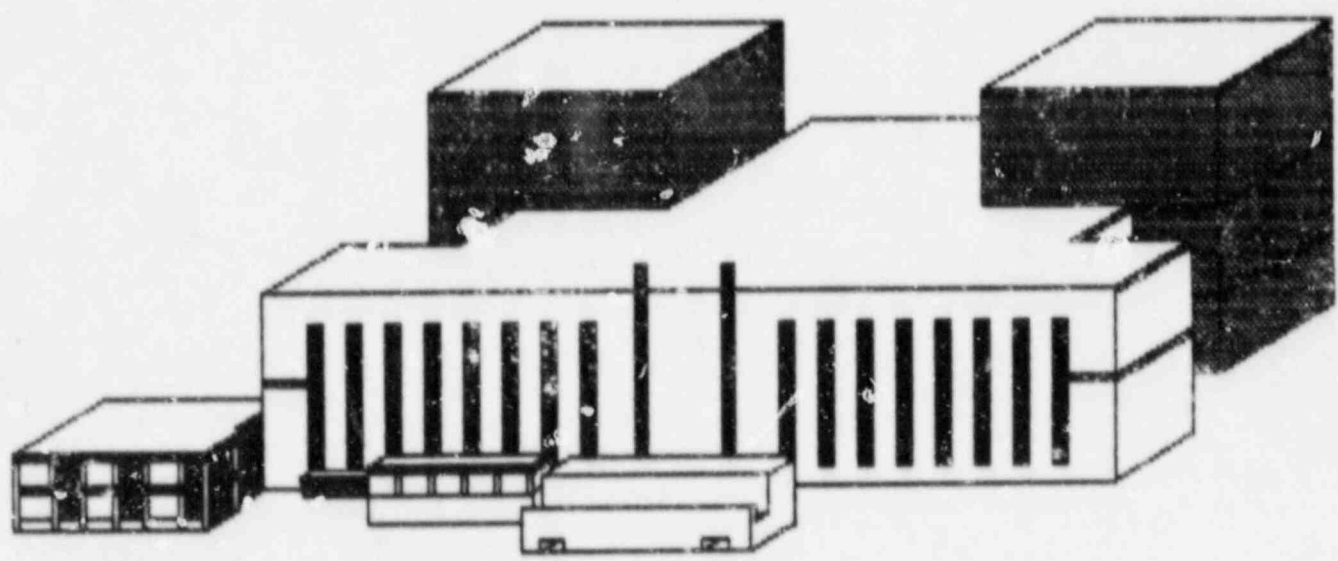


*Extra
Complete*

POINT BEACH NUCLEAR PLANT EMERGENCY PLAN EXERCISE



SEPTEMBER 14, 1989

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POINT BEACH NUCLEAR PLANT

EMERGENCY PLAN EXERCISE

SEPTEMBER 14, 1988

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1.0 INTRODUCTION

POINT BEACH NUCLEAR PLANT
EMERGENCY PLAN EXERCISE
SEPTEMBER 14, 1988

1.0 INTRODUCTION

- 1.1 This is a "full participation" exercise for Wisconsin Electric Power Company. It will require a full activation of human and physical resources which are predesignated components of the Point Beach Nuclear Plant Emergency Plan.
- 1.2 This is a "full participation" exercise for Manitowoc County and Kewaunee County. They will exercise their radiological emergency preparedness plans to the extent required to satisfy exercise objectives.
- 1.3 This is a "partial participation" exercise for the State of Wisconsin. The Division of Emergency Government will simulate the participation of other state agencies.
- 1.4 The exercise will last from 7 to 10 hours during daylight hours.

2.0 PARTICIPATING ORGANIZATIONS

2.0 PARTICIPATING ORGANIZATIONS

2.1 Wisconsin Electric Power Company

- 2.1.1 Nuclear Power Department
- 2.1.2 Communications Department
- 2.1.3 Other departments as required

2.2 State of Wisconsin - Division of Emergency Government

The state's Division of Emergency Government will participate in the exercise by activating the State Emergency Operations Center and establishing communications links with the affected counties and the utility in support of a simulated event at PBNP.

2.3 Kewaunee County

2.3.1 Sheriff's Department

The Sheriff's Department will actively participate in the exercise to provide support, as required, during a simulated event at PBNP.

2.3.2 Emergency Operations Center (EOC)

Kewaunee County Division of Emergency Government will participate in the exercise by fully activating facilities and personnel, as required, in support of a simulated event at PBNP.

2.4 Manitowoc County

2.4.1 Sheriff's Department

The Sheriff's Department will actively participate in the exercise to provide support, as required, during a simulated event at PBNP.

2.4.2 Emergency Operations Center (EOC)

Manitowoc County Division of Emergency Government will participate in the exercise by fully activating facilities and personnel, as required, in support of a simulated event at PBNP.

2.5 Other Organizations

Other organizations which may participate include, but are not limited to, the following:

- 2.5.1 Wisconsin Department of Health and Social Services
- 2.5.2 Wisconsin State Patrol
- 2.5.3 United States National Weather Service
- 2.5.4 United States Coast Guard
- 2.5.5 United States Nuclear Regulatory Commission
- 2.5.6 Wisconsin Public Service Corporation
- 2.5.7 Two Rivers Community Hospital
- 2.5.8 Mishicot Ambulance Service

3.0 OBJECTIVES

3.0 OBJECTIVES

3.1 Wisconsin Electric Power Company

3.1.1 General

3.1.2 Control Room

3.1.3 Technical Support Center

3.1.4 Operations Support Center

3.1.5 Emergency Operation Facility

3.1.6 Offsite Health Physics Facility

3.1.7 Security

3.1.8 Joint Public Information Center

3.2 State of Wisconsin

3.3 Kewaunee County

3.4 Manitowoc County

EMERGENCY PLAN OBJECTIVES - SEPTEMBER EXERCISE

3.0 OBJECTIVES

3.1 Wisconsin Electric Power Company

3.1.1 General

- a. Demonstrate timely notification of on-site emergency response personnel of an emergency plan activation.
- b. Demonstrate timely notification of key corporate emergency support personnel:
 1. Emergency support manager
 2. Rad/Con waste manager
 3. Emergency director
 4. Vice President communications (or designee)
- c. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions based upon specified emergency action levels.
- d. Demonstrate the ability to direct, coordinate and control emergency activities.
- e. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.
- f. Demonstrate the ability of all elements of the emergency response organization to communicate using the following equipment:
 1. Direct lines between plant emergency response facilities (ERFs). Plant emergency response facilities include: Control room, TSC, EOF, SBCC, extension building, and JPIC.
 2. Direct lines between the TSC/EOF and the corporate emergency center (CEC).

3. Direct lines between the TSC/EOF and the State of Wisconsin EOC.
 4. Direct lines between the TSC/EOF and the county EOCs in Manitowoc and Algoma.
 5. Radio communications between the offsite health physics facility and utility offsite radiological monitoring teams.
- g. Demonstrate the ability to staff the following emergency response facilities:
1. Control room (CR)
 2. Operations support center (OSC)
 3. Technical support center (TSC)
 4. Emergency operations facility (EOF)
 5. Offsite health physics facility (OSHPPF)
 6. Joint public information center (JPIC)

3.1.2 Control Room

- a. Demonstrate the ability of the control room staff to provide data in a timely fashion to the TSC.
- b. Demonstrate the ability to notify on-site personnel of emergency classifications using the plant Gai-tronics system.
- c. Demonstrate the ability to notify on-site personnel of an evacuation using the plant Gai-tronics and alarm system. (This objective may, in part, be demonstrated from the TSC.)
- d. Demonstrate the ability to notify the NRC within one hour of event classification using EPIP 2.2. (This objective may be demonstrated from the TSC.)
- e. Demonstrate the ability to notify the State DEG and both counties of event classification within 15 minutes using EPIP 2.1. (This objective may be demonstrated from the TSC.)

- f. Demonstrate the ability of control room staff to correctly classify an emergency event using the EPIPs.
- g. Demonstrate the ability upon receiving a request for an ambulance to call 911 for the dispatch of same. (This objective may be demonstrated from the TSC.)
- h. Demonstrate the ability to perform:
 - 1. An evacuation of plant personnel to predesignated on-site assembly areas. (This objective may be demonstrated from the TSC.)
 - 2. An evacuation of contractor personnel to the SBCC. (This objective may be demonstrated from the TSC.)
 - 3. Personnel accountability within about 30 minutes of sounding a plant evacuation alarm. (This objective may be demonstrated from the TSC.)

