5E3	3.9E3	3.3E3	2.4E3	5.0E2	1.9E2	1.9E2
RE-20	A,B Drywell PAM D.W. 114'(R/hr)	10.0	10.0	100	100	60.0	52.0	44.0	32.0	10.0	4.0	4.0
RE-21	A,B Cont. Purge Monitor R.B. 141(mR/hr)	5.0E5	5.0E5	7.5E6	7.5E6	4.5E6	3.9E6	3.3E6	2.4E6	5.0E5	1.9E5	1.9E5
RE-139	Inside Annulus 114'(mR/hr)	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM
RE-141	Refuel Floor South R.B. 186'(mR/hr)	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM
RE-146	Containment Airlock F.B. 114'(mR/hr)	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM
RE-151	Sample Station Area R.B. 162'(mR/hr)	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM	OSM
RE-162	O.G.Bldg.Regen Area O.G. 67'(mR/hr)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-164	O.G.Bldg.Smpl. Area O.G. 123'(mR/hr)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
RE-165	Cond.Demin Rgn. Area O.G. 67'(mR/hr)	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-166	Cond.Demin S.F. Area O.G. 95'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-167	O.G. Bldg.Viv.Area O.G. 137'(mR/hr)	28	28	28	28	28	28	28	28	28	28	28
RE-182	Recovery Sample Tank R.W. 65'(mR/hr)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-185	Storage Tank Area R.W. 90'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-186	Floor Drain Sump R.W. 65'(mR/hr)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
RE-187	High Cond. Sump Area R.W. 65'(mR/hr)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
RE-192	Refuel Floor South F.B. 113'(mR/hr)	20	20	300	300	180	150	125	90	20	8.0	8.0
RE-193	Refuel Floor North F.B. 113'(mR/hr)	3.0	5.0	75	75	45	38	30	23	5.0	2.0	2.0
RE-194	Supt Rm Trans. Tube F.B. 123'(mR/hr)	20	20	300	300	180	150	125	90	20	8.0	8.0
RE-195	Sample Sink Area F.B. 95'(mR/hr)	20	20	300	300	180	150	125	90	20	8.0	8.0
RE-196	Equip. Drain Sump F.B. 70'(mR/hr)	20	20	300	300	180	150	125	90	20	8.0	8.0
RE-200	North Hoist Area T.B. 123'(mR/hr)	0.5	0.5	12	12	12	12	12	12	12	12	12
RE-201	Air Removal Pump T.B. 95'(mR/hr)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-202	Rx Feed Pump Area T.B. 67'(mR/hr)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	Turb. Bldg Sump Rm T.B. 67'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-204	Cond.Demin Sump Rack T.B. 95'(mR/hr)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RE-210	PASS Panel A.B. 114'(mR/hr)	20	20	300	300	180	150	125	90	20	8.0	8.0
RE-211	Control Rod Drive A.B. 95'(mR/hr)	5.0	5.0	75	75	45	40	33	24	5.0	2.0	2.0
RE-212	HPCS Area East A.B. 70'(mR/hr)	5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-213	RHR A Area West A.B. 70'(mR/hr)	5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-214	RHR B Area East A.B. 70'(mR/hr)	5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-215	RHR C Area A.B. 70'(mR/hr)	5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-216	LPCS Area West A.B. 70'(mR/hr)	5.0	5.0	75	75	45	40	30	25	5.0	2.0	2.0
RE-217	HPCS Penetration East A.B. 70'(mR/hr)	20	20	300	300	180	150	125	90	20	7.5	7.5
RE-218	LPCS Penetration West A.B. 70'(mR/hr)	20	20	300	300	180	150	125	90	20	7.5	7.5
RE-219	RCIC Area West A.B. 70'(mR/hr)	5.0	5.0	75	75	45	45	30	25	5.0	2.0	2.0

Note: OSM - Off Scale High

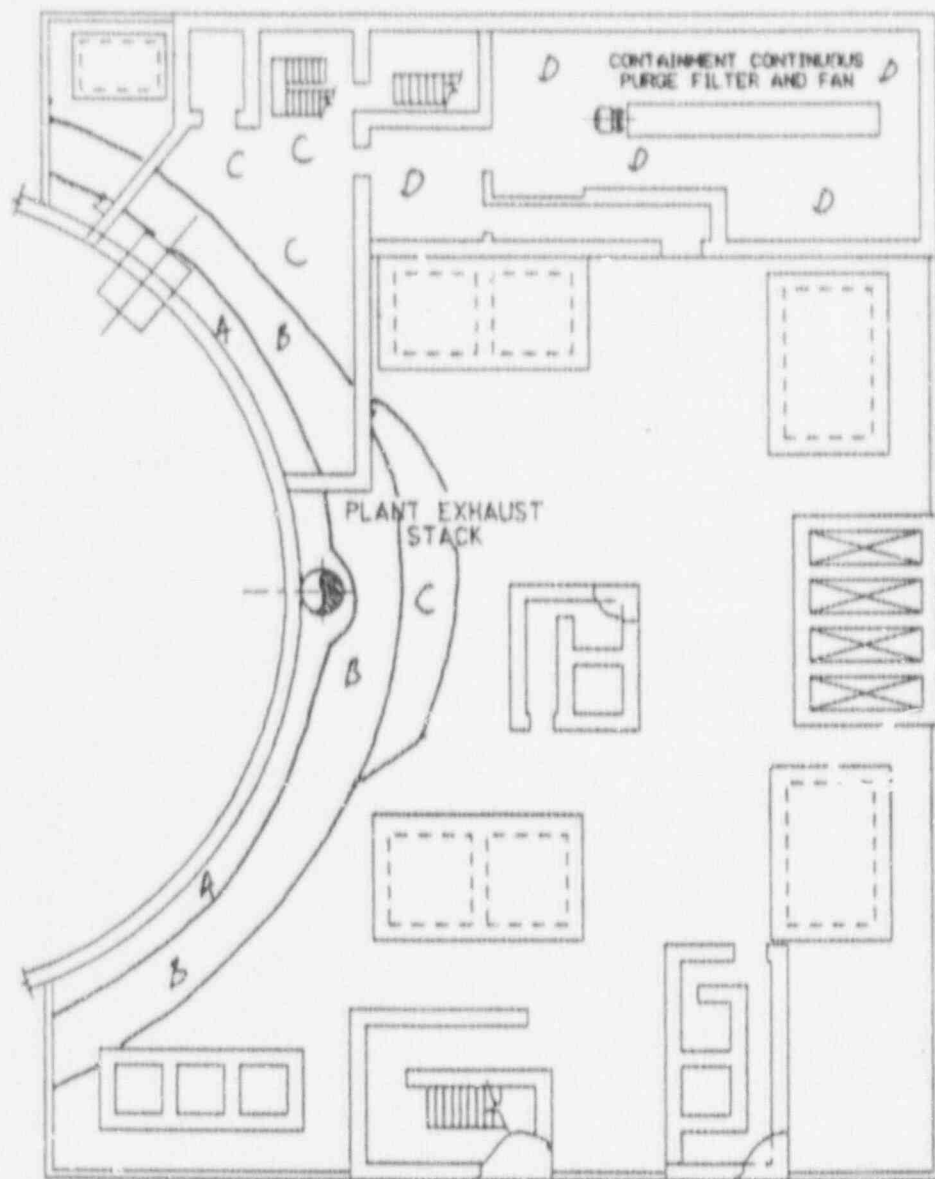
1991 RIVER BEND STATION PRACTICE EXERCISE  
 DRFS MONITOR TREND DATA

Table 9.2.1.c

Drill Time: 06/00 06/15 06/30  
 Clock Time: 1400 1415 1430

ID Number	Location (Units)			
RE-16	A,B Containment PAM R.B. 186'(R/hr)	1.9E2	1.9E2	1.9E2
RE-20	A,B Drywell PAM D.W. 114'(R/hr)	4.0	4.0	4.0
RE-21	A,B Cont. Purge Monitor R.B. 141(mR/hr)	1.9E5	1.9E5	1.9E5
RE-139	Inside Annulus 114'(mR/hr)	OSH	OSH	OSH
RE-141	Refuel Floor South R.B. 186'(mR/hr)	OSH	OSH	OSH
RE-146	Containment Airlock F.B. 114'(mR/hr)	OSH	OSH	OSH
RE-151	Sample Location Area R.B. 162'(mR/hr)	OSH	OSH	OSH
RE-162	O.G.Bldg.Regan Area O.G. 67' (mR/hr)	0.4	0.4	0.4
RE-164	O.G.Bldg.Smpl. Area O.G. 123'(mR/hr)	2.0	2.0	2.0
RE-165	Cond.Demin Rgn. Area O.G. 67'(mR/hr)	9.2	9.2	9.2
RE-166	Cond.Demin Str. Area O.G. 95'(mR/hr)	0.1	0.3	0.3
RE-167	O.G. Bldg.Viv.Area O.G. 137'(mR/hr)	28	28	28
RE-182	Recovery Sample Tank R.W. 65'(mR/hr)	0.4	0.4	0.4
RE-185	Storage Tank Area R.W. 90'(mR/hr)	0.2	0.2	0.2
RE-186	Floor Drain Sump R.W. 65'(mR/hr)	0.5	0.5	0.5
RE-187	High Cond. Sump Area R.W. 65'(mR/hr)	0.3	0.3	0.3
RE-192	Refuel Floor South F.B. 113'(mR/hr)	8.0	8.0	8.0
RE-193	Refuel Floor North F.B. 113'(mR/hr)	2.0	2.0	2.0
RE-194	Supt Rm Trans. Tube F.B. 123'(mR/hr)	8.0	8.0	8.0
RE-195	Sample Sink Area F.B. 95'(mR/hr)	8.0	8.0	8.0
RE-196	Equip. Drain Sump F.B. 70'(mR/hr)	8.0	8.0	8.0
RE-200	North Hoist Area T.B. 123'(mR/hr)	12	12	12
RE-201	Air Removal Pump T.B. 95'(mR/hr)	0.2	0.2	0.2
RE-202	Rx Feed Pump Area T.B. 67'(mR/hr)	1.5	1.5	1.5
RE-203	Turb. Bldg Samp Rm T.B. 67'(mR/hr)	0.1	0.1	0.1
RE-204	Cond Demin Sump Rack T.B. 95'(mR/hr)	0.1	0.1	0.1
RE-210	PASS Panel A.B. 114'(mR/hr)	8.0	8.0	8.0
RE-211	Control Rod Drive A.B. 95'(mR/hr)	2.0	2.0	2.0
RE-212	HPCS Area East A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-213	RHR A Area West A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-214	RHR B Area East A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-215	RHR C Area A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-216	LPCS Area West A.B. 70'(mR/hr)	2.0	2.0	2.0
RE-217	HPCS Penetration East A.B.70'(mR/hr)	7.5	7.5	7.5
RE-218	LPCS Penetration West A.B.70'(mR/hr)	7.5	7.5	7.5
RE-219	RCIC Area West A.B. 70'(mR/hr)	2.0	2.0	2.0

Note: OSH - Off Scale High

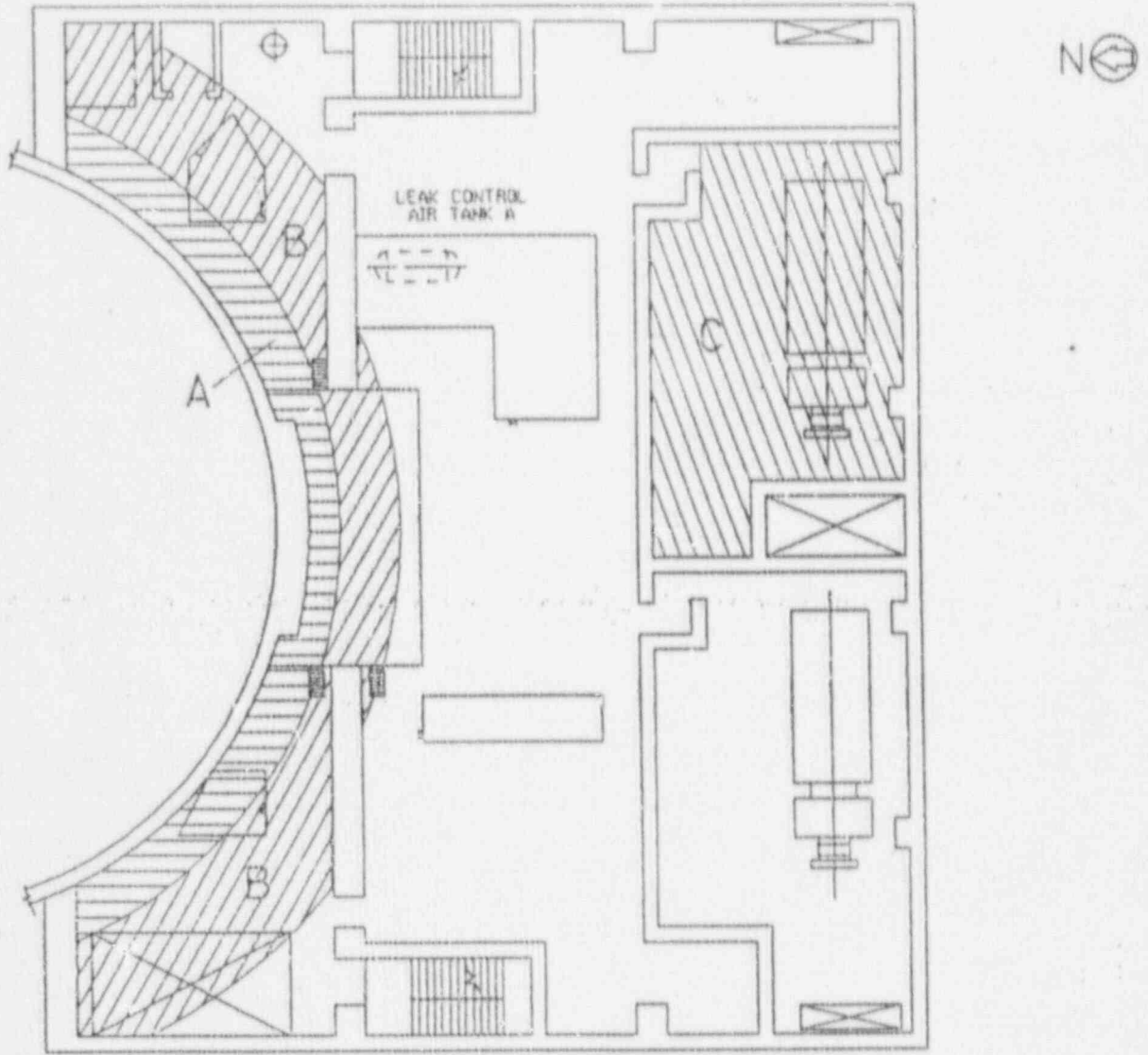


AUXILIARY BUILDING ROOF EL. 170'-0"





Figure 9.2.3



AUXILIARY BUILDING EL. 141'-0"





1991 PRACTICE EXERCISE

Table 9.2.3  
River Bend Station  
Aux. Bldg. E1, 141\*

	1130		1145		1200		1215		1245		1300		1315		1330		1350		1400		1430	
	1145	1200	1145	1200	1200	1215	1215	1230	1245	1300	1315	1315	1330	1330	1350	1400	1400	1400	1430	1430	1430	1500
<u>Ambient Radiation Level</u> (mr/hr)	500	7500	7500	7500	7500	4500	4500	3900	3250	2375	500	500	500	185	185	185	185	185	185	185	185	185
ZONE A	200	3000	3000	3000	3000	1800	1800	1550	1300	950	200	200	200	75	75	75	75	75	75	75	75	75
ZONE B	----	----	----	----	----	90K	90K	85K	80K	40K	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000
ZONE C																						
General Areas	20	300	300	300	300	180	180	150	125	90	20	20	20	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5