NOTE: FOLLOWING COMPLETION OF PERSONNEL ACCOUNTABILITY, CONTRACTORS AND PLANT EMPLOYEES NOT DIRECTLY INVOLVED IN THE EXERCISE WILL RETURN TO THEIR WORK STATIONS AND WILL BE CONSIDERED INVISIBLE TO THE REMAINDER OF THE EXERCISE.

- i. Demonstrate the ability to provide regular (e.g., hourly) status reports to appropriate state and county agencies. (This objective may be demonstrated from the TSC or EOF.)
- j. Demonstrate the ability to provide regular (e.g., hourly) status reports to the NRC. (This objective may be demonstrated from the TSC or EOF.)

3.1.3 Technical Support Center

- a. Demonstrate the ability of TSC staff to correctly classify an emergency event using the EPIPs.
- b. Demonstrate the ability to notify on-site personnel of emergency classification using the plant Gai-tronics system. (This objective may be demonstrated from the control room).
- c. Demonstrate the ability to maintain meteorological status boards with current data (e.g., not more than 30 minutes old).

- d. Demonstrate the ability to announce the activation of the TSC and the assumption of TSC responsibilities to appropriate personnel.
- e. Demonstrate the ability to notify the NRC within one hour of event classification using EPIP 2.2. (This objective may be demonstrated from the EOF.)
- f. Demonstrate the ability to notify the State DEG and both counties of event classification within 15 minutes.
- g. Demonstrate the ability to provide regular (e.g. hourly) status reports to appropriate state and county agencies. (This objective may be demonstrated from the EOF.)
- h. Demonstrate the ability to provide regular (e.g., hourly) status reports to the NRC. (This objective may be demonstrated from the EOF.)
- i. Demonstrate the ability to develop appropriate offsite protective action recommendations using the EPIPs. (This objective may be demonstrated from the EOF.)
- j. Demonstrate the ability to conduct a plant evacuation to on-site assembly areas. (This objective may be demonstrated from the control room.)
- k. Demonstrate the ability to assure contamination control in the TSC/OSC.
- l. Demonstrate the ability of TSC personnel to maintain an emergency reentry team status board.
- m. Demonstrate the ability of TSC staff to provide accurate and timely information regarding plant and emergency event status to the EOF.
- n. Demonstrate the ability to monitor and control exposure of all persons assigned to the TSC.
- o. Demonstrate the adequacy of facilities and displays to support emergency operations.

- p. Demonstrate the ability of the POM to manipulate TSC and turbine building ventilation systems to assure an air flow FROM the TSC.
- q. Demonstrate the ability to call 911 for the dispatch of an ambulance following notification of a personnel injury requiring offsite response. (This objective may be demonstrated from the control room.)
- r. Demonstrate the ability of personnel using radios to communicate effectively.

3.1.4 Operations Support Center

- a. Demonstrate the ability to organize, dispatch, and manage a rescue team from the OSC.
- b. Demonstrate the ability of TSC/OSC personnel to make a timely request for an ambulance if the initial report of a serious injury is received in the OSC.
- c. Demonstrate the ability to dispatch and control all inplant reentry teams following formal activation of the OSC.
- d. Demonstrate the ability to announce the activation of the OSC and the assumption of the OSC responsibilities to appropriate personnel.
- e. Demonstrate the ability to assure contamination control in the TSC/OSC.
- f. Demonstrate the ability to organize, dispatch, and manage a damage assessment or repair team in accordance with the EPIPs.
- g. Demonstrate the ability of OSC personnel to maintain an emergency reentry team status board.
- h. Demonstrate the ability to monitor and control exposure of all persons assigned to the OSC.
- i. Demonstrate the ability of personnel using radios to communicate effectively.
- j. Demonstrate the ability and resources necessary to properly outfit reentry teams with protective clothing based upon anticipated environmental conditions.

- k. Demonstrate the equipment and procedures required to direct in-plant rescue operations.
- l. Demonstrate the ability of on-site personnel to administer appropriate emergency first aid to an injured person.
- m. Demonstrate the ability of the Health Physics director to direct on-site radiological monitoring teams.

3.1.5 Emergency Operations Facility

- a. Demonstrate the adequacy of facilities and displays to support emergency operations.
- b. Demonstrate the ability to adequately staff the EOF to support emergency operations.
- c. Demonstrate the ability to provide regular (e.g., hourly) status reports to state and county offices of emergency government.
- d. Demonstrate the ability to provide regular (e.g., hourly) status reports to the NRC.
- e. Demonstrate the ability to perform computer calculation of offsite radiological consequences based upon a monitored release path.
- f. Demonstrate the ability to announce the activation of the EOF and the assumption of EOF responsibilities to appropriate personnel.
- g. Demonstrate the ability to monitor and control exposure of all persons assigned to the EOF.
- h. Demonstrate the ability to estimate total population exposure.
- i. Demonstrate the ability to provide accurate and timely information to the JPIC.
- j. Demonstrate the ability to evaluate radiological survey information and recommend appropriate protective actions based on PAGs and plant conditions.

3.1.6 Offsite Health Physics Facility

- a. Demonstrate the ability to maintain meteorological status boards with recent data.
- b. Demonstrate the ability of personnel using radios to communicate effectively.
- c. Demonstrate the ability to mobilize and deploy field monitoring teams in a timely fashion.
- d. Demonstrate the ability to routinely inform offsite survey teams of changes in plant conditions and/or emergency classifications.
- e. Demonstrate the ability of monitoring teams to perform radiological surveys and report results.
- f. Demonstrate the ability of the offsite Health Physics director to direct offsite radiological monitoring teams to:
 1. Perform radiological surveys
 2. Report survey results to appropriate emergency response facilities.
 3. Collect ambient air samples.
 4. Transport air, soil, or vegetation samples to the appropriate laboratory facility.
- g. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as $E-07 \mu\text{Ci/cc}$ in the presence of noble gases.

3.1.7 Security

- a. Demonstrate the ability to accomplish personnel accountability within 30 minutes of a plant or limited plant evacuation.
- b. Demonstrate the ability to control access to the plant site.
- c. Demonstrate the implementation of appropriate emergency response procedures.

- 3.1.8 Joint Public Information Center (Communications Dept.)
- a. Demonstrate the ability to staff the Corporate Emergency Response-Public Information Center (CERPIC).
 - b. Demonstrate the ability to provide accurate and timely information to the public.
 - c. Demonstrate the ability to mobilize JPIC staff and activate facilities promptly.
 - d. Demonstrate the ability to brief the media in a clear, accurate and timely manner.
 - e. Demonstrate the ability to establish and operate a utility rumor control program at the JPIC.
 - f. Demonstrate the ability to provide advance coordination with offsite agencies of information released to the public.
 - g. Demonstrate the adequacy of facilities and displays to support emergency operations.
 - h. Demonstrate the ability to communicate with all appropriate company locations and offsite organizations.

3.2 State of Wisconsin

- 3.2.1 Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The four ECLs are: Notification of unusual event, alert, site area emergency and general emergency. (FEMA #1)
- 3.2.2 Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions. (FEMA #2)
- 3.2.3 Demonstrate the ability to direct, coordinate and control emergency activities. (FEMA #3)

- 3.2.4 Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel. (FEMA #4)
- 3.2.5 Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations. (FEMA #5)
- 3.2.6 Demonstrate the ability to continuously monitor and control emergency worker exposure. (FEMA #6)
- 3.2.7 Demonstrate the appropriate equipment and procedures for determining field radiation measurements. (FEMA #7)
- 3.2.8 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. (FEMA #8)
- 3.2.9 Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses. (FEMA #9)
- 3.2.10 Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure, based on plant and field data. (FEMA #10)
- 3.2.11 Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates and other relevant factors. (FEMA #11)
- 3.2.12 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). (FEMA #12)
- 3.2.13 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. (FEMA #13)
- 3.2.14 Demonstrate the ability to brief the media in an accurate, coordinated and timely manner. (FEMA #14)

- 3.2.15 Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion. (FEMA #15)
 - 3.2.16 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. (FEMA #16)
 - 3.2.17 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). (FEMA #18)
 - 3.2.18 Demonstrate the ability to identify the need for and call upon federal and other outside support agencies' assistance. (FEMA #26)
 - 3.2.19 Demonstrate the ability to estimate total population exposure. (FEMA #31)
 - 3.2.20 Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change. (FEMA #34)
- 3.3 Kewaunee County
- 3.3.1 Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The four ECLs are: Notification of unusual event, alert, site area emergency and general emergency. (FEMA #1)
 - 3.3.2 Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions. (FEMA #2)
 - 3.3.3 Demonstrate the ability to direct, coordinate and control emergency activities. (FEMA #3)
 - 3.3.4 Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel. (FEMA #4)

- 3.3.5 Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations. (FEMA #5)
- 3.3.6 Demonstrate the ability to continuously monitor and control emergency worker exposure. (FEMA #6)
- 3.3.7 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). (FEMA #12)
- 3.3.8 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. (FEMA #13)
- 3.3.9 Demonstrate the ability to brief the media in an accurate, coordinated and timely manner. (FEMA #14)
- 3.3.10 Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion. (FEMA #15)
- 3.3.11 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. (FEMA #16)
- 3.3.12 Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ populations (including transit-dependent persons, special needs populations, handicapped persons and institutionalized persons). (FEMA #18)
- 3.3.13 Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas. (FEMA #20)
- 3.3.14 Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees. (FEMA #21)
- 3.3.15 Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees. (FEMA #22)
- 3.3.16 Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change. (FEMA #34)

3.4 Manitowoc County

- 3.4.1 Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The four ECLs are: Notification of unusual event, alert, site area emergency and general emergency. (FEMA #1)
- 3.4.2 Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions. (FEMA #2)
- 3.4.3 Demonstrate the ability to direct, coordinate and control emergency activities. (FEMA #3)
- 3.4.4 Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel. (FEMA #4)
- 3.4.5 Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations. (FEMA #5)
- 3.4.6 Demonstrate the ability to continuously monitor and control emergency worker exposure. (FEMA #6)
- 3.4.7 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). (FEMA #12)
- 3.4.8 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. (FEMA #13)
- 3.4.9 Demonstrate the ability to brief the media in an accurate, coordinated and timely manner. (FEMA #14)
- 3.4.10 Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion. (FEMA #15)
- 3.4.11 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. (FEMA #16)

- 3.4.12 Demonstrate the ability and resources necessary to implement appropriate actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, handicapped persons and institutionalized persons). (FEMA #18)
- 3.4.13 Demonstrate the ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ. (FEMA #19)
- 3.4.14 Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas. (FEMA #20)
- 3.4.15 Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees. (FEMA #21)
- 3.4.16 Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees. (FEMA #22)
- 3.4.17 Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change. (FEMA #34)
- 3.4.18 Demonstrate the ability to coordinate the evacuation of on-site personnel. (FEMA #35)

4.0 EMERGENCY DRILL SCOPE

4.0 EMERGENCY EXERCISE SCOPE

4.1 Overview

- 4.1.1 The 1988 Point Beach Nuclear Plant emergency plan exercise scenario will require activation of the Wisconsin Electric TSC, OSC, EOF, JPIC and various corporate support facilities. State and local Emergency Operations Centers (EOCs) will be established in response to scenario events.
- 4.1.2 The scenario will provide exercise participants at the plant with several opportunities to identify, classify and mitigate emergency events.
- 4.1.3 Although scenario events do not lead to a significant release of radioactivity to the environment, declaration of a General Emergency classification is ultimately warranted due to a potential loss of three fission product barriers. Field monitoring activities by utility and state teams will verify that no significant radioactive release has occurred. Offsite protective measures will be required due to the General Emergency declaration, specifically the degraded core condition.
- 4.1.4 The scenario will require a medical emergency response to an injured plant employee. The injury may not be complicated by radioactive contamination. Participation of the ambulance service and hospital may be simulated.

4.2 Sequence of Events

- 4.2.1 The scenario begins with PSNP Units 1 and 2 at 100% power. A Unit 1 turbine trip/reactor trip initiates in response to a failed condensate pump. Control rods fail to drop into the core. Operator actions, however, successfully insert rods into the core and result in the reactor becoming subcritical. This Anticipated Transient Without Scram (ATWS), requires an "Alert" declaration (category 10).
- 4.2.2 The transient results in a brief overpressure condition in the reactor coolant system (RCS). A pressurizer power operated relief valve (PORV) lifts to release RCS pressure to the pressurizer relief tank (PRT). Although the PORV reseats, the valve spring is damaged.

- 4.2.3 Sometime later, the damaged PORV spring allows the PORV to lift resulting in a brief loss of reactor coolant to the PRT. The PORV block valve fails on thermal overload and operator attempts to secure the PORV leak are unsuccessful. The PRT retains its integrity and prevents a release of reactor coolant to the containment.
- 4.2.4 The broken spring on the PORV ultimately gives way and the PORV fails open. When the PRT rupture disk fails, a leak of reactor coolant to the containment results. Because of the failed PORV block valve, operators are unable to secure the leak.
- 4.2.5 The RCS leak rate results in a rapid depressurization of the RCS. Pressurizer low-pressure initiates a safety injection actuation. One high-head safety injection pump fails to start due to a breaker problem.
- 4.2.6 A few moments after safety injection actuation, a welding rig in the number one pipeway is knocked over. A gas bottle is damaged and is propelled through the number one pipeway toward containment. The projectile causes a safety injection line and charging line valve to be broken. The damaged safety injection line is the one supplied by the operating pump. This damage results in a loss of all high-head safety injection. The operable safety injection pump delivers boric acid and refueling water to the number one pipeway and the auxiliary building floor via the broken safety injection line. Injection to the primary system never occurs.
- 4.2.7 In addition, the projectile in the number one pipeway damages several containment isolation valves and containment penetrations. Although the damage is considerable, and some containment isolation valve indicator lights in the control room are dim, the containment is not actually breached.
- 4.2.8 The spill of refueling water to the auxiliary building results in slightly elevated radiation levels as monitored at the auxiliary building vent stack. The atmospheric release of radioactivity is not significant from an offsite dose standpoint.
- 4.2.9 A site emergency (Category 1) may be declared as a result of an RCS leak rate in excess of available pump capacity.

- 4.2.10 At this point, the plant is in hot shut down, cooling down on the atmospheric steam dumps, with an in-containment RCS leak in excess of available charging capacity. Because high-head safety injection is not available, core uncover ultimately results. Temperature at the core exit thermocouples increases to greater than 700°F.
- 4.2.11 A primary leak rate exceeding pump capacity, an apparent loss of containment integrity, and core temperatures exceeding 700°F together warrant declaration of a General Emergency (Category 1).
- 4.2.12 The General Emergency declaration will require a recommendation of protective actions to offsite agencies. The minimum recommendation is sheltering in all sectors from zero to two miles and at least four downwind sectors out to five miles.
- 4.2.13 Because of the degraded core conditions, protective action recommendations (PARs) will likely include evacuation of at least all sectors out to two miles.
- 4.2.14 The offsite health physics facility (OSHPP) and emergency operation facility (EOF) will implement and coordinate offsite monitoring. Protective action recommendations developed at the EOF will be based upon plant conditions. The absence of a significant offsite radiological release will be verified by a coordinated OSHPP and EOF effort.
- 4.2.15 Plant maintenance activities will focus upon restoration of the failed safety injection pump or piping. While involved in repair or damage assessment activities, one team member becomes injured and requires response by an on-site first aid team. Offsite medical response (ambulance and hospital) may be simulated.
- 4.2.16 Scenario events will require Manitowoc County, Kewaunee County, and the State of Wisconsin to issue protective action orders, activate emergency operation centers, reception centers and congregate care facilities.
- 4.2.17 The scenario will be terminated at the discretion of the main exercise controller.
- 4.2.18 The scenario will not provide for demonstration of on-site or off-site recovery and reentry.