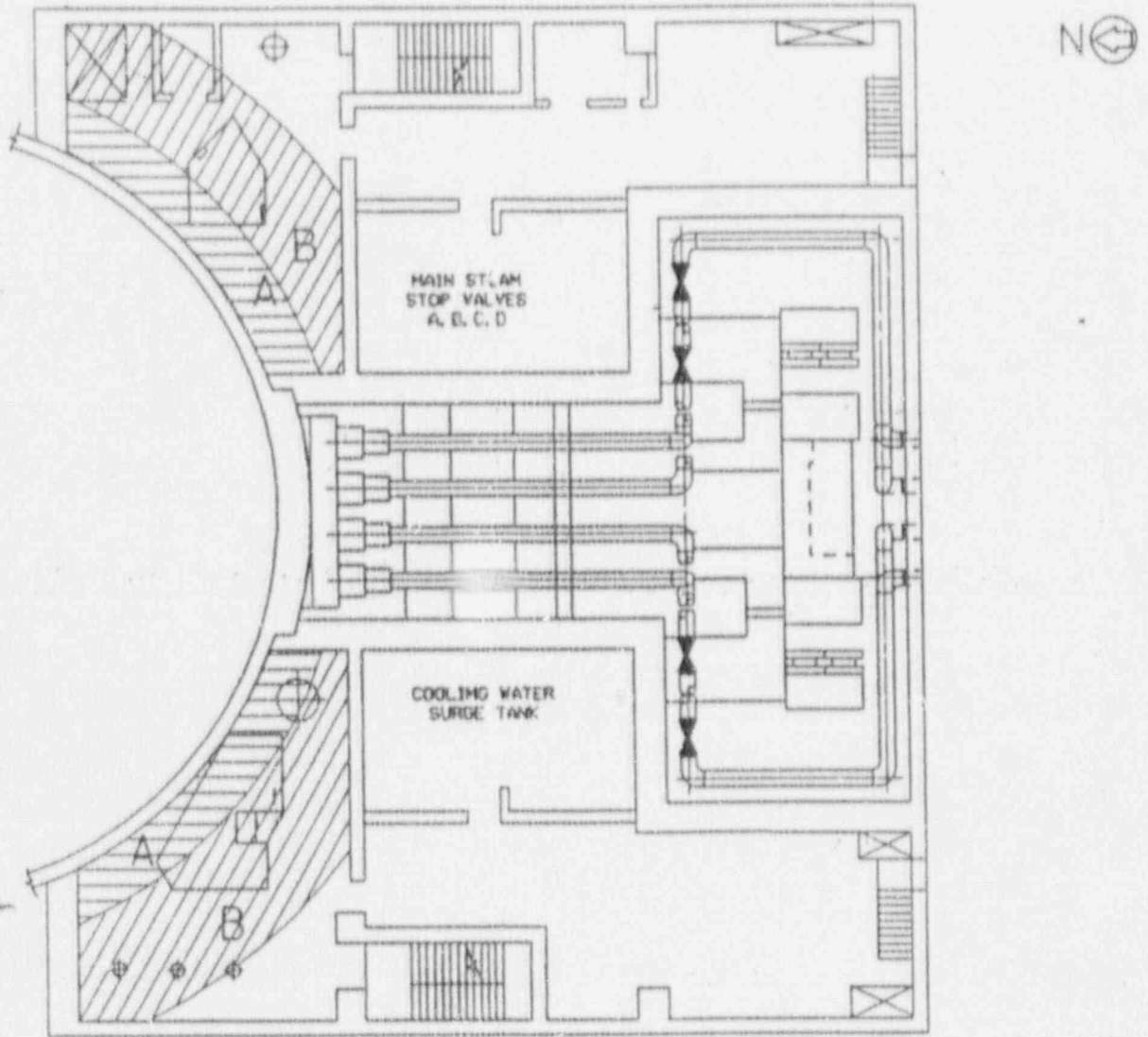
Contamination Levels (dpm/100cm<sup>2</sup>)

General Areas As Found -----

Airborne Levels (cps)

General Areas As Found -----

Figure 9.2.4

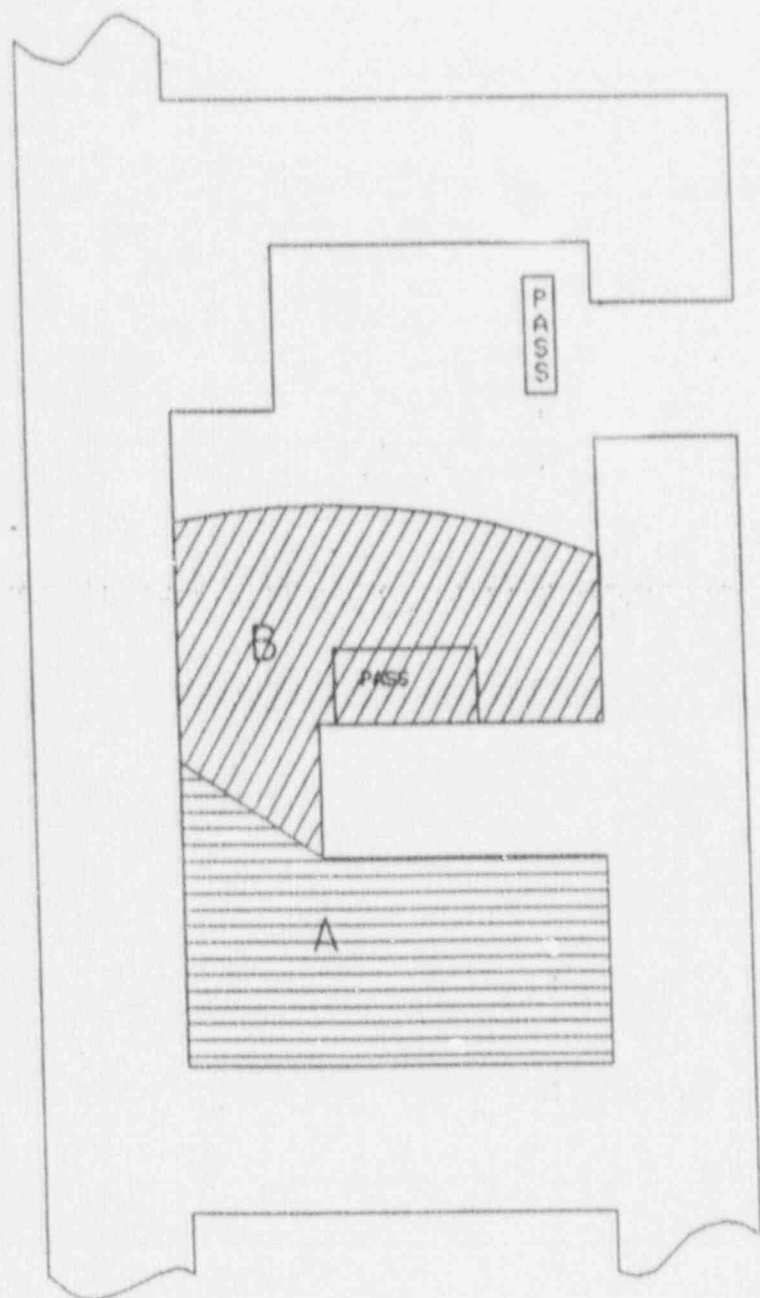
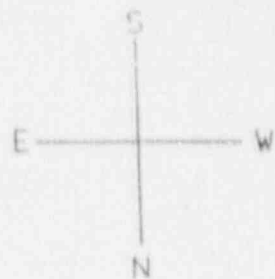


AUXILIARY BUILDING EL. 114'-0"





Figure 9.2.5



PASS SAMPLE AREA



1991 PRACTICE EXERCISE

Table 9-2.5  
River Bend Station  
Aux. Bldg. E1.114-P:SS Station

	<u>Ambient Radiation Level</u> (mr/hr)											
	1130	1145	1200	1215	1230	1245	1300	1315	1330	1345	1400	1430
Cont. w/ Sample line	1000	10K	10K	10K	9000	8000	8000	7000	7000	7000	7000	7000
ZONE A	100	1000	1000	1000	900	800	800	700	700	700	700	700
ZONE B	20	200	200	200	180	160	160	140	140	140	140	140
General Areas	20	200	200	200	180	160	160	140	140	140	140	140
Mon. RE 665 (R/hr)	1	10	10	10	9	8	8	7	7	7	7	7
Mon. RE 704 (mR/hr)	20	200	200	200	180	160	160	140	140	140	140	140

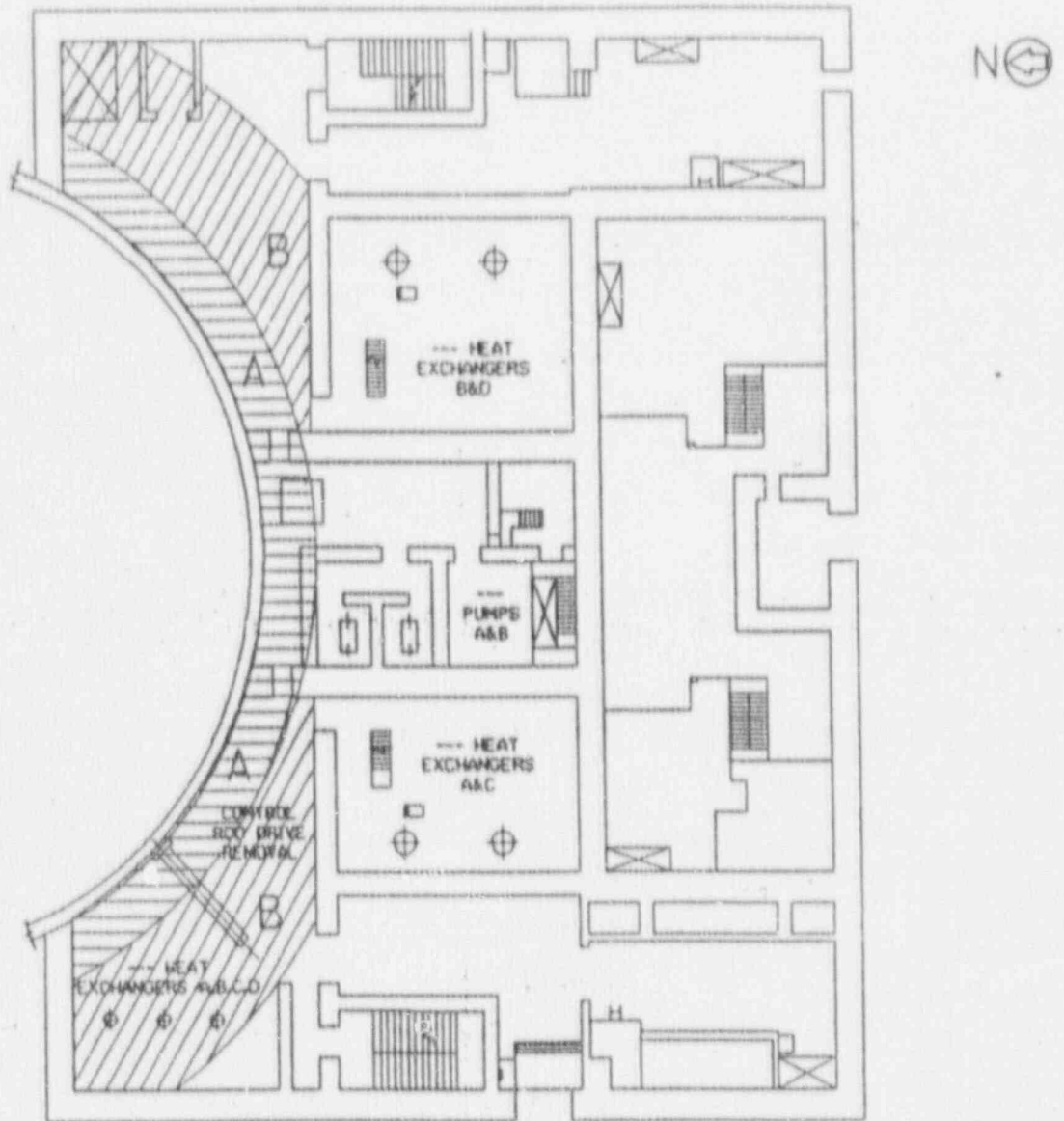
Contamination Levels (dpm/100cm<sup>2</sup>)

General Areas As Found -----

Airborne Levels (cpm)

General Areas As Found -----

Figure 9.2.6



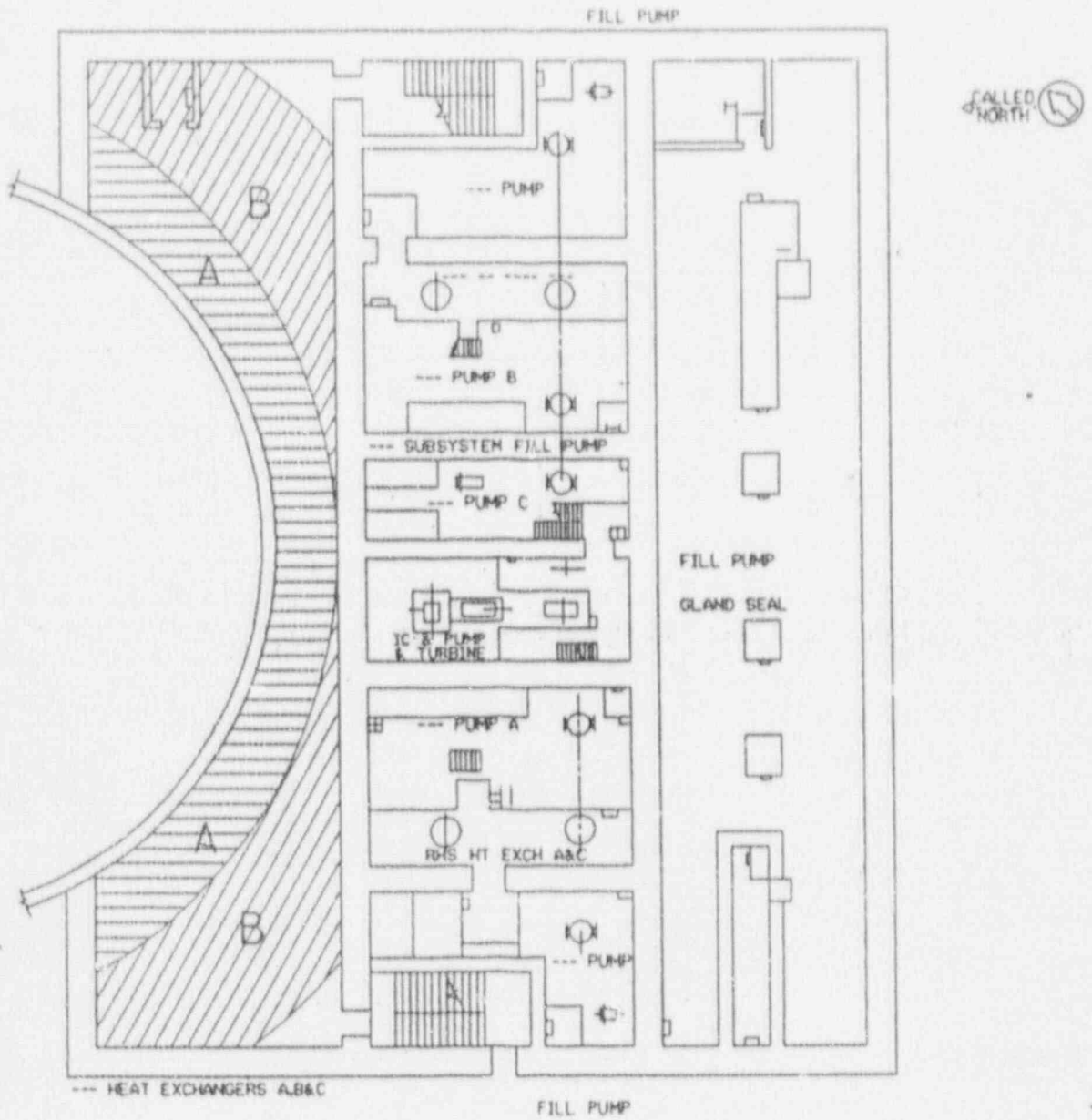
AUXILIARY BUILDING EL. 95'-9"







Figure 9.2.7



AUXILIARY BUILDING EL. 70'-0"



1991 PRACTICE EXERCISE

Table 9.2.7  
River Bend Station  
Aux. Bldg. E1. 70\*

Ambient Radiation Level ( $\mu\text{r/hr}$ )		1130	1145	1200	1215	1230	1245	1300	1315	1330	1400	1430
ZONE A	500		7500	7500	4500	3900	3250	2375	500	185	185	185
ZONE B	200		3000	3000	1800	1550	1300	950	200	75	75	75
General Areas	20		300	300	180	150	125	90	20	7.5	7.5	7.5
ARM RE-212	5		75	75	45	40	30	25	5	2	2	2
RE-213	5		75	75	45	40	30	25	5	2	2	2
RE-214	5		75	75	45	40	30	25	5	2	2	2
RE-215	5		75	75	45	40	30	25	5	2	2	2
RE-216	5		75	75	45	40	30	25	5	2	2	2
RE-217	20		300	300	180	150	125	90	20	7.5	7.5	7.5
RE-218	20		300	300	180	150	125	90	20	7.5	7.5	7.5
RE-219	5		75	75	45	40	30	25	5	2	2	2

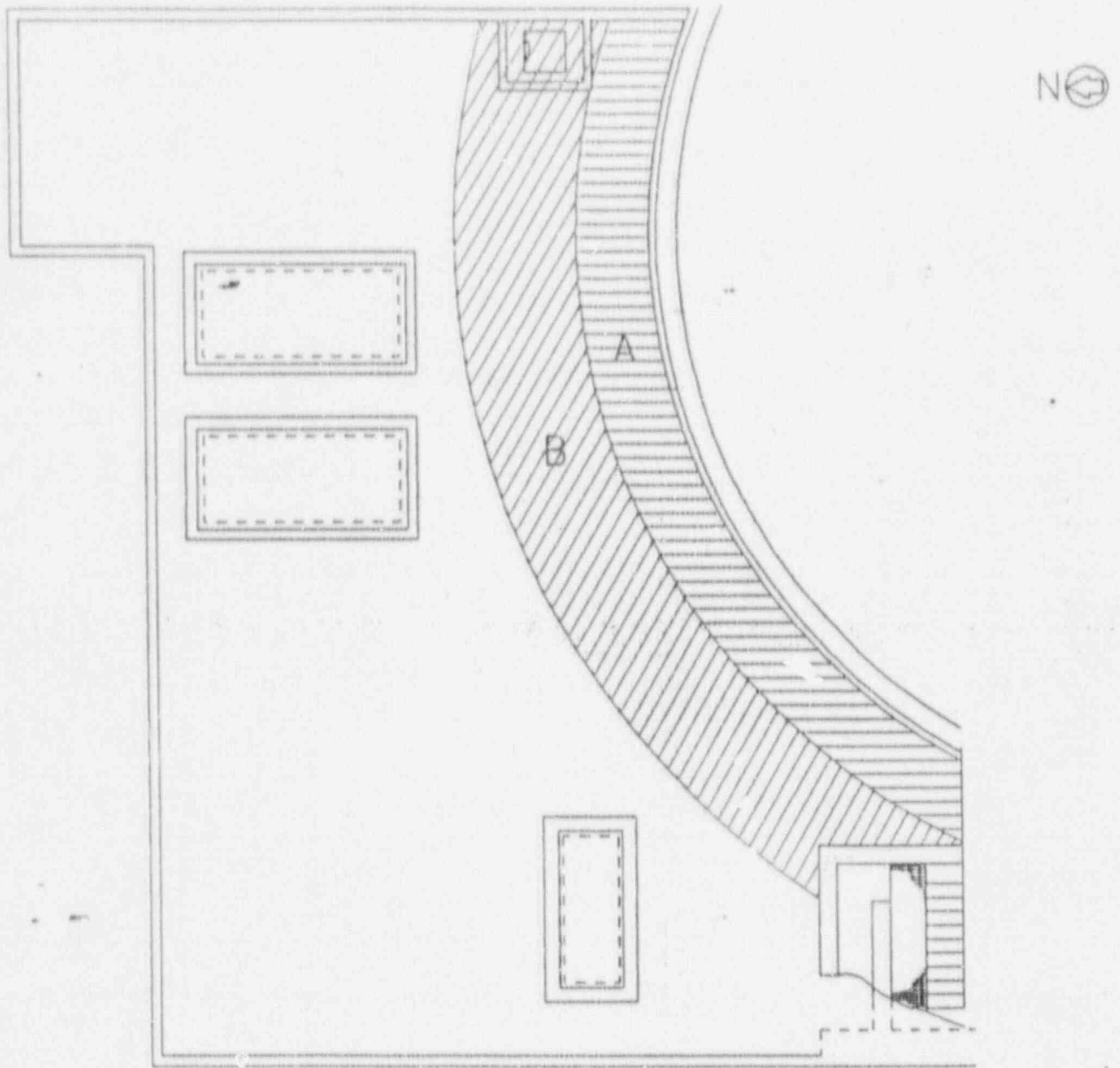
Contamination Levels ( $\text{dpm}/10\text{Jcm}^2$ )

General Areas As Found -----

Airborne Levels (cpm)

General Areas As Found -----

Figure 9.2.8



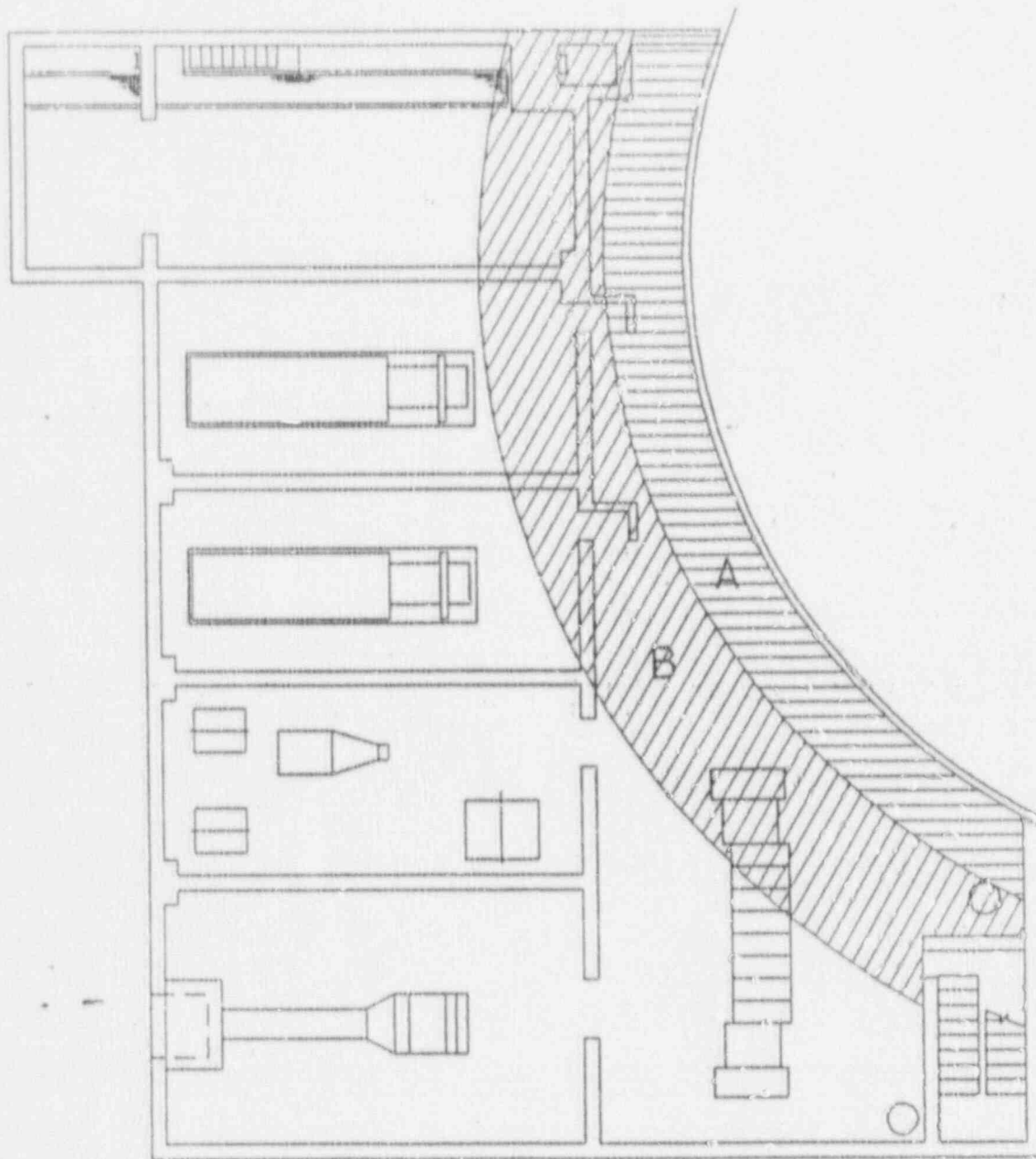
FUEL BUILDING ROOF







Figure 9.2.9



FUEL BUILDING EL. 148'



Table 9.2.  
River Bend Station  
Final Bldg. E. 148'

Ambient Radiation Level (mr/hr)	1130	1145	1200	1215	1245	1300	1315	1330	1345	1400	1430	1500
ZONE A	7500	4500	3900	3250	2375	185	185	185	185	185	185	185
ZONE B	200	1800	1550	1300	950	200	200	200	200	200	200	200
General Areas	20	300	300	180	125	90	20	20	20	20	20	20

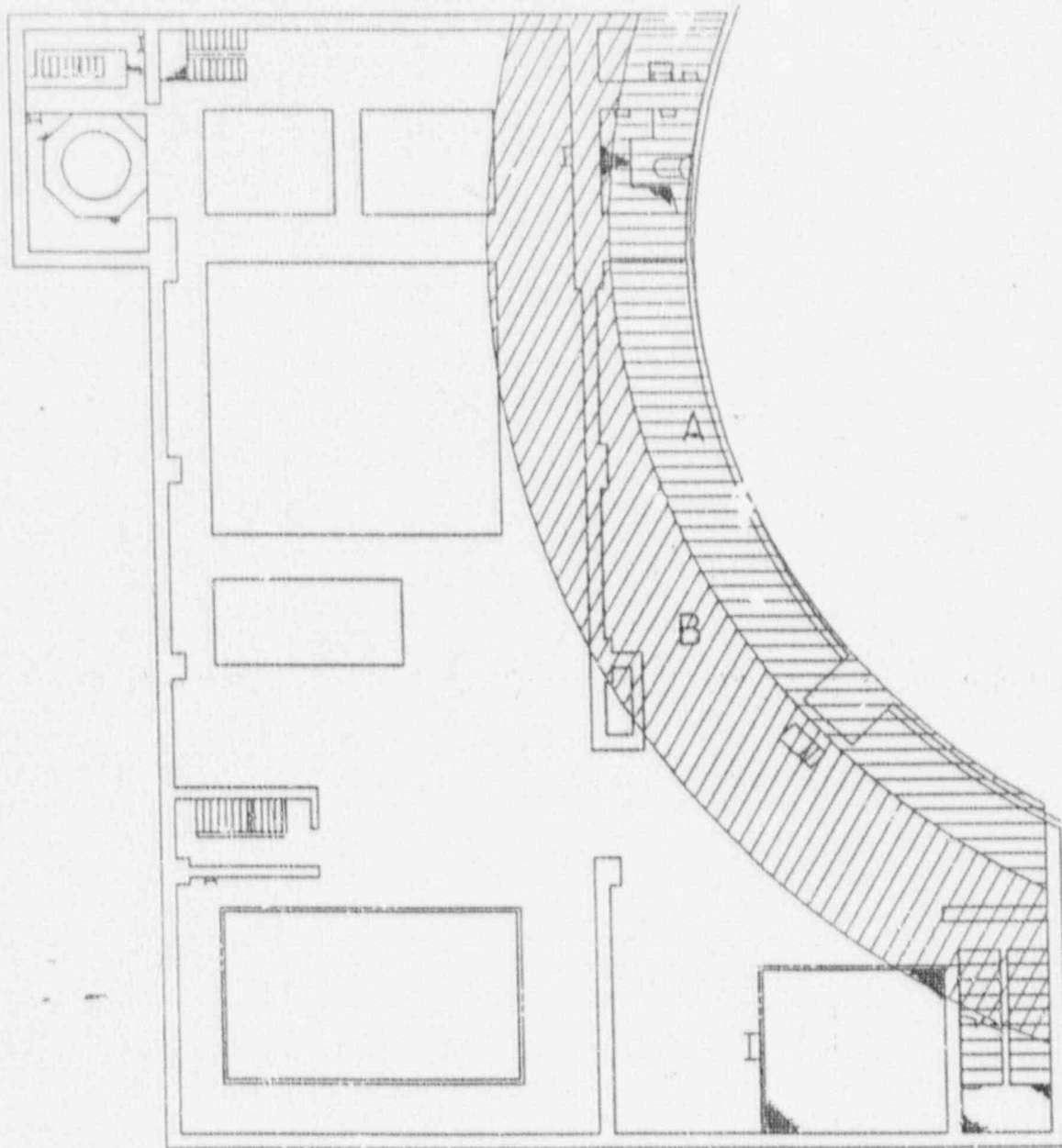
Contamination Levels (cpm/100cm<sup>2</sup>)

General Areas As Found

Airborne Levels (cpm)

General Areas As Found

Figure 9.2.1

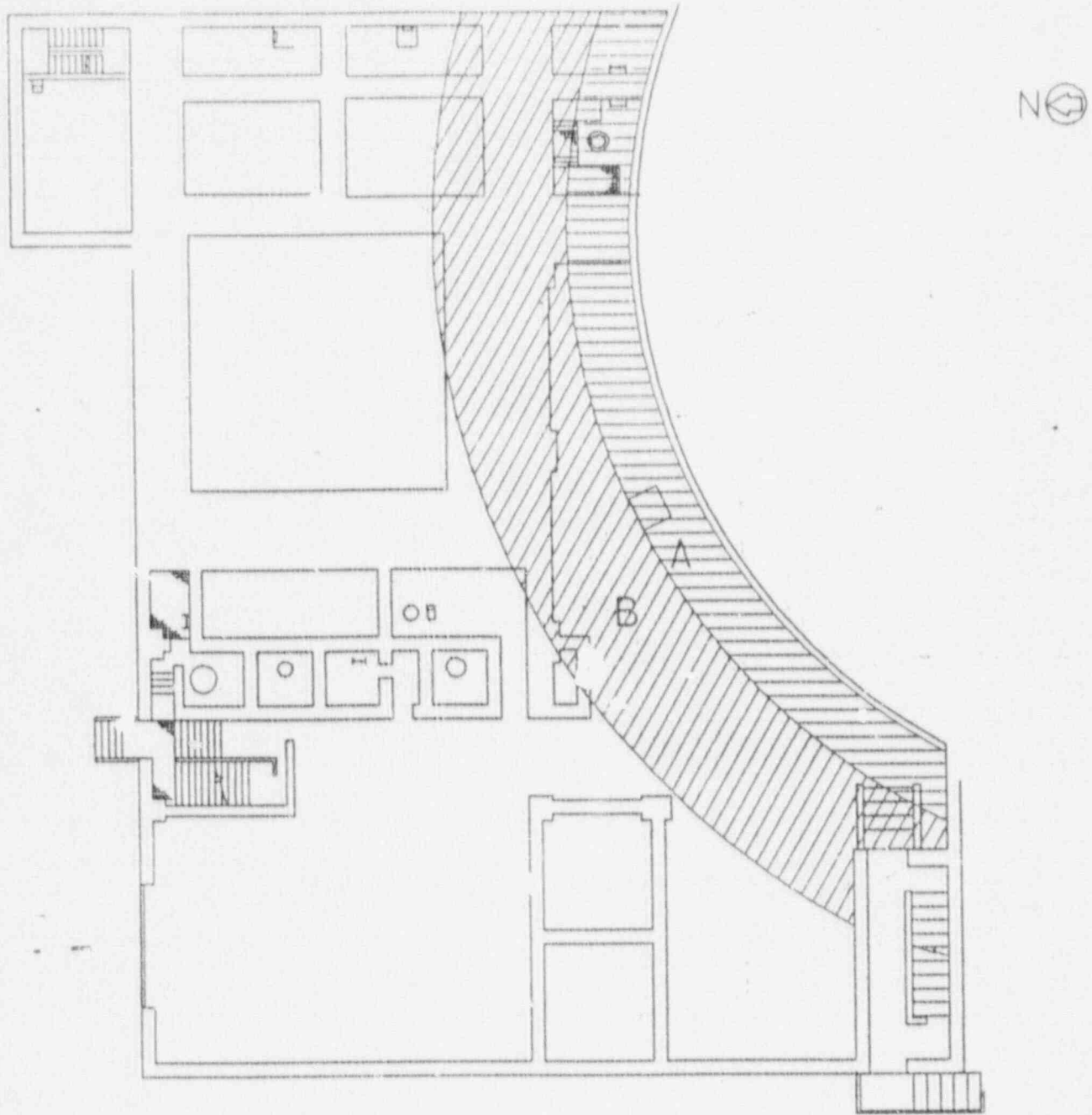


FUEL BUILDING EL. 113'