5.0 INITIAL CONDITIONS

5.0 INITIAL CONDITIONS

5.1 Pre-exercise Events - Station Log Attached

5.2 Unit 1 @0630 Hours

5.2.1 100% power

5.2.2 RCS temperature = 570 °F

5.2.3 RCS pressure = 1985 psig

5.2.4 Boron concentration = 211 ppm

5.2.5 Generator output = 515 MWe gross

5.2.6 Equipment out of service

a. Electric service

H52-02 13.8 tie breaker out of service for maintenance inspection

b. Auxiliary feed pump (P38B)

Red tagged out for oil change.

c. Pressurizer PORV (PCV-431C)

Stuck shut

d. RHR pump (1P10B)

1. IT 03 & 04 done at 03:48

2. In alert range due to pump vibration

e. Atmospheric steam dump ("A" CV-2016)

Leaking, red tagged

5.3 Unit 2 @0630 Hours

5.3.1 100% power

5.3.2 RCS temperature = 570°F

5.3.3 RCS pressure = 1985 psig

5.3.4 Boron concentration = 680 ppm

- 5.3.5 Generator output = 515 MWe gross
- 5.3.6 Equipment out of service
 - a. 2P4B BA transfer pump, red tagged out for replacement/repair
 - b. SR 31 (source range)
- 5.4 Control Room Status Board - Unit 1 - See Attachment to This Section
- 5.5 Radiological/Meteorological Status @0630
 - 5.5.1 No known releases - system normal
 - 5.5.2 Wind speed (primary tower) = 7-10 mph
 - 5.5.3 Wind direction (primary tower) = 60°
 - 5.5.4 Sigma Theta = 1°
 - 5.5.5 Delta T/35 meters = 0.3°F
- 5.6 Controller and Observers

The following individuals are controllers or observers and for the purpose of this drill are on simulated vacation. Therefore, they are not available to respond to the emergency.

C. L. Andrews	J. Z. LaPlante
G. A. Casadonte	T. C. Lucas
C. A. Castell	G. J. Maxfield
R. J. Chojnacki	A. Z. Pusztai
M. E. Crouch	A. L. Reimer
C. A. Gates	D. D. Schoon
R. E. Heiden	T. P. Sheley
R. W. Holzer	G. R. Sherwood
M. A. Hoynacki	T. L. Slack
D. J. Johnson	J. K. Smith
D. C. Kois	M. J. Smith
G. M. Krieser	D. R. Stevens

Attachments:

1. Station Log
2. Unit 1 Equipment Status
3. Unit 1 Equipment Out of Service
4. Unit 2 Equipment Out of Service
5. Chemistry "Control Room Summary Sheet For September 13, 1988"

UNIT 1 EQUIPMENT STATUS

Mixed Bed "A" (LiOH)	<input checked="" type="radio"/> ON - OFF - EMPTY - RTO	<u>9-14-88</u> Date	Last boron <u>221</u> ppm
"B" (HOH)	ON - <input checked="" type="radio"/> OFF - EMPTY - RTO	<u>9-7-88</u> Date	Last boron <u>230</u> ppm
Deborator "A"	ON - OFF - <input checked="" type="radio"/> EMPTY - <input checked="" type="radio"/> RTO	<u>6-21-88</u> Date	Last boron <u>—</u> ppm
Deborator "B"	ON - OFF - EMPTY - <input checked="" type="radio"/> RTO	<u>6-14-88</u> Date	Last boron <u>7</u> ppm
Cation	ON - <input checked="" type="radio"/> OFF - EMPTY - RTO	<u>5-13-88</u> Date	Last boron <u>2118</u> ppm
Steam Generator Blowdown Flow	"A" <u>15</u> Klbs/hr	"B" <u>15</u> Klbs/hr	<u>9-1-88</u> Date
Neut. Tank Discharge to	Unit 1	<input checked="" type="radio"/> Unit 2	
Service Water Discharge to	Unit 1	Unit 2	<input checked="" type="radio"/> Unit 1 & 2
VCT H ₂ Regulator Setting	<u>32</u> psig	<u>9-13-88</u> Date	

Unit - 1
EQUIPMENT OUT OF SERVICE

A Atmos Steam Dump (CU-2016)

PCV-431C (PORV)

P38B - Aux Feed Pump

Common - 13.8 Kv Tie Breaker H52-02

Unit - 2
EQUIPMENT OUT OF SERVICE

P4B - Boric Acid Transfer Pump

SR-31 - Source Range

P38B - Auxiliary Feedwater Pump

Common - 13.8 KV Tie Breaker H52-02

CONTROL ROOM SUMMARY SHEET FOR 13-SEP-88

UNIT 1

CONCENTRATIONS

BORON	RCS	HOTLEG/RHR	221.0	ppm	12-SEP-1988 08:14
		PZR	212.0	ppm	12-SEP-1988 08:12
	BAST	B	12.7	% Boric Acid	11-SEP-1988 11:18
		C	12.2	% Boric Acid	11-SEP-1988 11:19
	RWST	(OLD)	2198.0	ppm	30-AUG-1988 07:56
		(NEW)	2190.0	ppm	06-SEP-1988 09:05
	ACCUM	A	2260.0	ppm	12-SEP-1988 15:15
		B	2227.0	ppm	12-SEP-1988 15:12
% NaOH	SPRA	ADD TK	-2.2	% NaOH	12-SEP-1988 17:38
H2	RCS		34.30	cc/Kg	12-SEP-1988 08:30

ACTIVITIES

PRIMARY GROSS		0.29	uCi/cc	12-SEP-1988 08:14
100/E		-----	uCi/cc	-----
GASEOUS		0.20	uCi/cc	12-SEP-1988 08:30
STM GEN A		< MDA	uCi/cc	11-SEP-1988 08:18
B		< MDA	uCi/cc	11-SEP-1988 08:18

LEAKAGE

TOTAL PRI TO SEC		6.62	gpd	12-SEP-1988 10:02
------------------	--	------	-----	-------------------

6.0 TIME SCHEDULE OF SIMULATED EVENTS

6.0 TIME SCHEDULE OF REAL AND SIMULATED SCENARIO EVENTS

- 06:30 Exercise is initiated in the control room with a shift turnover.
- 07:40 A series of events result in a Unit 1 reactor trip signal
- Condensate pump (1P25A) fails
 - Both main feed pumps trip on low suction pressure
 - Turbine trips
 - Reactor trip signal (steam flow/feed flow mismatch)
- 07:40:05 Reactor fails to trip
- Reactor trip breakers are jammed closed
 - Control rods fail to drop
 - Manual reactor trip is unsuccessful
 - ALERT declaration required (Category 10)
- 07:40:15 An overpressure condition develops in the reactor coolant system
- Pressurizer vents through PORV (430) to the pressurizer relief tank (PRT)
 - PORV spring is damaged
- 07:41 Operators successfully trip the reactor by deenergizing supply breakers for B01 and B02.
- 07:42 Safety injection actuation, no injection.
- *(07:56) Plant operations manager declares an ALERT based upon Category 10, "Failure of reactor protection system to complete a trip which brings reactor subcritical."
- *(08:11) Offsite agencies notified of ALERT
- *(08:24) Technical Support Center manned
- *(08:56) Manitowoc County, Kewaunee County and Wisconsin Emergency Operations Centers (EOCs) activated.
- 09:19 PORV-430 lifts briefly venting reactor coolant to the PRT. Attempts to close corresponding block valve (516) are unsuccessful.

* Times shown in parentheses are approximate and are dependent upon player actions.

- 10:10 PORV-430 lifts and fails open
- PRT rupture disc fails and a leak from the reactor coolant system (RCS) to containment is initiated.
 - Containment monitors (1RE-211, 1RE-212) alarm.
 - A safety injection (SI) actuation occurs on a pressurizer/low pressure signal.
 - SI pump (1P15A) fails to start due to a breaker problem.
- 10:10+ A welding rig in the #1 pipeway is knocked over. A gas bottle is damaged and propelled through the pipeway. The projectile damages the following:
- Several containment isolation valves
 - Several containment penetrations
 - "B" safety injection line. This is the line fed by the operable SI pump.
 - Valve stem on 1-HCV-142 on the charging line
- Although damage is considerable, containment integrity is not actually breached.
- A SITE EMERGENCY declaration is warranted.
- Boric acid and refueling water (RWST) spill into the pipeway and the auxiliary building.
- The spill initiates a small release through the auxiliary building vent.
- 10:12+ Maintenance and Operations efforts are directed toward damage assessment and restoration of the safety injection system. Teams may be controlled from the Operations Support Center (OSC).
- 10:15 Charging pump area monitor (1RE-104) alarms.
- 10:17 Containment monitor (1RE-102) and Auxiliary Building Vent monitor (RE-214) alarm.
- 10:25 Containment monitor (1RE-107) alarms.