Figure 9.2.14



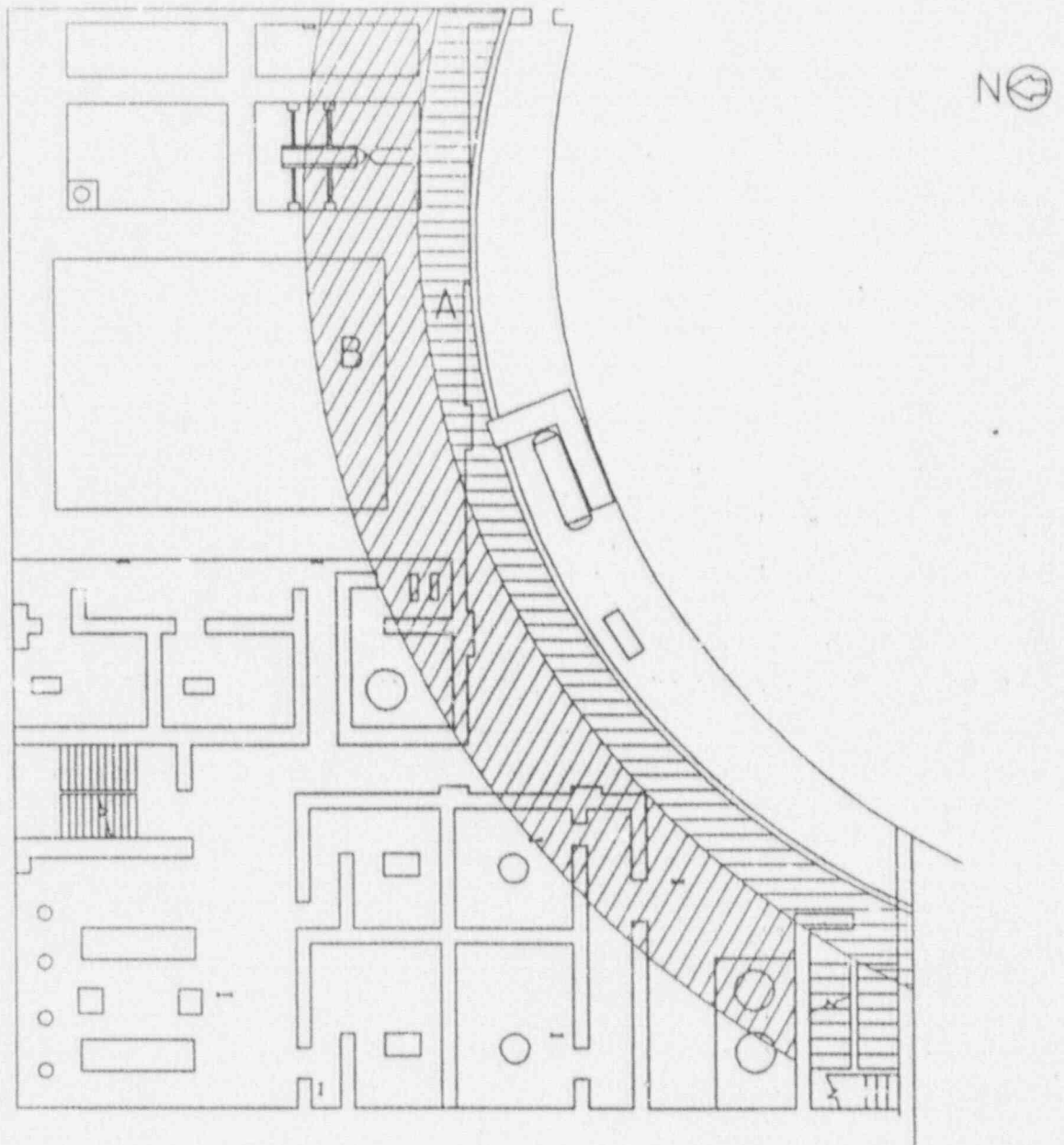
FUEL BUILDING EL. 95'







Figure 9.2.12



FUEL BUILDING EL. 70'

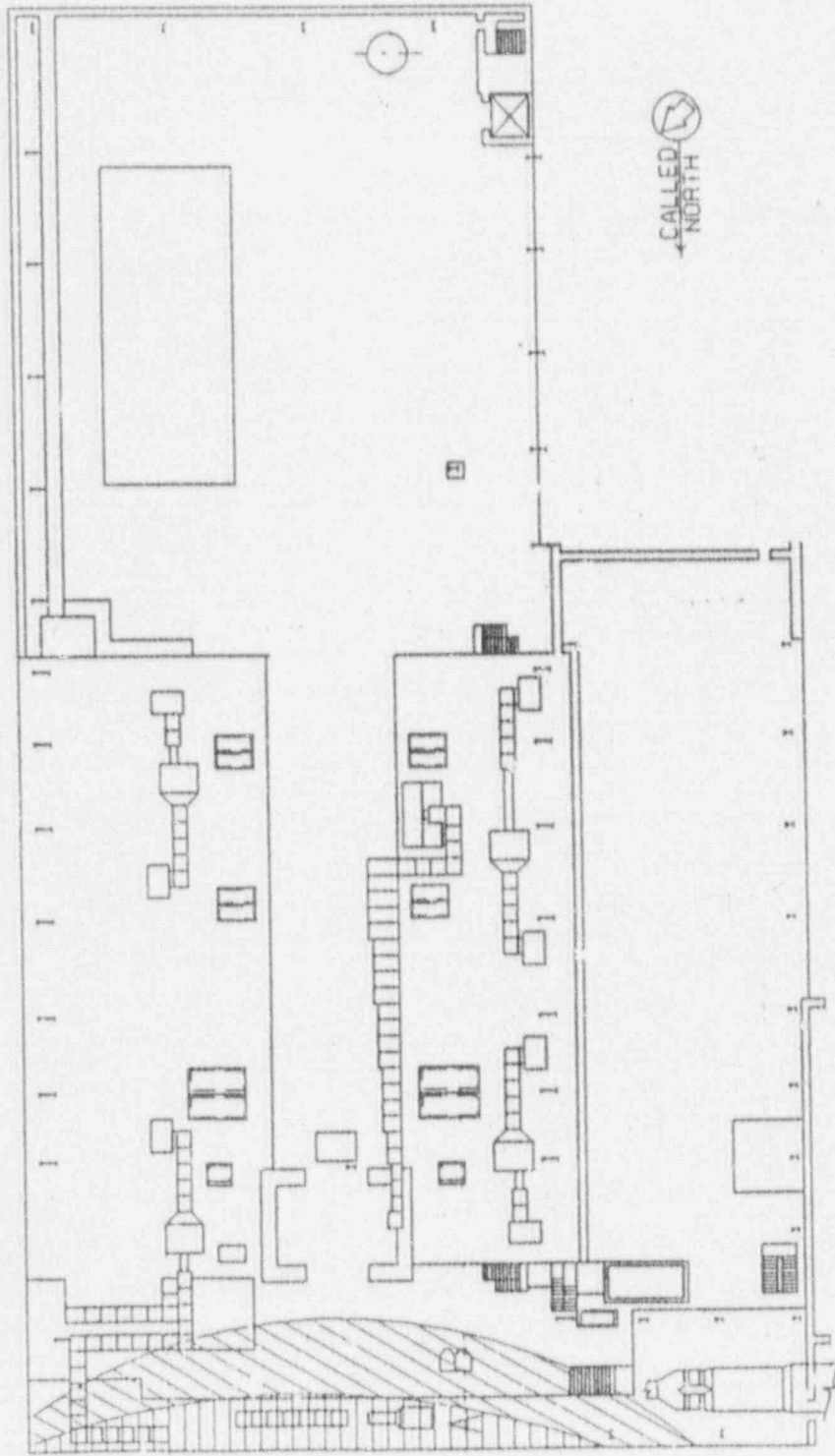






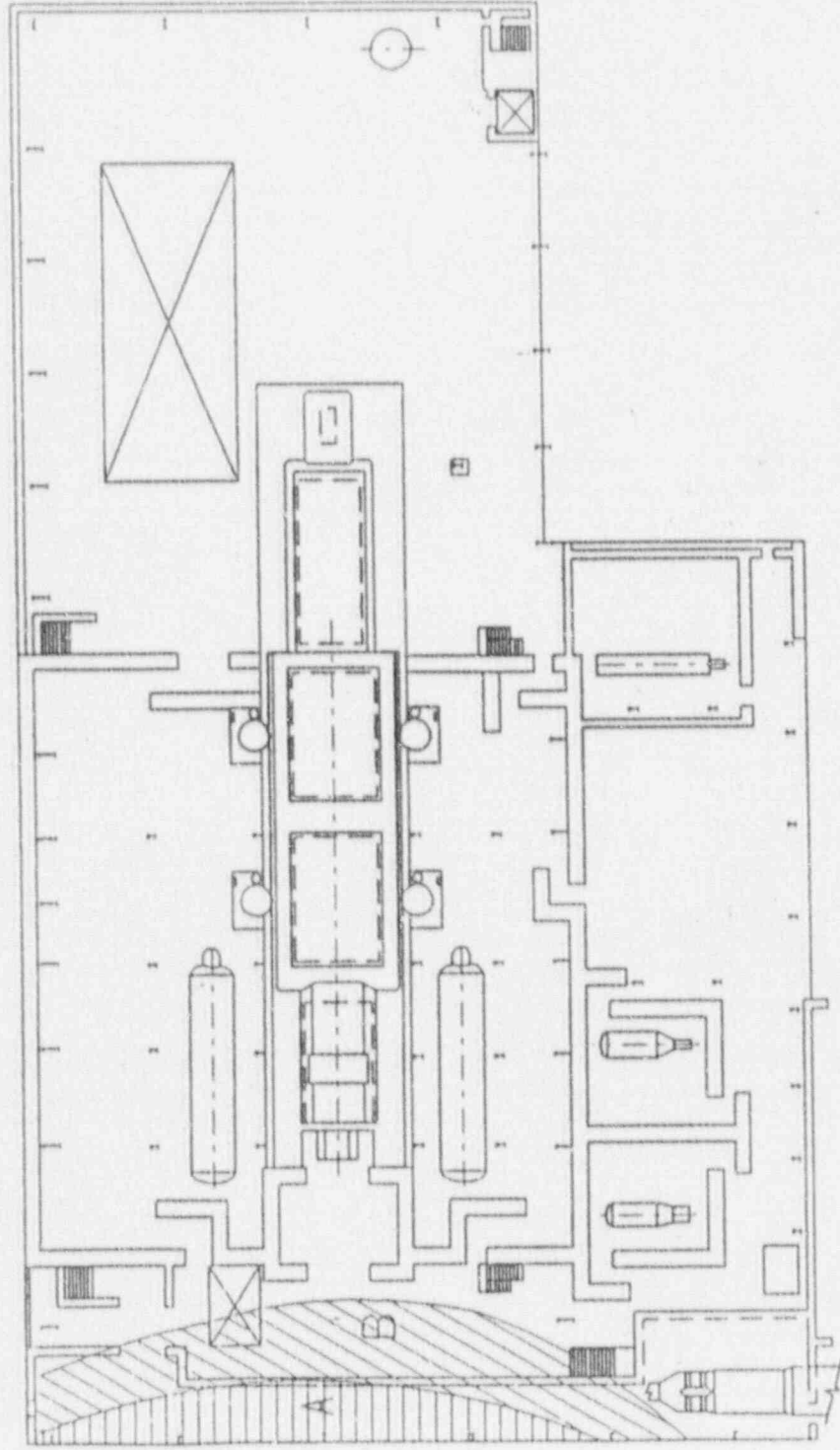


Figure 9.2.13



TURBINE BLDG.  
EL. ABOVE 123'

Figure 9.2.14



TURBINE BLDG.  
EL. 123'



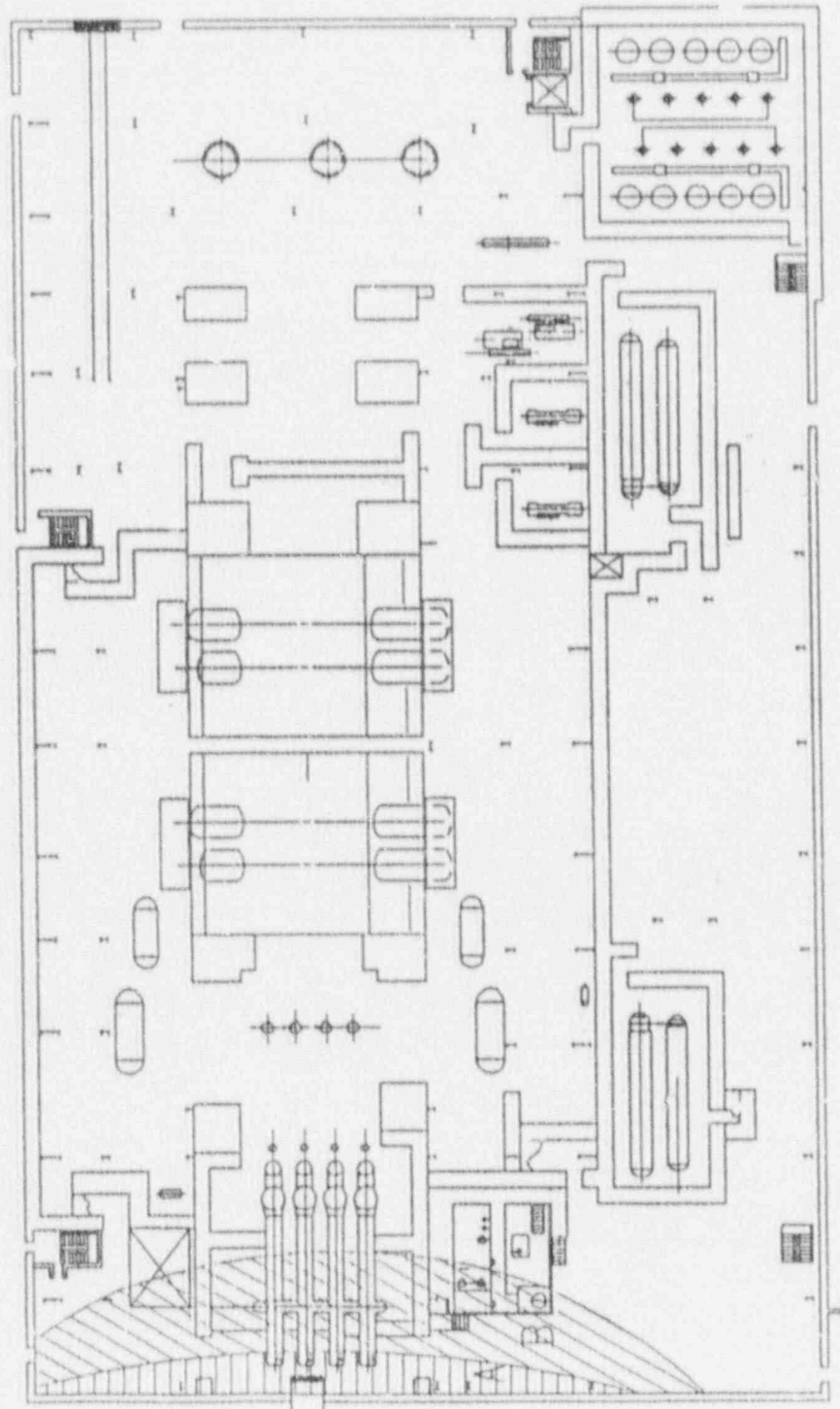
1991 PRACTICE EXERCISE

Table 9.2.14  
 River Bend Station  
 Turb. Bldg. EL. 123'

	0800 0830	0830 0900	0900 0930	0930 0945	0945 1000	1000 1015	1015 1030	1030 1045	1045 1100	1100 1115	1115 1130
<u>Ambient Radiation Level (mr/hr)</u>											
ZONE A	As Found	----	----	----	----	----	2 0.5	2 0.5	2 0.5	2 0.5	2 0.5
ZONE B	As Found	----	----	----	----	----					
General Areas	As Found	----	----	----	----	----					
ARM RE-200	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>											
General Areas	As Found	----	----	----	----	----					
<u>Airborne Levels (cpm)</u>											
General Areas	As Found	----	----	----	----	----					



Figure 9.2.15



TURBINE BLDG. EL. 95'

1991 PRACTICE EXERCISE

Table 9.2.15  
River Bend Station  
Turb. Bldg. EL. 95'

	0805 0830	0830 0900	0900 0930	0930 0945	0945 1000	1000 1015	1015 1030	1030 1045	1045 1100	1100 1115	1115 1130
<u>Ambient Radiation Level</u> (mr/hr)											
ZONE A	As Found	----	----	----	----	----	2	2	2	2	2
ZONE B	As Found	----	----	----	----	----	0.5	0.5	0.5	0.5	0.5
ZONE C	20	20	20	As Found	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
ARM RE-201	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-204	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>											
ZONE C	3000	3000	3000	3000	3000*	3000	3000	3000	3000	3000	3000
General Areas	As found	----	----	----	----	----	----	----	----	----	----
<u>Airborne Levels (cpm)</u> ( $\mu\text{Ci/cc}$ )											
ZONE C	5.0E+03 (4.0E-08)	5.0E+03 (4.0E-08)	5.0E+03 (4.0E-08)	5.0E+03 (4.0E-08)	As Found (3.0E-11)	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----

CONTROLLER NOTE: Prior to 0805, airborne activity in ZONE C is 3.0E-11  $\mu\text{Ci/cc}$  (<100 cpm).

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.

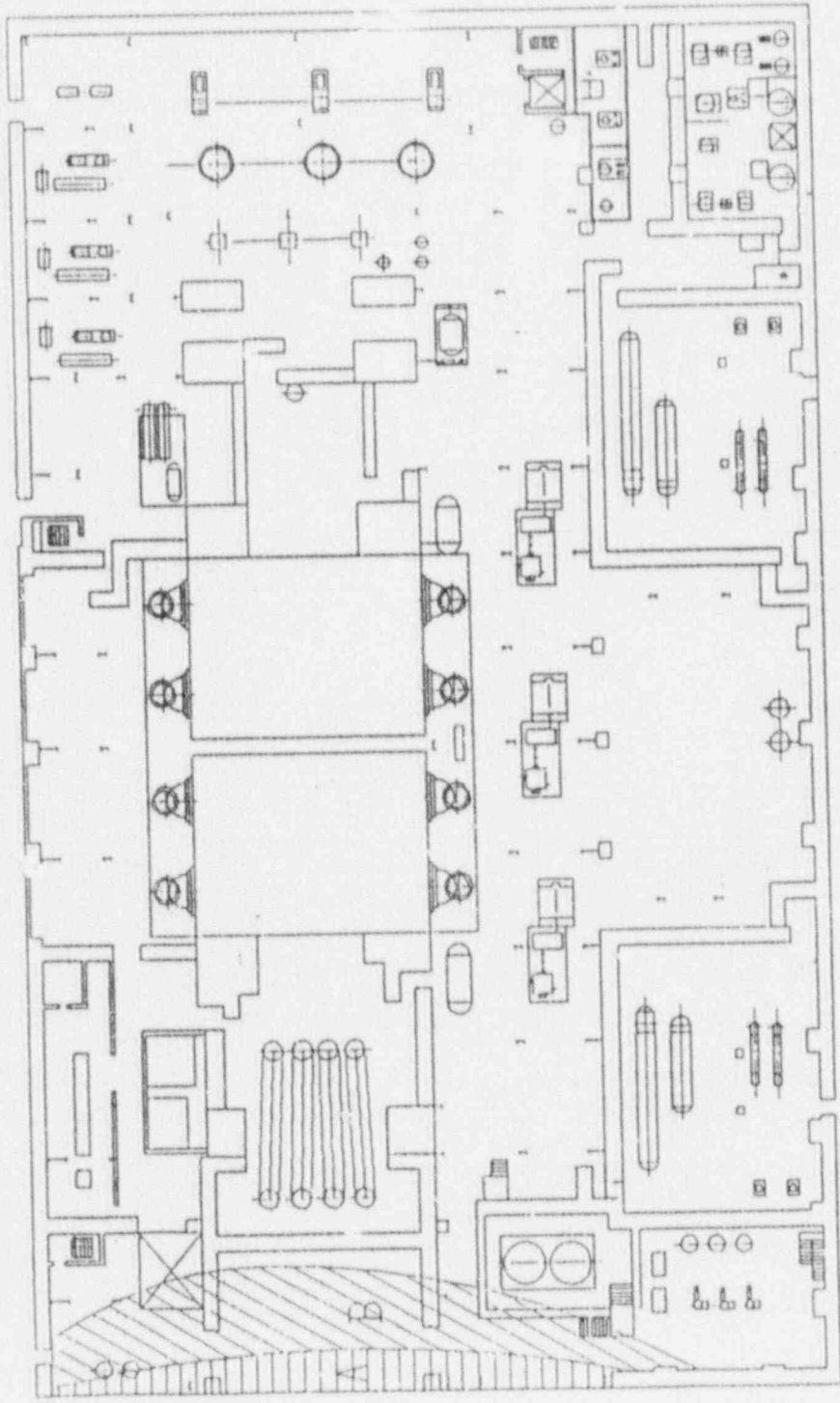
1991 PRACTICE EXERCISE

Table 9.2.15  
River Bend Station  
Turb. Bldg. EL. 95'

Ambient Radiation Level (mr/hr)		1130 1145	1145 1200	1200 1215	1215 1230	1230 1245	1245 1300	1300 1315	1315 1330	1330 1400	1400 1430	1430 1500
ZONE A	2		30	30	30	30	30	30	30	30	30	30
ZONE B	0.5		12	12	12	12	12	12	12	12	12	12
ZONE C	As Found		---	---	---	---	---	---	---	---	---	---
General Areas	As Found		---	---	---	---	---	---	---	---	---	---
ARM RE-201	0.2		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RE-204	0.1		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Contamination Levels (cpm/100cm <sup>2</sup> )			3000*	3000	3000	3000	3000	3000	3000	3000	3000	3000
ZONE C	As Found		---	---	---	---	---	---	---	---	---	---
General Areas	As Found		---	---	---	---	---	---	---	---	---	---
Airborne Levels (cpm) ( $\mu$ Ci/cc)			(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)
ZONE C	As Found		---	---	---	---	---	---	---	---	---	---
General Areas	As Found		---	---	---	---	---	---	---	---	---	---

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.

Figure 9.2.16



TURBINE BLDG. EL. 65'



Table 9.2.16  
River Bend Station  
Turb. Bldg. EL. 65'

	0805 0830	0830 0900	0900 0930	0930 0945	0945 1000	1000 1015	1015 1030	1030 1045	1045 1100	1100 1115	1115 1130
<u>Ambient Radiation Level</u> (mr/hr)											
ZONE A	As Found	----	----	----	0.5	0.5	2	2	2	2	2
ZONE B	As Found	----	----	----	----	0.5	0.5	0.5	0.5	0.5	0.5
ZONE C	35	35	35	As Found	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
ARM RE-162	5	5	5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-165	35	35	35	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-202	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>											
ZONE C	4500	4500	4500	4500	4500*	4500	4500	4500	4500	4500	4500
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
<u>Airborne Levels (cpm)</u> ( $\mu\text{Ci/cc}$ )											
ZONE C	6.3E+03 (5.0E-08)	6.3E+03 (5.0E-08)	6.3E+03 (5.0E-08)	6.3E+03 (5.0E-08)	As Found (3.0E-11)	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----

CONTROLLER NOTE: Prior to 0805, airborne activity in ZONE C is 3.0E-11  $\mu\text{Ci/cc}$  (<100 cpm).

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.

## 1991 PRACTICE EXERCISE

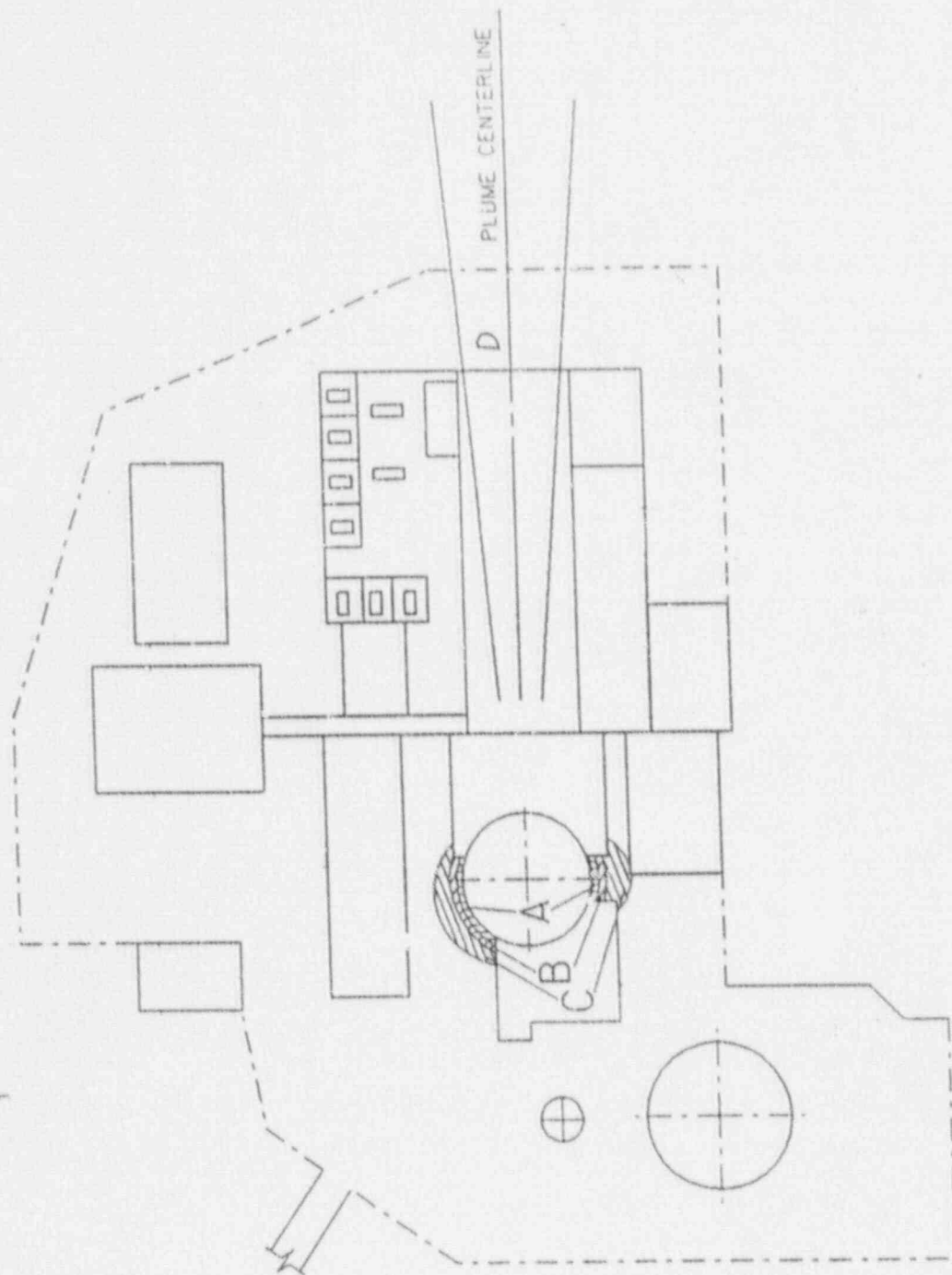
Table 9.2.16  
River Bend Station  
Turb. B'dg. El. 65\*

	1130 1145	1145 1200	1200 1215	1215 1230	1230 1245	1245 1300	1300 1315	1315 1330	1330 1400	1400 1430	1430 1500
<u>Ambient Radiation Level</u> (mr/hr)											
ZONE A	5	5	4.8	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6
ZONE B	2	2	1	1	1	1	1	1	1	1	1
ZONE C	As Found	----	----	----	----	----	----	----	----	----	----
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
ARM RE-162	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
RE-165	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
RE-202	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
RE-203	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<u>Contamination Levels (dpm/100cm<sup>2</sup>)</u>											
ZONE C	4500*	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
General Areas	As Found	----	----	----	----	----	----	----	----	----	----
<u>Airborne Levels (cpm)</u>											
General Areas	As Found (3.0E-11)	----	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)	(3.0E-11)

\* If players take actions to decontaminate the area, swipes will yield <100 dpm following the cleanup.



Figure 9.2.17



OUTSIDE AREAS



SECTION 9.3

PROCESS MONITOR TREND DATA





1991 RIVER BEND STATION PRACTICE EXERCISE  
 PROCESS MONITOR TREND DATA

Table 9.3.1.c

	Drill Time:	05/45	06/00	06/15	06/30
	Clock Time:	1345	1400	1415	1430
ID Number	Location (Units)				
RE-5A,B	Fuel Bldg. Vent Exhaust ( $\mu\text{Ci}/\text{sec}$ )	1.3E+00	1.3E+00	1.3E+00	1.3E+00
RE-6A,B	Radwast Bldg. Vent Exh. ( $\mu\text{Ci}/\text{sec}$ )	5.7E-01	5.7E-01	5.7E-01	5.7E-01
1GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-05	5.6E-07	5.6E-07	5.6E-07
2GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	1.2E-04	1.2E-04	1.2E-04	1.2E-04
3GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-02	4.3E-02	4.3E-02	4.3E-02
4GE-125	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{sec}$ )	2.2E+03	3.4E+01	3.4E+01	3.4E+01
RE-110P	Aux. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-12	2.0E-12	2.0E-12	2.0E-12
RE-110G	Aux. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	3.0E-08	3.0E-08	3.0E-08	3.0E-08
RE-118P	Turbin Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	3.0E-11	3.0E-11	3.0E-11	3.0E-11
RE-118G	Turbin Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	1.0E-10	1.0E-10	1.0E-10	1.0E-10
RE-124P	C.D./O.G. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-10	2.0E-10	2.0E-10	2.0E-10
RE-124G	C.D./O.G. Bldg. Vent ( $\mu\text{Ci}/\text{cc}$ )	2.0E-08	2.0E-08	2.0E-08	2.0E-08
RE-126P	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.0E-07	3.5E-10	6.0E-10	6.0E-10
RE-126G	Main Plant Exhaust Duct ( $\mu\text{Ci}/\text{cc}$ )	4.3E-05	5.6E-07	7.4E-07	7.4E-07
RE-111P	Cont. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	6.4E-01	6.4E-01	6.4E-01	6.4E-01
RE-111G	Cont. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	8.4E+00	8.4E+00	8.4E+00	8.4E+00
RE-112P	D.W. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	6.7E-07	6.7E-07	6.7E-07	6.7E-07
RE-112G	D.W. Atmosphere ( $\mu\text{Ci}/\text{cc}$ )	3.3E-05	3.3E-05	3.3E-05	3.3E-05
RE-103	SGTS Effluent ( $\mu\text{Ci}/\text{cc}$ )	1.1E-05	2.0E-06	2.0E-06	2.0E-06
RE-110	Cont. Purge ( $\mu\text{Ci}/\text{cc}$ )	3.0E-06	3.0E-06	3.0E-06	3.0E-06
RE-11A,B	Annulus Exhaust ( $\mu\text{Ci}/\text{cc}$ )	4.4E-04	6.8E-06	3.5E-06	1.9E-07
	Off Gas Pretreatment Monitor (mR/hr)	0	0	0	0
	Off Gas Posttreatment Monitor (cpm)	0	0	0	0
	Main Steam Line Rad. Monitor A (mR/hr)	1000	1000	1000	1000
	Main Steam Line Rad. Monitor B (mR/hr)	1000	1000	1000	1000
	Main Steam Line Rad. Monitor C (mR/hr)	1000	1000	1000	1000
	Main Steam Line Rad. Monitor D (mR/hr)	1000	1000	1000	1000

SECTION 10

METEOROLOGICAL AND RADIOACTIVE RELEASE DATA

## SECTION 10: Meteorological and Radioactive Release Data

### 10.0 Introduction

### 10.1 Radioactive Release Information

Figure 10.1.1 Release Rate Curves

Figure 10.1.2 Release Path

### 10.2 Meteorological Data

Weather Forecast

Table 10.2.1 Meteorological Data

### 10.3 Off-Site Field Data

Table 10.4.1 Plume Position. (time vs. distance)

Table 10.4.2 Release Times (time vs. distance)

Table 10.4.3 Whole Body Dose Rates (closed window)

Table 10.4.4 Whole Body dose Rates (open window)

Table 10.4.5 Child Thyroid Dose Rates

Table 10.4.6 Iodine Concentrations

Table 10.4.7 Air Sample Data (E-140-N and RO-2 meters)

Table 10.4.8 Air sample Data (Particulate)

### 10.4 Deposition Data

No offsite deposition is postulated.

### 10.5 Plume Position Maps

### 10.6 EDP Dose Projection and PAR



SECTION 10.0

INTRODUCTION

## 10.0 Introduction

This section provides the information necessary for participants to evaluate the magnitude of the radioactive release and to respond appropriately.

The vent path utilizes SBGT where iodine levels are reduced by a factor of 100. Protective Actions are based on the peak release of  $1.0E+07$   $\mu\text{Ci}/\text{second}$ .