* Times shown in parentheses are approximate and are dependent upon player actions.

- *(10:27) Plant operation manager may declare a SITE EMERGENCY based upon Category 1, "Leak Rate in Excess of Available Pump Capacity."
- *(10:30) PBNP offsite monitoring teams are dispatched.
- *(10:35) Evacuation of plant personnel to on-site assembly areas.
- 10:48 Auxiliary Building Vent monitor (RE-214) alarm clears.
- 11:07 RCS leak results in core uncover. Core temperatures exceed 700°F. A GENERAL EMERGENCY declaration is warranted.
- 11:07+ Fuel failure occurs and gap activity is released to the reactor coolant system and containment via the PORV and PRT.
- Containment radiation monitors (1RE-102, 1RE-107) peg offscale high.
- Containment high range monitors RM-126, 127, and 128 alarm and show increased levels of radiation in containment.
- 11:13 Injection from accumulators to the reactor coolant system occurs.
- *(11:22) Plant operations manager declares a GENERAL EMERGENCY based upon Category 1, "Loss of primary system integrity and containment with the potential for fuel damage."
- Protective actions include, at a minimum:
- | | | |
|---------|------------------|-------------|
| Shelter | All sectors | 0 - 2 miles |
| Shelter | Downwind Sectors | 2 - 5 miles |
- *(11:25) Various activities are initiated by the County and State EOCs to evaluate and/or implement protective action recommendations.
- Implementation includes:
- Preparation of EBS messages
 - Sounding of sirens
 - Broadcast of EBS messages
 - Establishing traffic control points
 - Implementation of protective measures for school children
 - Establishment of relocation and congregate care centers

* Times shown in parentheses are approximate and are dependent upon player actions.

- * (11:25+) Two sirens in Manitowoc County do not provide run verification upon being polled.
- * (11:30) Emergency Operations Facility (EOF) manned by site personnel.
- 11:40 The 22nd Street drawbridge in Two Rivers fails in the open position. Repairs are expected to take three to four hours.
- * (12:00) Evacuation of nonessential personnel from onsite to offsite.
- * (12:30) Emergency Operations Facility (EOF) manned by corporate support personnel.
Joint Public Information Center (JPIC) manned by utility and county personnel.
- * (12:40) If earlier protective action recommendations from the utility did not include evacuation, the PARs will be escalated to include, at a minimum, evacuation out to two miles.
- * (12:45) State of Wisconsin field monitoring teams are dispatched.
- 12:50 A house fire is reported to the Manitowoc County sheriff's dispatcher. The burning home is located inside the zone for which evacuation was recommended.
- 13:25+ A plant employee is injured while involved in Maintenance, Health Physics, Chemistry or other damage assessment activities. An on-site first aid team responds to the scene.
- * (13:40) Manitowoc sheriff, Mishicot ambulance and Two Rivers Hospital are notified of and respond to the on-site injury. If the injury occurs on the plant controlled side, the Two Rivers Community Hospital nuclear first aid room will be utilized for the victim.
- * (17:00) Exercise is terminated by main exercise controller.

* Times shown in parentheses are approximate and are dependent upon player actions.

7.0 DETAILED SCENARIO EVENTS WITH CUE AND CONTINGENCY CARDS

7.1 C630 - Exercise Start

7.1.1 Plant Conditions

a. Unit 1:

- 100% power middle of life
- Pressurizer PORV (PCV-431C) out of service
 - Stuck shut
 - Block valve (1-515) closed
- CV-2016 "A" atmospheric steam dump out of service
 - Was leaking, tagged out for maintenance and repair.
- H52-02 13.8 kV tie breaker out of service for maintenance inspection
- Auxiliary Feedwater Pump P38B red tagged out for oil change
- 1P10B RHR pump in alert range due to pump vibration
- Welding in Unit 1 facade and auxiliary building is scheduled for handrail improvement project

b. Unit 2:

- 100% power
- 2P4B BA transfer pump red tagged out for replacement or repair
- SR-31 (source range detector) is out of service

7.1.2 Meteorological Status

- a. Wind Speed = 7 mph
- b. Wind Direction = 443°
- c. Sigma Theta = -4°
- d. Delta T/35 meters = .3°F

7.1.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.1.4 Emergency Action Level

- a. Per conditions: None
- b. Declared: None

7.1.5 Controller Actions/Emergency Organization Response

a. Card 1 (0630), CUE

MESSAGE: Shift turnover

b. Card 2 (0640), CONTINGENCY

MESSAGE: Announce commencement of the Emergency
Plan exercise.

c. Card 3 (0640 +), CUE

MESSAGE: Weather forecast

NOTE: Provide this information as a correction to
any person obtaining a 24-hour weather
forecast from the National Weather Service.
Players should actually obtain a forecast
from the NWS. In the TSC this may be done
via NAWAS.

d. Card 4 (0650 +), CUE

MESSAGE: TSC RMS II values are as read.

e. Card 5 (0650 +), CUE

MESSAGE: EOF RMS II values are as read.

7.1.6 Offsite Agency Response

None

EP EXERCISE 09-88
Section 7

CARD NO. 1

CUE

TIME: 0630

MESSAGE FOR: DSS

MESSAGE: Shift turnover.

Review the following items with the departing DSS.

- Station log, September 14, 1988 (attached)
- Plant status board
- Maintenance work requests
- Red tag series

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

IN FORM 1141
ONLY

POINT BEACH NUCLEAR PLANT
IGNITION CONTROL PERMIT

FOR INFORMATION ONLY

REFERENCE: PBNP ADMINISTRATIVE PROCEDURE PBNP 3.4.1.

1.0 GENERAL

SMP / RMP

Date 14 SEPT 88 Mod. Request / MR # EPO91488
Location of Work: Bldg. PRO 2nd fl Elevation 86' Equipment HAND RAIL
What is to be done? HAND RAIL IMPROVEMENT WELD / GRIND / BURN

2.0 PRECAUTIONS

- 2.1 Fully charged fire extinguisher provided at work site.
- 2.2 Exposed flammable liquids and combustible materials within 35' of the work site relocated or satisfactorily protected.
- 2.3 Openings in walls, decks, or ducts within 35' of the work site satisfactorily protected.
- 2.4 Tanks, containers, ducts cleaned of combustible and purged of flammable or noxious vapors.
- 2.5 Fire watch assigned and aware of duties and responsibilities.

3.0 AUTHORIZATION

The precautions have been implemented, the intent of this procedure is satisfied, and the work can be done in a fire safe manner.

SIGNED R. GARNOLL
Authorized Person

4.0 APPROVAL

This ignition control permit expires 24 hours from the time stated below or when any conditions of authorization and approval have changed. The fire equipment listed below has been disabled to facilitate this work:

<u>Halon System</u>	<u>Smoke Detection</u>	<u>Other</u>
<u>21 CSR C927</u>	<u>XS- _____</u>	<u>_____</u>
<u>22 AFP C928</u>	<u>D- _____</u>	<u>_____</u>
<u>23 VSG C929</u>	<u>_____</u>	<u>_____</u>

Date ___/___/___ Time _____ hrs. APPROVED _____ DSS/DCS

5.0 FOLLOWUP INSPECTION

Work areas and all adjacent areas to which sparks and heat may have spread (such as floors above and below and on opposite side of walls) were inspected after the work or activity was completed and were found fire safe.

Time Completed _____ hrs. SIGNED _____
Authorized Person or Fire Watch

All fire protection systems listed in Section 4.0 have been returned to service.

_____ hrs SIGNED _____ DSS/DCS

FOR INFORMATION ONLY

UNIT: PB1 POINT BEACH NUCLEAR PLANT | QA Scope: N
 Priority: 3 MAINTENANCE WORK REQUEST | By: RON D MITCHELL
 HP Zone:

Work Group: M&C MWR No: 880213
 Mod Request No:

Equip ID: FABRICATE System: XX Location: 8/PAB/PW 1
 Equipment Name: CONSTRUCTION OF NON OR MULTINUMBERED EQUIPMENT

Problem Description:
 IMPROVE LADDER DESIGN TO AID IN ACCESS TO THE UPPER LEVEL 14'. CONCERN:
 OPERATORS TEND TO STEP ON CHARGING LINE AND SAFETY CONCERN.
 (OPERATOR SLIPPED AND FELL WHILE ADJUSTING CV-300A & B ON 5/14/88)

Tag/Sticker #: N01240 Originator: GERROLL R. O. Date: 05/14/88
 Plant Conditions Read: ANY CONDITION MOD Revw Read:
 Desired Complete Date: Orig Supervisor: CROUCH M. E.