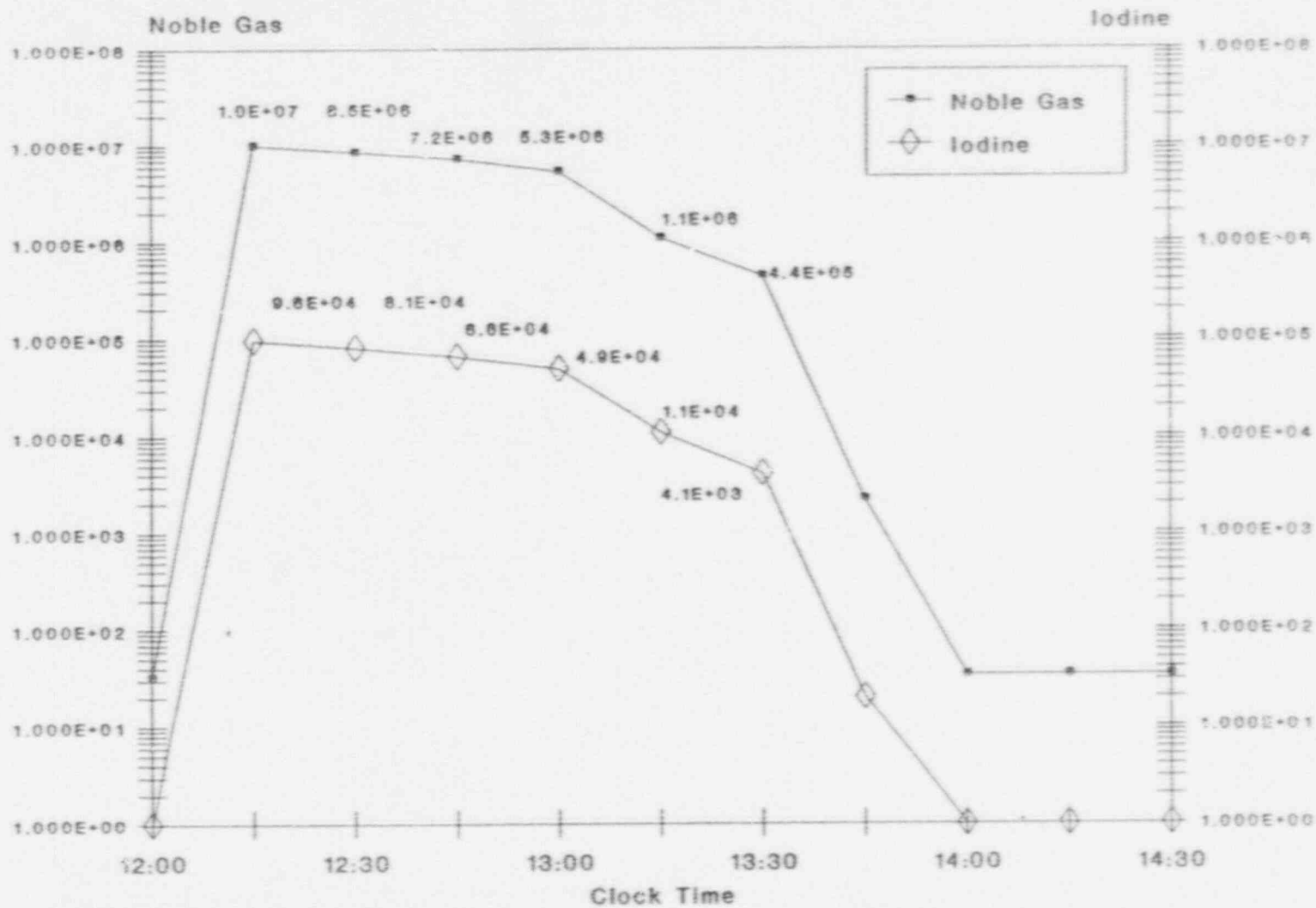
Section 10 furnishes scenario controllers the with specific data necessary for providing participants the information that simulates the environmental conditions of the postulated event. Section 10.1 includes figures which show the release rate curve and release path. Section 10.2 gives meteorological data and the current weather forecast. Section 10.3 gives readings and results of field data at the site boundary and beyond. Section 10.4 normally contains deposition data, however, due to the relatively small release, and relatively low concentrations of iodine in the plume, iodine deposition is not postulated for this scenario. Section 10.5 pictorially displays the geographic path of the plume. Section 6 provides the EDP dose projection for the peak release and the resulting Protective Action Recommendation.

SECTION 10.1

RADIOACTIVE RELEASE RATE AND RELEASE PATH DATA

# 1991 RBS PRACTICE EXERCISE

## Release Rates



uCi/sec

SECTION 10.2  
METEOROLOGICAL DATA

TABLE 10.2.1

METEOROLOGICAL INFORMATION  
(PRIMARY DATA, 10 METER SENSORS)

TIME	SPEED (MPH)	DIRECTION (DEGREES FROM)	DELTA-5 (DEGREES F)
0800	3.5	358	+0.70
0815	4.4	000	+0.75
0830	4.5	359	+0.85
0845	4.8	359	+0.85
0900	3.9	001	+0.80
0915	3.5	001	+0.85
0930	2.0	000	+0.75
0945	2.5	359	+0.70
1000	2.9	359	+0.60
1015	2.5	000	+0.55
1030	2.4	001	+1.00
1045	3.0	000	+1.50
1100	4.5	359	+1.55
1115	5.0	000	+1.55
1130	4.1	000	+1.50
1145	3.2	359	+1.45
1200	3.0	001	+1.50
1215	2.0	001	+1.00
1230	3.0	000	+1.00
1245	2.1	001	+1.10
1300	4.0	000	+1.20
1315	6.1	359	+1.00
1330	8.0	359	+1.25
1345	10.0	000	+1.15
1400	12.5	000	+1.10
1415	12.0	000	+1.00
1430	14.0	358	+1.10
1445	14.2	359	+1.05
1500	12.7	359	+1.15

TABLE 10.2.2

METEOROLOGICAL FORECAST

- Morning: Expect partly cloudy skies this morning with light winds out of the north. Mild temperatures in the middle to upper 40's with winds 1 to 3 mph.
- Afternoon: Clear and cool with temperatures in the mid 50's. Clouds developing later with winds increasing 5-10 mph from the north. An increased chance of precipitation of 30% towards evening.
- Evening: Becoming cloudy this evening, with winds increasing as a storm front enters the area from the north. Winds of 5 to 10 mph are expected with gusts of up to 35 mph. Mild temperatures will persist with a 75% chance of rain as the storm front passes through the area.

SECTION 10.3

FIELD DATA FOR OUTSIDE THE SITE BOUNDARY





1991 River Bend  
Evaluated Exercise

Table 10.3.2  
RELEASE RATE TIMES

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	
1215																					
1230	1215																				
1245	1230	1215																			
1300	1245	1230	1215	1215																	
1315	1300	1300	1245	1245	1230	1215															
1330	1315	1315	1315	1300	1300	1300	1245	1230	1215	1215											
1345	1330	1330	1330	1315	1315	1315	1315	1315	1300	1300	1245	1245	1230	1215							
1400						1330	1330	1330	1330	1330	1315	1315	1315	1300	1300	1300	1245	1230	1215	1215	
1415												1330	1330	1330	1330	1330	1315	1315	1315	1300	1300
1430																			1330	1330	1330

.991 River Bend  
 Evaluated Exercise

Table 10.3.3  
 CLOSED WINDOW WHOLE BODY DOSE RATES (mR/hr)

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	
1215																					
1230	190																				
1245	120	150																			
1300	140	84	98	48																	
1315	60	47	49	22	16	23															
1330	8	6	4	13	10	9	12	8	10	7.5											
1345	2.5	2	1	0.7	1.5	1.3	1	0.9	3.5	2	4	3	3	4							
1400						0.5	0.4	0.3	0.3	0.2	0.4	0.3	0.3	1.4	1.3	1.0	2.4	1.5	2.5	2	
1415												0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	
1430																			0.1	0.1	
Int. Dose*		1.3E+02	7.2E+01	3.8E+01	2.1E+01	6.9E+00	8.5E+00	3.3E+00	2.2E+00	3.6E+00	2.5E+00	1.1E+00	9.8E-01	8.0E-01	1.5E+00	3.5E-01	3.1E-01	6.4E-01	4.3E-01	6.9E-01	7.2E-01
Max Dose**		1.5E+03	1.2E+03	7.5E+02	3.2E+02	2.8E+02	2.4E+02	2.0E+02	1.7E+02	1.3E+02	8.8E+01	8.3E+01	7.8E+01	7.4E+01	6.9E+01	6.4E+01	5.9E+01	5.4E+01	5.0E+01	4.5E+01	4.0E+01

\*Int. Dose is the actual dose received if exposed at centerline for the duration of the release.

\*\*Max. Dose is the projected dose based on the default duration (8 hours) for the centerline dose rates.

NOTES:

- All values represent plume centerline readings;
- For measurements taken off-centerline, interpolate between the centerline value and the edge of the plume;
- The value at the plume edge equals 1% of the centerline readings;
- RO-2 lowest reading is 0.2 mR/hr;
- RO-2A lowest reading is 2.0 mR/hr;
- Convert dose rates to CPM (3000 CPM per 1 mR/hr)
- if technician uses E-140/RM-14 for indication of activity.

1991 River Bend  
Evaluated Exercise

Table 10.3.4  
OPEN WINDOW WHOLE BODY DOSE RATES (mrad/hr)

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	
1215																					
1230	440																				
1245	280	340																			
1300	320	190	220	110																	
1315	140	110	110	52	36	54															
1330	18	14	10	30	24	20	27	18	24	17											
1345	6	5	3	1.6	4	3	2.5	2	8	5	10	8	6	10							
1400						1	0.9	0.8	0.6	0.4	0.8	0.8	0.7	3	3	2.6	5	3.5	6	5	
1415													0.3	0.3	0.3	0.3	0.5	0.4	0.4	1.3	
1430																			0.2	0.2	

NOTES:

All values represent plume centerline readings;  
 For measurements taken off-centerline, interpolate between the centerline value and the edge of the plume;  
 The value at the plume edge equals 1X of the centerline readings;  
 RO-2 lowest reading is 0.2 mR/hr;  
 RO-2A lowest reading is 2.0 mR/hr;  
 Convert dose rates to CPM (3000 CPM per 1 mR/hr)  
 if technician uses E-140/RM-14 for indication of activity.

1991 River Bend  
Evaluated Exercise

Table 10.3.5  
CHILD THYROID DOSE RATES (mrem/hr)

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	
1215																					
1230	790																				
1245	440	640																			
1300	140	320	450	270																	
1315	60	50	50	22	89	150															
1330	8	6	4	13	10	9	12	47	71	54											
1345	2.5	2	1.3	0.7	1.5	1.3	1.1	0.9	4	2.5	4	11	16	33							
1400						0.5	0.4	0.3	0.3	0.2	0.4	0.4	0.4	1.7	1.6	1.5	2.4	4.7	20	18	
1415												0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.9
1430																			0.1	0.1	
Int. Dose*	3.6E+02	2.5E+02	1.3E+02	7.7E+01	2.5E+01	4.0E+01	3.3E+01	1.2E+01	1.9E+01	1.4E+01	1.2E+00	2.9E+00	4.2E+00	8.7E+00	4.2E-01	3.9E-01	6.5E-01	1.2E+00	5.0E+00	4.7E+00	
Max Dose**	6.3E+03	5.1E+03	3.5E+03	2.0E+03	1.5E+03	1.3E+03	1.1E+03	8.7E+02	6.4E+02	6.1E+02	5.8E+02	5.4E+02	5.1E+02	4.8E+02	4.5E+02	4.2E+02	3.8E+02	3.5E+02	3.2E+02		

\*Int. Dose is the actual dose received if exposed at centerline for the duration of the release.

\*\*Max. Dose is the projected dose based on the default duration (8 hours) for the centerline dose rates.

NOTES: This table is for Controller information only and data are not to be provided to Players;

All values represent plume centerline readings;

For measurements taken off-centerline, interpolate between the centerline value and the edge of the plume;

The value at the plume edge equals 1% of the centerline readings.

Table 10.3.6  
 IODINE CONCENTRATIONS IN  $\mu\text{Ci/cc}$

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
1215																				
1230	4.9E-07																			
1245	2.7E-07	4.0E-07																		
1300	8.7E-08	2.0E-07	2.8E-07	1.7E-07																
1315	3.8E-08	2.9E-08	3.1E-08	1.4E-08	5.6E-08	9.3E-08														
1330	5.0E-09	3.9E-09	2.6E-09	8.1E-09	6.5E-09	5.6E-09	7.3E-09	2.9E-08	4.5E-08	3.3E-08										
1345	1.6E-09	1.2E-09	8.4E-10	4.4E-10	9.5E-10	8.3E-10	7.0E-10	5.8E-10	2.3E-09	1.6E-09	2.6E-09	6.8E-09	1.0E-08	2.1E-08						
1400						3.0E-10	2.6E-10	2.2E-10	1.6E-10	1.2E-10	2.7E-10	2.5E-10	2.3E-10	1.1E-09	9.8E-10	9.1E-10	1.5E-09	2.9E-09	1.2E-08	1.1E-08
1415												9.2E-11	8.6E-11	7.9E-11	7.2E-11	6.5E-11	1.4E-10	1.3E-10	1.1E-10	5.4E-10
1430																			4.3E-11	3.6E-11

NOTES:

This table is for Controller information only and data are not to be provided to Players;  
 All values represent plume centerline readings;  
 For measurements taken off-centerline, interpolate between the centerline value and the edge of the plume;  
 The value at the plume edge equals 1% of the centerline readings.

Table 10.3.7  
 SILVER ZEOLITE CARTRIDGE READINGS  
 E140H/HP 210 PROBE  
 (CPM NET)

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
1215																				
1230	310																			
1245	170	250																		
1300	55	130	180	110																
1315	23	18	19	BKGD	35	60														
1330	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	18	30	21										
1345	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	13						
1400						BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD
1415												BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD
1430																			BKGD	BKGD

NOTES:

All values represent plume centerline readings;  
 For measurements taken off-centerline, interpolate between the centerline value and the edge of the plume;  
 The value at the plume edge equals 1% of the centerline readings.

For readings  $>1.0E+05$ , the E140H will be offscale high. If the technician uses an  
 RO-2 or RO-2A, convert CPM readings to mR/hr using the conversion: 3000 cpm = 1 mR/hr;  
 RO-2 lowest reading is 0.2 mR/hr;  
 RO-2A lowest reading is 2.0 mR/hr.

Table 10.3.8  
PARTICULATE AIR FILTER READINGS  
E140N/HP 210 PROBE  
(CPM NET)

Time	S.B.	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	
1215																					
1230	3000																				
1245	1700	2500																			
1300	500	1300	1800	1000																	
1315	200	180	190	80	350	600															
1330	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	180	280	210	BKGD	BKGD									
1345	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	130							
1400						BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD
1415												BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD	BKGD
1430																				BKGD	BKGD

NOTES: All values represent plume centerline readings;  
For measurements taken off-centerline, interpolate between the centerline value and the edge of the plume;  
The value at the plume edge equals 1% of the centerline readings.

For readings  $>1.0E+05$ , the E140N will be offscale high. If the technician uses an RO-2 or RO-2A, convert CPM readings to  $\mu\text{R/hr}$  using the conversion:  $3000 \text{ cpm} = 1 \mu\text{R/hr}$ ;  
RO-2 lowest reading is  $0.2 \mu\text{R/hr}$ ;  
RO-2A lowest reading is  $2.0 \mu\text{R/hr}$ .



SECTION 10.4  
DEPOSITION DATA

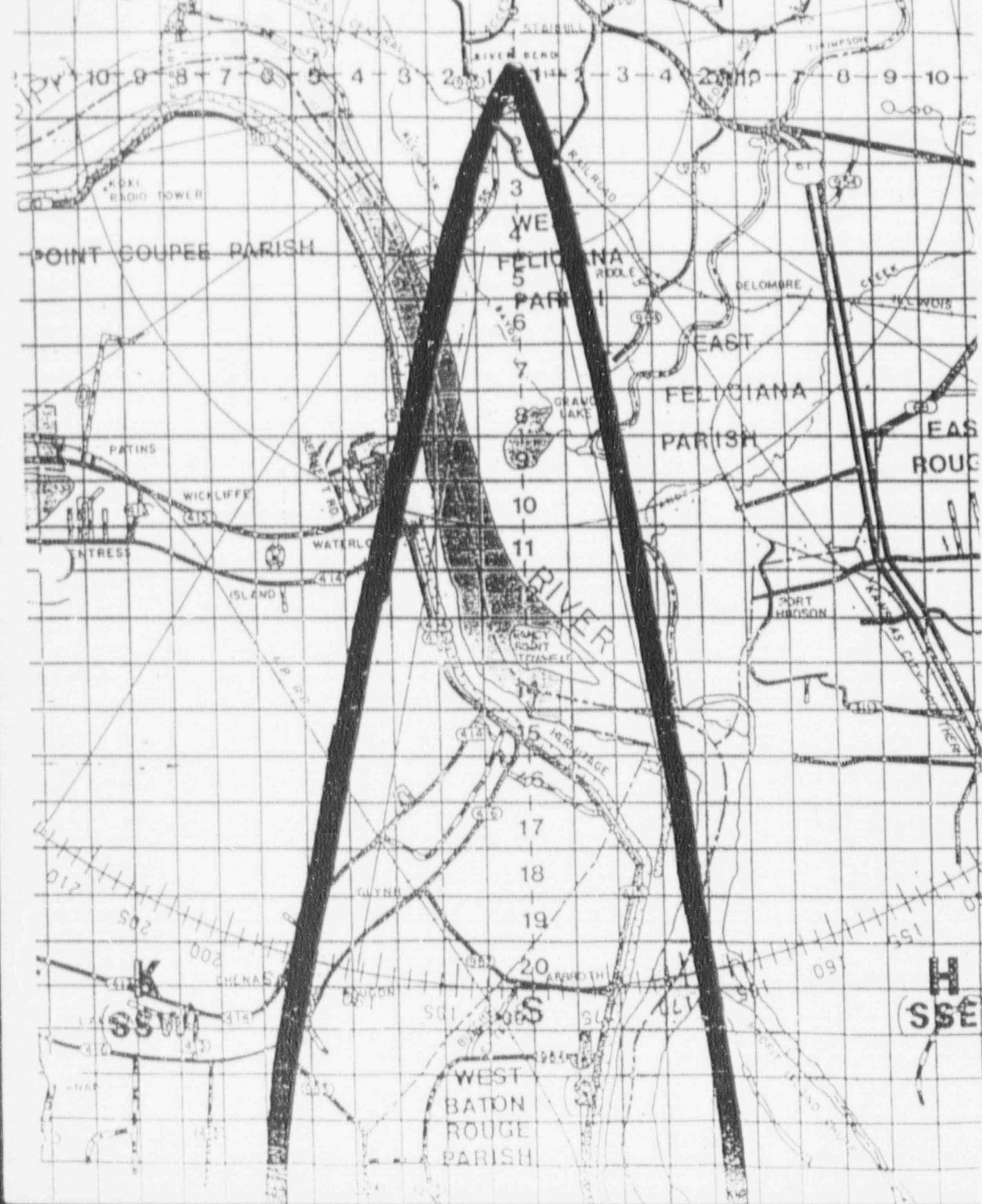
Offsite iodine deposition is not postulated for this scenario.

SECTION 10.5  
PLUME LOCATION MAPS

RIVER BEND STATION

Time: 1230

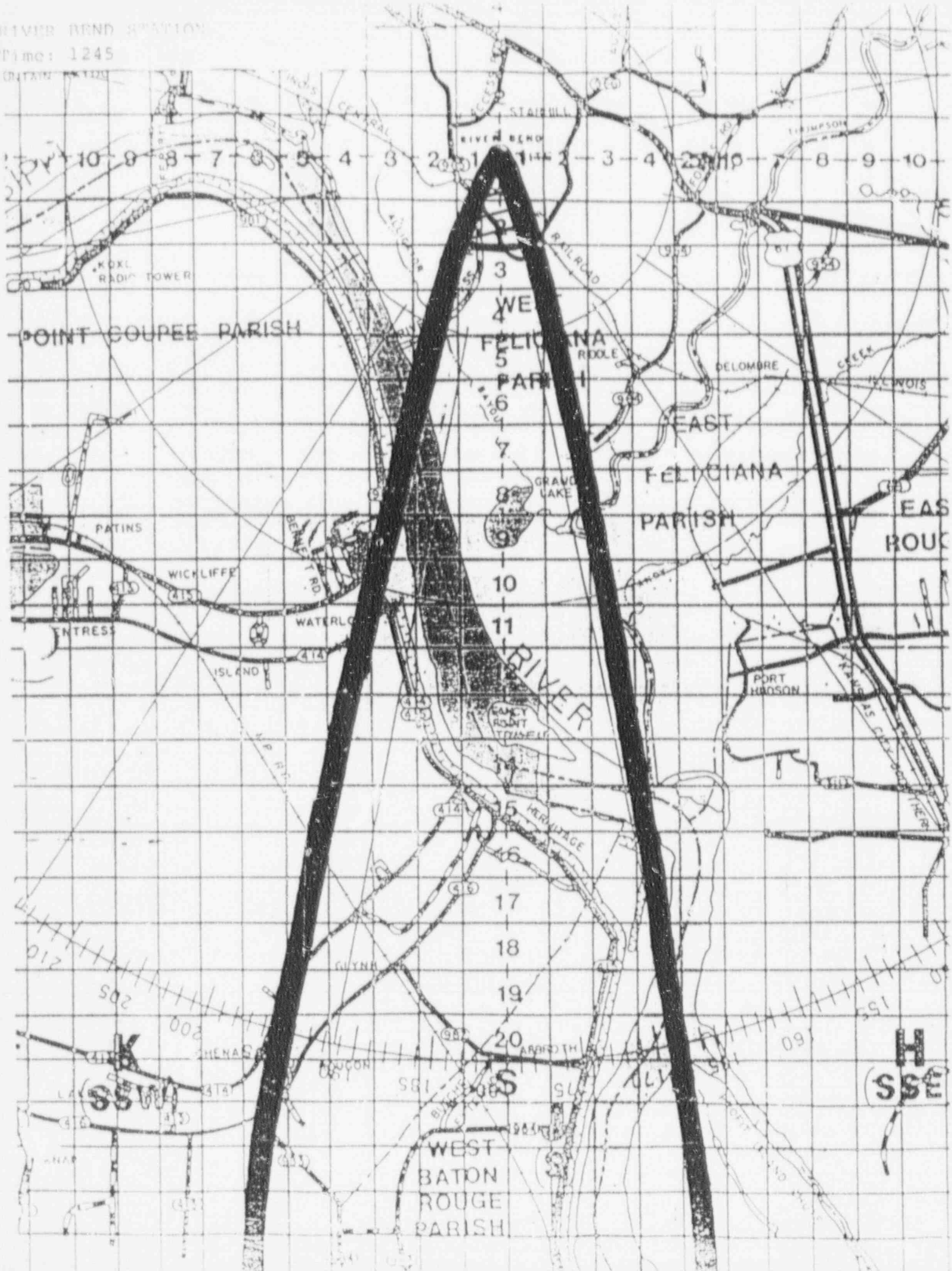
UNITED STATES



RIVER BEND STATION

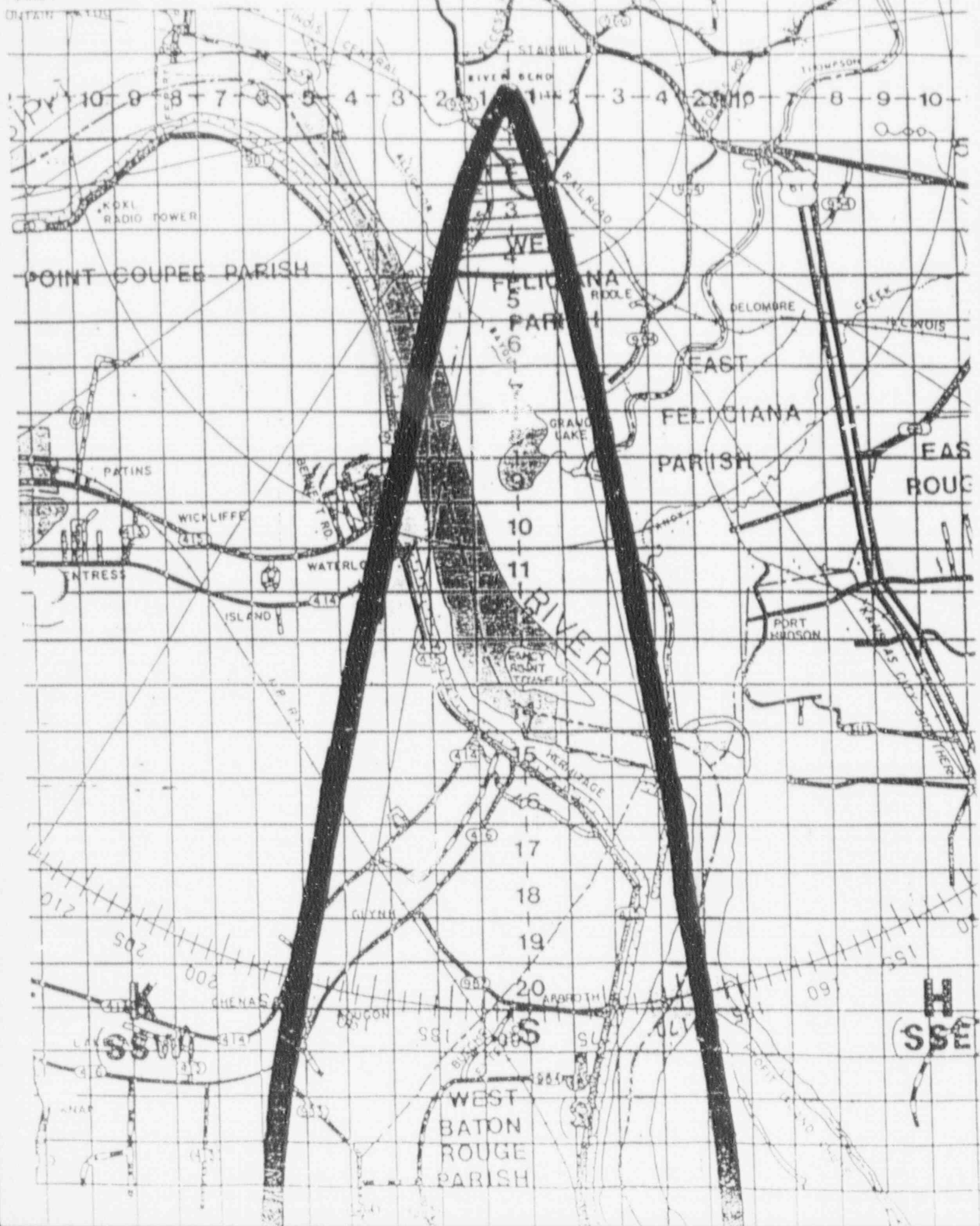
Time: 1245

CR. 12121



RIVER BEND STATION

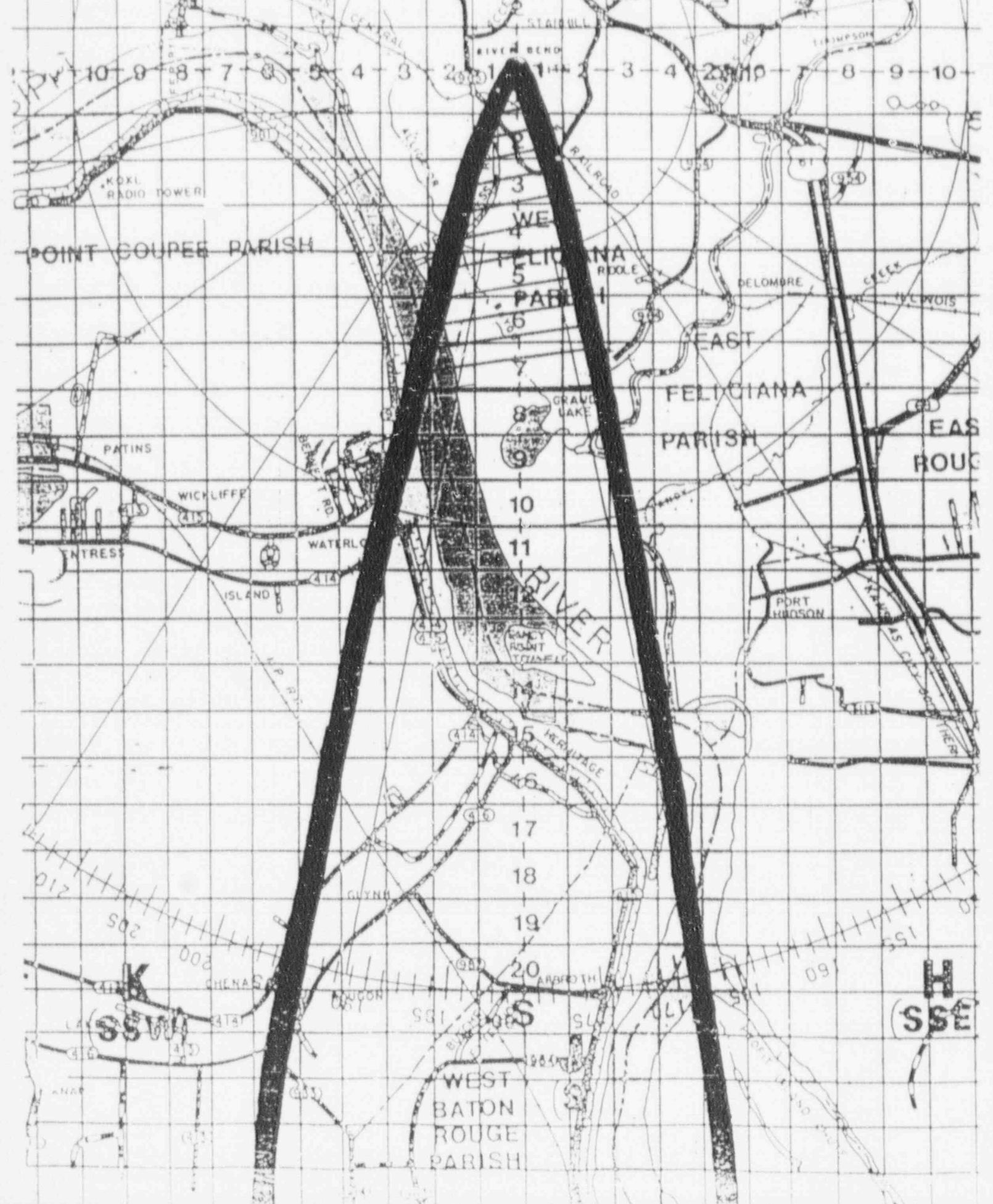
Time: 1300



RIVER BEND STATION

Time: 1315

(CONTINUED)