SR: N Seismic: 3 Pre-Mtc Test: Proc:
 EQ: N LCO: N Post-Mtc Test: Proc:
 SSA: N CAT: N Tech Spec: NONE
 Review Date: 07/28/88 OPS Rep: RON D MITCHELL

MOD Request Approved: Revw Date: MOD Eng:
 * Equipment Release Operational DSS: Y Date: 07/28/88
 * for Work Supt OPS: RON D MITCHELL Date: 07/28/88

* Fire Protection Permits Required * WORKER Qualification Required
 Ignition Control: Y Class: ELECTRICAL
 Trans Combustible: N QC Inspector: N
 Fire Barrier Penetration: N

* Special Procedures Required * * SPECIAL CONTROLS REQUIRED *
 Work Procedure Read: N Post-Maint T/I: N Radiation Work Permit: N
 Work Proc 1: 2 Equipment Isolation: N
 Group Head: RON D MITCHELL Date: 07/28/88 Line Supv: Date:

Work Plan (Include QC Hold Points / Sign Off if Needed)
 EXPAND TREAD SIZE AND ADD HAND RAIL.

WORK PERFORMED: _____

QAR #	Q	Q	Q	Q	Q	Q
MTE Used:	1.	2.	3.	4.	5.	6.
	3.	4.	5.	6.		
MWR Tags Removed?						
Work Complete Date:						
Employee Number:	_ _ _ _ _ _ _					
Employee Name:	_ _ _ _ _ _ _					

Root Cause: _____ Generic: Yes/No | * Equipment Return to Service *
 Post-Mtc Performed:
 QC Insp Date | Line Supv Date | OPS DSS: _____ Date: _____
 Non-OPS Supv: _____ Date: _____
 NCR: Yes/No | 10CFR21: Yes/No | NPRDS: Yes/No | Machinery History: Yes / No
 Group Head: _____ Date: _____ | CHAMPS | EGRS QA: _____ Date: _____

EQR-40a

FOR INFORMATION ONLY

EP EXERCISE 09-88
Section 7

CARD NO. 2

CONTINGENCY

TIME: 0640

MESSAGE FOR: DSS

MESSAGE: Use Gai-tronics to announce the following:

"Attention all personnel

Attention all personnel

We have commenced an Emergency Plan Exercise.

I repeat.

We have commenced an Emergency Plan Exercise."

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 3

CUE

TIME: 0640 +

MESSAGE FOR: TSC and/or EOF

MESSAGE: Temperature today -

- a. Highs in the mid to upper 60s
- b. Lows tonight in the 40s

Winds -

Out of the east - northeast today and this evening at 5 to 15 mph becoming more westerly by morning.

Skies will be mostly cloudy, only a 20% chance of scattered showers.

THIS IS A DRILL

CONTROLLER LOCATION: TSC or EOF

EP EXERCISE 09-88
Section 7

CARD NO. 4

CUE

TIME: 0650 →

MESSAGE FOR: TSC

MESSAGE: RMS II - Values are "as read."

THIS IS A DRILL

CONTROLLER LOCATION: TSC

EP EXERCISE 09-88
Section 7

CARD NO. 5

CUE

TIME: 0650 →

MESSAGE FOR: EOF

MESSAGE: RMS II - Values are "as read."

THIS IS A DRILL

CONTROLLER LOCATION: EOF

7.2 0700 - Maintenance Begins Preparations for Welding

7.2.1 Plant Conditions

- a. Unit 1:
 - No change
- b. Unit 2:
 - No change

7.2.2 Meteorological Status

- a. Wind Speed = 6 mph
- b. Wind Direction = 450°
- c. Sigma Theta = 2°
- d. Delta T/35 meters = 1°F

7.2.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.2.4 Emergency Action Level

- a. Per conditions: None
- b. Declared: None

7.2.5 Controller Actions/Emergency Organization Response

- a. Card 6 (0700), CONTROLLER INSTRUCTION

MESSAGE: Contractor supervisor (controller) reports to control room regarding controlled side welding for handrail improvement modification.

NOTES: The controller will pick up the MWR for handrail repairs.

An ignition control permit for welding - grinding - burning on handrails at PAB pipeway #1 and U1 facade 85' will be attached to the MWR. Ensure that it is reviewed and approved by the DSS.

7.2.5 Controller Actions/Emergency Organization
Response (Continued)

b. Card 7 (0700), CUE

MESSAGE: Maintenance supervisor reports to drill
control to get permission to commence
various maintenance activities.

7.2.6 Offsite Agency Response

None

EP EXERCISE 09-88
Section 7

CARD NO. 6

CONTROLLER INSTRUCTION

TIME: 0700

MESSAGE FOR: Contractor Supervisor (Controller)

MESSAGE: Report to the drill control room to obtain/prepare appropriate documents for welding on the handrails in #1 pipeway and Unit 1 facade, El. 85'.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 7

CUE

TIME: 0700

MESSAGE FOR: Maintenance Supervisor

MESSAGE: Report to drill control room to get the paperwork associated with the
maintenance work list below:

- P38B oil change
- 13.8 Kv Breaker (H52-02) inspection
- Handrail welding #1 pipeway
- 2P4B BA transfer pump inspection

THIS IS A DRILL

CONTROLLER LOCATION: Maintenance Office

7.3 0738 - Condensate Pump Motor Overload Alarm

7.3.1 Plant Conditions

- a. Unit 1:
 - 100% power
 - Condensate pump failure begins
- b. Unit 2:
 - 100% power
 - Stable

7.3.2 Meteorological Status

- a. Wind Speed = 8 mph
- b. Wind Direction = 450°
- c. Sigma Theta = 1°
- d. Delta T/35 meters = .5°F

7.3.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.3.4 Emergency Action Level

- a. Per conditions: None
- b. Declared: None

7.3.5 Controller Actions/Emergency Organization Response

- a. Card 8 (0738), CUE

MESSAGE: "Motor overload" alarm

NOTE: This alarm does not inform operators which pump motor has experienced an overload.

- b. Card 9 (0738), CUE (If asked)

MESSAGE: Condensate pump current

NOTE: Increasing amperage indicates an overload condition on the "A" condensate pump.

7.3.6 Offsite Agency Response

None

EP EXERCISE 09-88
Section 7

CARD NO. 3

CUE

TIME: 0738

MESSAGE FOR: Control Room Operator

MESSAGE: "Pump motor overload" alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 9

CUE (If asked)

TIME: 0738

MESSAGE FOR: Control Room Operator

MESSAGE: 1P25A (Condensate pump) Current: 123A → 140 Amps

1P25B (Condensate pump) Current: 125A → 130 Amps

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

7.4 0739 - Condensate Pump 1P25A Trips

7.4.1 Plant Conditions

- a. Unit 1:
 - 100% power
 - Condensate pump 1P25A trips
- b. Unit 2:
 - 100% power
 - Steady state

7.4.2 Meteorological Status

- a. Wind Speed = 8 mph
- b. Wind Direction = 449°
- c. Sigma Theta = 1°
- d. Delta T/35 meters = .5°F

7.4.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.4.4 Emergency Action Level

- a. Per conditions: None
- b. Declared: None

7.4.5 Controller Actions/Emergency Organization Response

- a. Card 10 (0739), CUE

MESSAGE: 1C03 alarms

NOTE: This card should be read and handed to the RO. It provides the RO with the alarms and indications he would receive on a condensate pump trip.

7.4.5 Controller Actions/Emergency Organization
Response (Continued)

b. Card 11 (0739+), CUE

MESSAGE: Additional 1C03 information

NOTE: This cue provides information that operators may request in response to the previous condensate pump failure alarms.

c. Card 12 (0739 +), CUE

MESSAGE: Condensate pump stopped and hot.

NOTE: This card should be provided to anyone at the condensate pump investigating its failure.

d. Card 13 (0739 +), CUE

MESSAGE: Rotor will not turn

NOTE: Issue this cue if team attempts to rotate pump shaft.