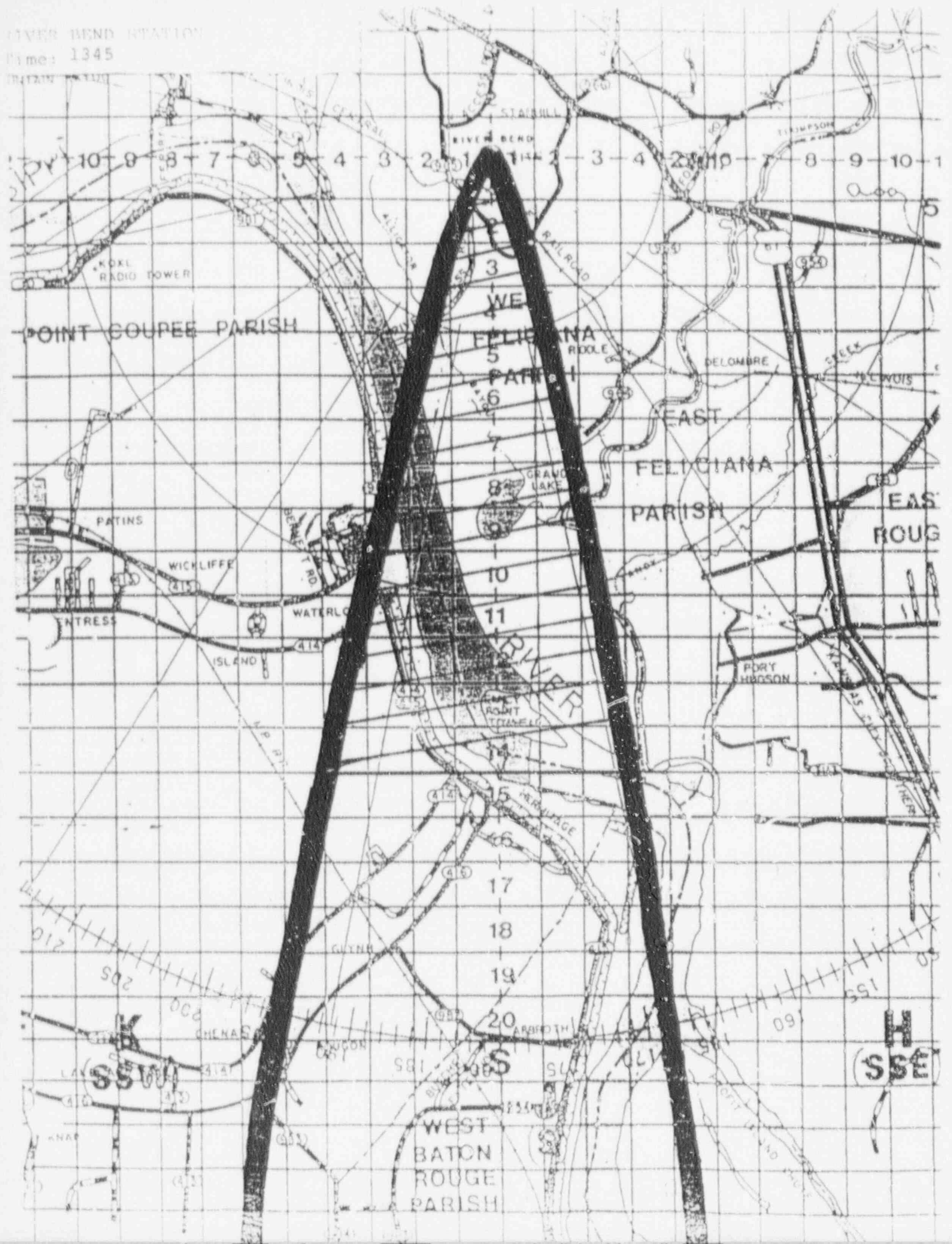




RIVER BEND STATION

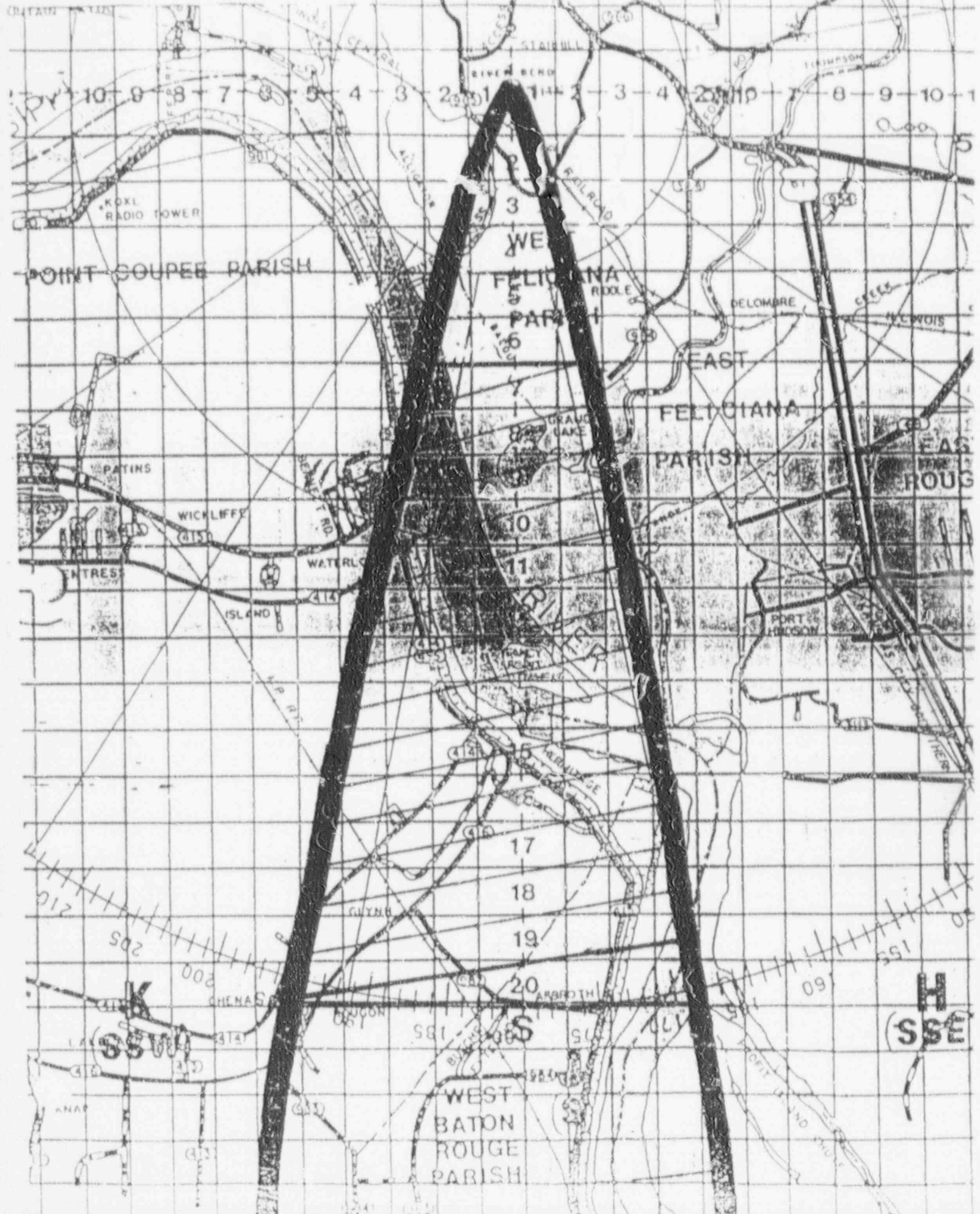
Time: 1345

TRAIN



RIVER BEND STATION

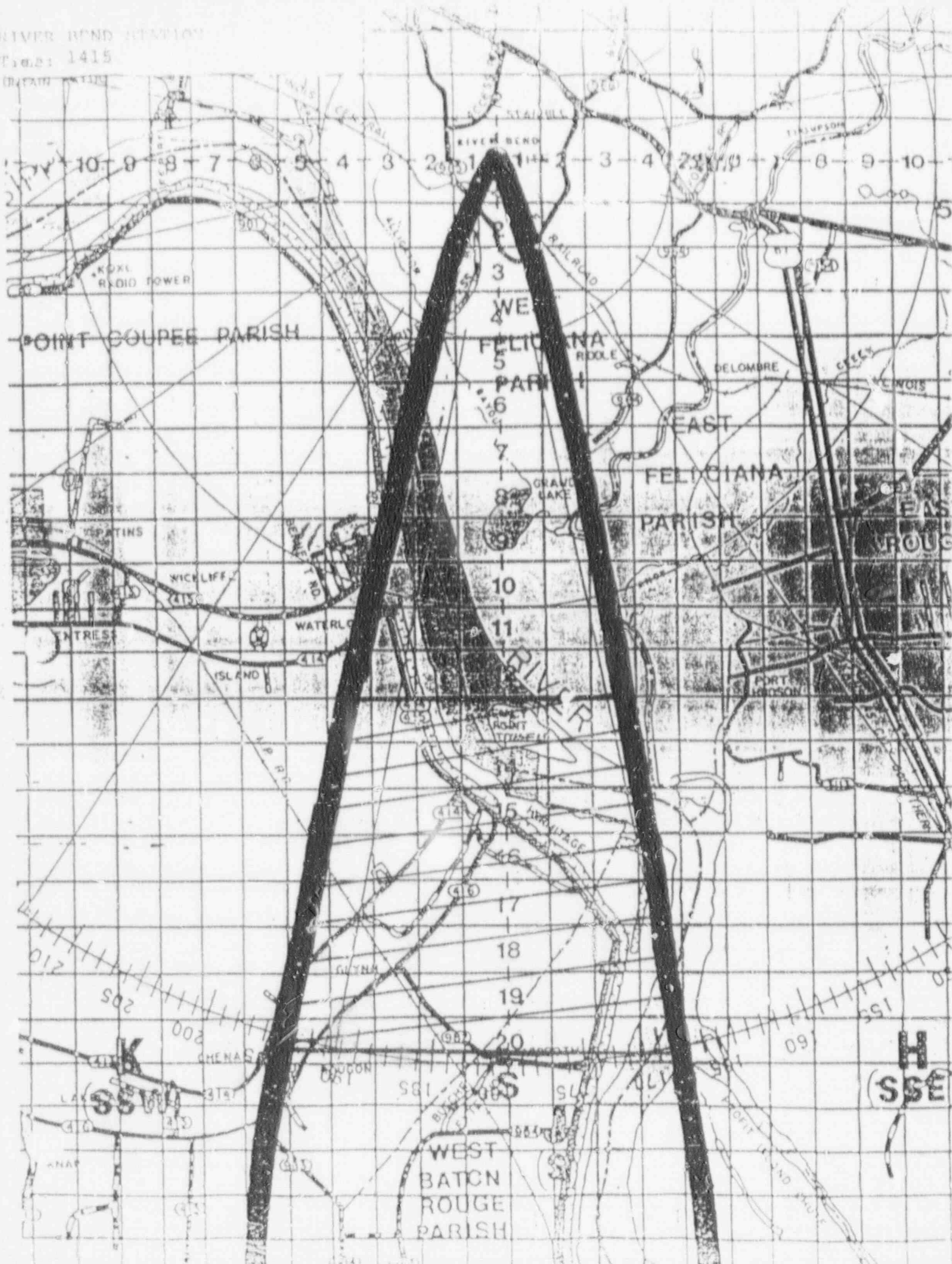
Time: 1400



RIVER BEND STATION

Time: 1415

DATE: 1/11/50



10 9 8 7 6 5 4 3 2 1 1 2 3 4 5 6 7 8 9 10

POINT COUPEE PARISH FELICIANA PARISH EAST FELICIANA PARISH WEST BATON ROUGE PARISH

WATERLOO ISLAND LA 101 LA 102 LA 103 LA 104 LA 105 LA 106 LA 107 LA 108 LA 109 LA 110 LA 111 LA 112 LA 113 LA 114 LA 115 LA 116 LA 117 LA 118 LA 119 LA 120

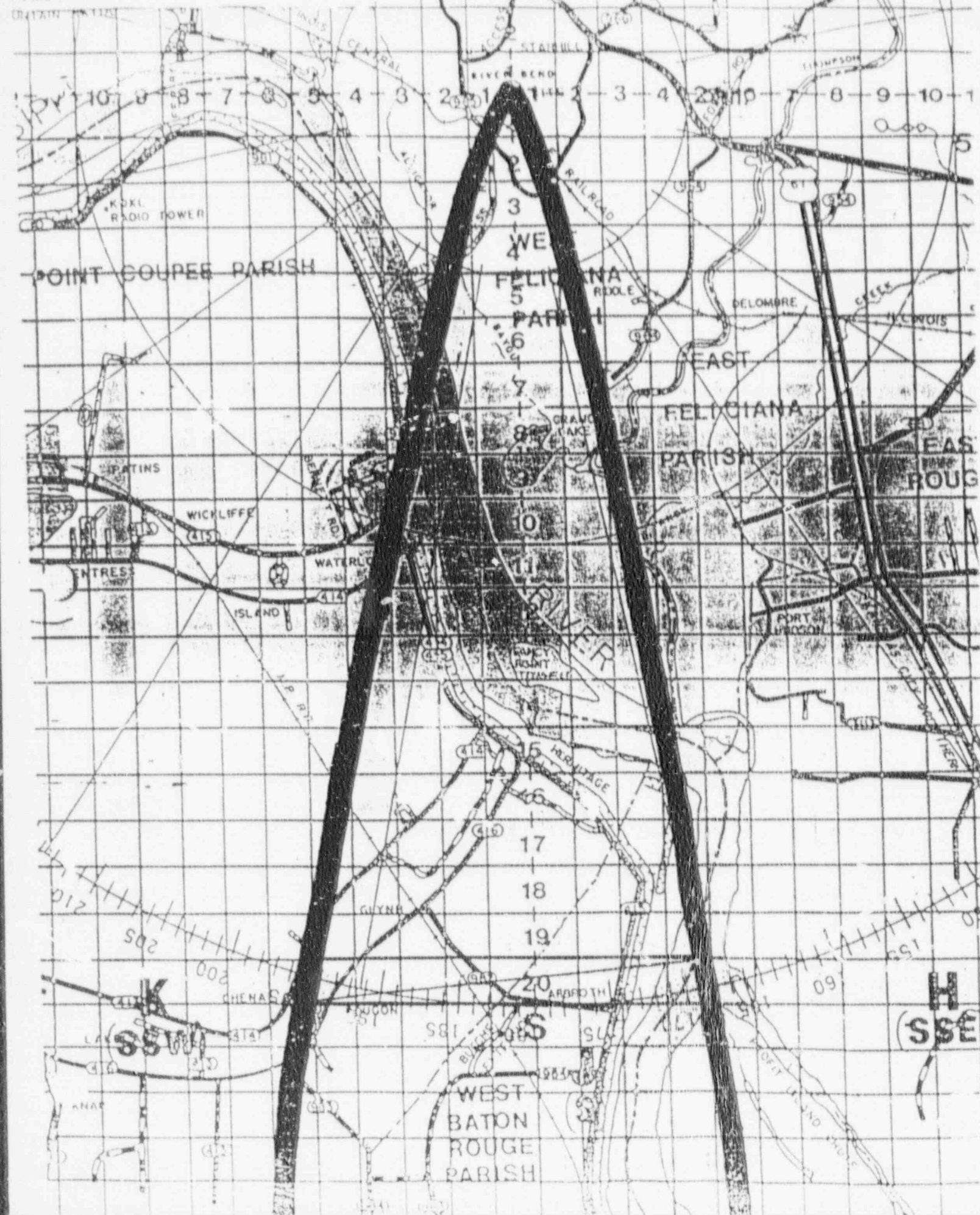
0 10 20 30 40 50 60 70 80 90 100

0 10 20 30 40 50 60 70 80 90 100

WEST BATON ROUGE PARISH

RIVER BEND STATION

Time: 1430



SECTION 10.6

DOSE PROJECTIONS AND PROTECTIVE ACTION RECOMMENDATIONS

\*\*\*\*\*  
 Date: SUMMARY TABLE Time of calc:  
 \*\*\*\*\*

DOSE PROJECTIONS BASED ON DRMS DATA  
 ACCIDENT: Filtered (loss of coolant)

Wind Speed: 2.00 mph Release Rate ( $\mu$ Ci/sec): 1e+007  
 Wind Direction (from): 359.00 deg Release Duration: 8.00 hrs  
 Delta T: 1.50 deg F Time since shutdown: 0.00 hrs  
 Stability Class: F

Distance	WB Dose Rate (mRem/hr)	Duration (hrs)	WB Dose (mRem)	Thyroid Dose (mRem)
EAB (0.6 miles)	198.65	8.00	1589.22	6334.44
2.0 miles	43.73	8.00	349.82	1992.20
5.0 miles	12.95	8.00	103.61	674.51
10.0 miles	5.67	8.00	45.40	322.06

\*\*\*\*\*  
 Date: SUMMARY TABLE Time of calc: \*\*\*\*\*  
 \*\*\*\*\*

Distance	WB Dose Rate (mRem/hr)	WB Dose (mRem)	Thyroid Dose (mRem)	Plume Arrival Time (hrs)
EAB (0.6 miles)	198.65	1589.22	6334.44	0.28
1.0 miles	105.77	854.14	4006.85	0.50
2.0 miles	43.73	349.82	1992.20	1.00
3.0 miles	25.34	202.69	1242.54	1.50
4.0 miles	17.46	139.70	887.65	2.00
5.0 miles	12.95	103.61	674.51	2.50
6.0 miles	10.16	81.32	540.22	3.00
7.0 miles	8.65	69.19	468.13	3.50
8.0 miles	7.41	59.27	407.81	4.00
9.0 miles	6.46	51.70	361.41	4.50
10.0 miles	5.67	45.40	322.06	5.00

Plume arrival time = hours from calc time

\*\*\*\*\*  
 PROTECTIVE ACTION RECOMMENDATION  
 \*\*\*\*\*

EIF-2-007 FLOWCHART: BLOCK 17

\*\*\*\*\*  
 \* Shelter 2 mile radius \*  
 \* Shelter 5 miles downwind \*  
 \*\*\*\*\*  
 \*\*\*\*\* CONTINUE TO UPDATE EVALUATION \*\*\*\*\*

Wind Direction (from)	Affected Sectors	Corresponding Protective Action Sections		
		2 miles	5 miles	10 miles
359.00	J H K	1	4,9,16	14,15,17

2 mile radius PAS = 1  
 5 mile radius PAS = 2,3,4,8,9,16  
 10 mile radius PAS = 5,6,7,10,11,12,13,14,15,17,18