7.4.6 Offsite Agency Response

None

CARD NO. 10

CUE

TIME: 0739

MESSAGE FOR: Control Room Operator

MESSAGE: 1C03 Alarms

"Motor breaker trip"

"Steam generator feed pump "B" suction pressure low"

"Steam generator feed pump "A" suction pressure low"

"Steam generator feed pump seal ΔP low"

1P25A Condensate Pump Indication:

Green - On

White - On

Red - Off

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 11

CUE

TIME: 0739+

MESSAGE FOR: Control Room Operator

MESSAGE. Additional 1C03 alarms

P28A & B timer energized lights on

MFP suction pressure decreasing from 225 psig to 115 psig

"Condensate flow low" alarm

PC-2273 LP heater bypass open

"Steam Generator "A" level setpoint deviation" alarm

"Steam Generator "E" level setpoint deviation" alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 12

CUE

TIME: 0739 →

MESSAGE FOR: Personnel Inspecting Condensate Pump 1P25A

MESSAGE: Condensate pump inspection

"Shaft is stopped and the motor is very hot"

THIS IS A DRILL

CONTROLLER LOCATION: Condensate pump 1P25A or Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 13

CUE

TIME: 0739 →

MESSAGE FOR: Personnel Inspecting Condensate Pump 1P25A

MESSAGE: You are unable to rotate pump shaft.

THIS IS A DRILL

CONTROLLER LOCATION: Condensate Pump 1P25A or Drill Control Room

7.5 0740 - Reactor Trip Signal

7.5.1 Plant Conditions

a. Unit 1:

- A failed condensate pump causes a low suction pressure condition for the main feed pumps.
- The two-minute timer for the MFP low suction pressure trip is set incorrectly and results in a main feed pump trip. This causes the turbine to trip and a subsequent reactor trip signal.

b. Unit 2:

- 100% power
- Steady state

7.5.2 Meteorological Status

- a. Wind Speed = 8 mph
- b. Wind Direction = 449°
- c. Sigma Theta = 1°
- d. Delta T/35 meters = .5°F

7.5.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.5.4 Emergency Action Level

- a. Per conditions: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"
- b. Declared: None

7.5.5 Controller Actions/Emergency Organization Response

a. Card 14 (0740+), CUE

MESSAGE: Alarms and indications

NOTE: Read the alarm list. The cue provides indication of a reactor trip signal.

RESPONSE: Operators will initiate EOP-0 and CSP-S.1

b. Card 15 (0740++), CUE

MESSAGE: 1C04 alarms

NOTE: Read the alarm list to the RO. These alarms show a high pressure condition in the RCS with a PORV lift.

c. Card 16 (0740+++), CUE

MESSAGE: Rod bottom lights not lit.

NOTE: This card should be read to the RO after he attempts a manual reactor trip.

d. Card 17 (0741), CONTROLLER INSTRUCTION

MESSAGE: "OP-0 and CSP-S.1

NOTE: Completed procedures will be used by a control room controller to provide the operators necessary information as they progress through the procedures.

7.5.6 Offsite Agency Response

None are expected until an alert is declared and notifications are initiated.

CARD NO. 14

CUE

TIME: 0740+

MESSAGE FOR: Control Room

MESSAGE: Alarms and Indication

1C03

Feedwater pumps tripped (1st out) - Flashing

Turbine stop valves closed (1st out) - Solid

Feedwater pumps A & B

- Green light: On

- White light: On

- Red light: Off

1C04

Turbine trip (1st out) - Flashing

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

CONTROLLER NOTE: If asked, rod bottom lights are not lit.

CARD NO. 15

CUE

TIME: 0740++

MESSAGE FOR: Control Room

MESSAGE: 1C04 Alarms

"Pressurizer high pressure channel alert"

"Pressurizer hi/lo pressure"

"PORV (PCV-430) not shut"/shut (valve opened, then went shut)

"Pressurizer safety or relief line temp hi"

1st out "Pressurizer pressure hi" (Red out) solid

"PRT level high"

"PRT pressure high"

1st out SG A Lo level and lo FW flow (Red out) solid

1st out SG B Lo level and lo FW flow (Red out) solid

1st out SG A Lo-lo water level (Red out) solid

1st out SG B Lo-lo water level (Red out) solid

"Rx coolant Tave - Tref Deviation."

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 16

CUE

TIME: 0740+++

MESSAGE FOR: Control Room

MESSAGE: Rod bottom lights - Not lit

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 17

CONTROLLER INSTRUCTION

TIME: 0741

MESSAGE FOR: Control Room Controller

MESSAGE: A completed EOP-0 and CSP-S.1 will be used by the control room controller to provide the operators with plant information as they progress through the procedure.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

7.6 0741 - Rod Insertion Occurs

7.6.1 Plant Conditions

a. Unit 1:

- Reactor Shutdown
- EOP-0 will cause the operators to secure the rod control motor generators approximately one minute after the trip signal. This results in the insertion of all rods.

b. Unit 2:

- Steady state
- 100% power

7.6.2 Meteorological Status

- a. Wind Speed = 8 mph
- b. Wind Direction = 448°
- c. Sigma Theta = 0°
- d. Delta T/35 meters = .5°F

7.6.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.6.4 Emergency Action Level

- a. Per conditions: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"
- b. Declared: None

7.6.5 Controller Actions/Emergency Organization Response

- a. The control room staff will continue to respond to the casualty as required by the EOPs. EPIP 1.1 will be implemented to determine Emergency Plan implications.
- b. If not already in the control room, the DTA will be notified. The duty and call superintendent should be called.
- c. Card 18 (0741), CUE

MESSAGE: Rod bottom lights lit and other alarms

NOTE: This card should be provided to the operators after they open the supply breakers for B01 and B02.

7.6.6 Offsite Agency Response

None expected until an alert is declared and EPIP 2.1 is implemented.

CARD NO. 18

CUE

TIME: 0741

MESSAGE FOR: Drill Control Room

MESSAGE: - ROD BOTTOM LIGHTS - all lit

- ALARMS

- "EH supply pressure lo" alarm
- "Hydrogen panel" alarm (air side AC stop, DC running)
- "Turbine EMG lo pump running" (AC oil pump off) alarm
- "Condensate water box level lo" alarm
- "Vacuum control tank vacuum lo" alarm
- "Instrument air dryer bypass open" alarm
- "Instrument air dryer loss of power" alarm
- "Main transformer 1X01 phase "A" common trouble" alarm
- "Containment or aux building ventilation system air flow lo" alarm
- "Sewage treatment plant" alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

7.7 0742 - Safety Injection Actuation

7.7.1 Plant Conditions

a. Unit 1:

- Reactor shutdown
- Safety injection actuates but plant pressure remains high enough so no injection occurs.

b. Unit 2:

- 100% power
- Steady state

7.7.2 Meteorological Status

- a. Wind Speed = 8 mph
- b. Wind Direction = 448°
- c. Sigma Theta = 0°
- d. Delta T/35 meters = .5°F

7.7.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.7.4 Emergency Action Level

- a. Per conditions: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"
- b. Declared: None

7.7.5 Controller Actions/Emergency Organization Response

- a. Card 19 (0742), CUE

MESSAGE: Alarms

NOTE: Alarms indicate safety injection actuation. Additional cues will be provided through EOP/CSP sequence.

7.7.5 Controller Actions/Emergency Organization
Response (Continued)

b. Card 20 (0742 +), CUE

MESSAGE: MSIV bypass valves are stuck shut.

NOTES: This card will be given to any control room or auxillary operator who attempts to bypass the MSIVs in order to bring steam back into the turbine hall for the purpose of drawing a vacuum on the condenser for cooldown purposes.

c. Card 21 (0742 +), CONTINGENCY

MESSAGE: Cooldown is not allowed.

NOTE: This card should be given to the DSS if he orders a cooldown.

d. Card 21.1 (0742 +), CUE

MESSAGE: MOV-516 (PORV blocking valve). Lights out.

NOTE: This card should be given to any operator who attempts to operate the PORV blocking valve (MOV-516).

e. Card 22 (0742), CUE

MESSAGE: PRT level hi alarm clears.

7.7.6 Offsite Agency Response

None expected until the event is classified as an alert and notifications are completed.

CARD NO. 19

CUE

TIME: 0742

MESSAGE FOR: Control Room

MESSAGE: Alarms

1C04

- "Pressurizer lo pressure channel alert"
- "Pressurizer lo pressure" (1st out - solid)
- "Pressurizer lo pressure SI" (1st out - solid)
- Steam line loop A lo-lo SI" (1st out - solid)
- Steam line loop B lo-lo SI" (1st out - solid)

1C03

- "Steam line loop A pressure lo-lo channel alert"
- "Steam line loop B pressure lo-lo channel alert"
- "Steam line loop A isolation"
- "Steam line loop B isolation"
- "Steam line isolation valve 1A pressure lo"
- Steam line isolation valve 1B pressure lo"

C01

- Unit 1 Containment Isolation

THIS IS A DRILL

EP EXERCISE 09-88
Section 7

CARD NO. 20

CUE

TIME: 0742 +

MESSAGE FOR: Any AO attempting to bypass the MSIVs and/or observing atmospheric steam dumps.

MESSAGE: "MSIV bypass valves are both stuck shut."

"A" atmospheric steam dump is red tagged (AOV is gone).

"B" atmospheric steam dump only opens to ~25%
cycles okay 0 - 25%.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room or MSIV/Atmospheric Steam Dump Area

EP EXERCISE 09-88
Section 7

CARD NO. 21

CONTINGENCY

TIME: 0742 +

MESSAGE FOR: DSS

MESSAGE: Cooldown is not allowed. "A" atmospheric steam dump is out of service per initial conditions and "B" atmospheric steam dump only opens to 25%.
The decision to cooldown may have been appropriate, however, in order to keep scenario data on track a cooldown will not be allowed. Continue with attempts to repair equipment to allow cooldown.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 21.1

CONTINGENCY

TIME: 0742 +

MESSAGE FOR: Reactor Operator

MESSAGE: MOV-516 (PORV block valve) lights

Red light - Not lit when PORV block valve control
switch is shut

Green light - Not lit when PORV block valve control
switch is shut.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 22

CUE

TIME: 0742

MESSAGE FOR: Control Room Operator

MESSAGE: "PRT Level High" alarm clears

"Pressurizer safety or relief line temperature" - decreasing.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

0743 -
7.8 0840 - Alert: Emergency Organization Response

7.8.1 Plant Conditions

- a. Unit 1:
 - Hot shutdown, no load Tave
 - Steam generator levels are low
- b. Unit 2:
 - 100% power
 - Steady state

7.8.2 Meteorological Status

- a. Wind Speed = 8 to 10 mph
- b. Wind Direction = 448° to 460°
- c. Sigma Theta = 0° to -11°
- d. Delta T/35 meters = 0.5°F to -0.4°F

7.8.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.8.4 Emergency Action Level

- a. Per conditions: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip."
- b. Declared: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip."

7.8.5 Controller Actions/Emergency Organization Response

- a. The DTA and DCS will report to the control room.
- b. EPIP 1.1, "Plant Operations Manager Initial Response," should be implemented and an alert declared based on Category 10, Plant Shutdown Functions, "Failure of reactor protection system to complete a trip which brings reactor subcritical."

7.8.5 Controller Actions/Emergency Organization
Response (Continued)

- c. The DSS, DTA, DCS, and other members of the emergency response organization will implement EPIP 1.3, "Emergency Event, Immediate Actions."
- d. EPIP 2.1, "State and County Agency Notification," and EPIP 2.2, "NRC Notification" will be implemented.
- e. Activation of the TSC will commence in accordance with EPIP 4.1.
- f. Health Physics and Chemistry personnel will begin activation of facilities in the TSC/OSC and at the SBCC.
- g. Plant and company personnel will be notified in accordance with the EPIPs in Section 3.0.
- h. The site manager (or his designee) may report to the EOF to begin its activation in accordance with EPIP 4.3.
- i. Exercise controllers/observers should observe in the control room and TSC for proper turnover of information and emergency response organization control.
- j. Upon notification of the alert, the radcon/waste manager and ESM may begin transit from Milwaukee to the EOF.
- k. Upon notification of an alert communications department personnel who will staff the JPIC may proceed to the JPIC in Two Rivers.
- l. Communications department personnel may begin working on a press release in Milwaukee.
- m. Card 23 (0810), CUE

MESSAGE: "Pressurizer safety or relief line
temperature hi" alarm clears.

7.8.5 Controller Actions/Emergency Organization
Response (Continued)

n. Card 24 (0815), CONTINGENCY

MESSAGE: Declare an alert.

NOTE: This card should be issued if the POM has not
declared or is not on the verge of declaring
an alert.

7.8.6 Offsite Agency Response

- a. Manitowoc County, Kewaunee County and State DEG will receive the alert notification call via NAWAS and will make verification calls to the TSC using the normal telephone system.
- b. Upon notification of the alert the county and state will initiate staff callouts in preparation for EOC activation.

EP EXERCISE 09-88
Section 7

CARD NO. 23

CUE

TIME: 0810

MESSAGE FOR: Control Room

MESSAGE: "Pressurizer safety or relief line temperature hi" alarm clears.

Temperature = 125°F

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 24

CONTINGENCY

TIME: 0815

MESSAGE FOR: DSS

MESSAGE: Declare an alert.

Declare an alert based on EPIP 1.2 Category 10, "Plant shutdown function," failure of reactor protection system to complete a trip which brings reactor subcritical.

Implement EPIP 1.1

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

7.9 0919 - PORV 430 Cycles

7.9.1 Plant Conditions

a. Unit 1:

- Hot shutdown, no load Tave
- The spring on the PORV (PCV-430) developed cracks during the last opening cycle. Positive PORV control is lost. A single release of primary coolant to the PRT occurs.

b. Unit 2:

- 100% power
- Steady state.

7.9.2 Meteorological Status

- a. Wind Speed = 10 mph
- b. Wind Direction = 460°
- c. Sigma Theta = 12°
- d. Delta T/35 meters = -.5°F

7.9.3 Radiological Status

- a. Alarming release path monitors - None
- b. Alarming area-type monitors - None

7.9.4 Emergency Action Level

- a. Per conditions: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"
- b. Declared: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"

7.9.5 Controller Actions/Emergency Organization Response

- a. Company policy may cause the EOF to be activated by onsite personnel. The ESM, Radcon/waste manager, and other headquarters support personnel may be in transit to the EOF.
- b. Operations and Maintenance personnel may be evaluating methods of reestablishing condenser vacuum. They may be trying to restore the condensate pump. They may be investigating the cause of the ATWS; and they may be evaluating the cause of the rapid feed pump trip. Additionally, they will probably be evaluating the condition of the PORV and considering reestablishing the SI system.
- c. The TSC (or EOF) will be making status updates to offsite agencies (approximately hourly).
- d. The JPIC may be in the process of being set up by EIC personnel.
- e. Card 25 (0919), CUE
MESSAGE: Alarms and indication - 1C04
NOTE: The alarms and indicators suggest that the PORV has lifted.
- f. Card 26 (0920), CUE
MESSAGE: MOV-516 (PORV blocking valve). Lights out.
NOTE: This card should be given to any operator who attempts to operate the PORV blocking valve (MOV-516).
- g. Card 27 (0920 +), CUE
MESSAGE: Breaker/overload status for MOV-516 at 1B42.
NOTE: This card should be read to any AO who may attempt to reset the overloads for the PORV blocking valve (MOV-516) on 1B42.

7.9.5 Controller Actions/Emergency Organization
Response (Continued)

h. Card 28 (0920 +), CUE

MESSAGE: Current readings for MOV-516 breaker.

NOTES: This card should be read to any electrician or AO who investigates the cause of the PORV blocking valve (MOV-516) failure to close. Current readings indicate that the breaker is performing properly and it indicates a probable MOV problem.

i. Card 29 (0939 +), CONTINGENCY

MESSAGE: Do not enter containment.

j. Card 30 (0940), CUE

MESSAGE: PRT level alarm clears.

NOTES: If attempts are made to drain the PRT, the PRT level and pressure alarms clear. RCDT alarms may come in due to PRT draining if AO is not at C59.

k. Card 31 (0951), CUE

MESSAGE: Pressurizer safety or relief line temperature hi alarm clears.

l. Card 32 (1008), CONTROLLER INSTRUCTION

MESSAGE: Notify the real control room that you will soon be testing the alarm on IRE-104.

7.9.6 Offsite Agency Response

- a. The state and county emergency operations centers should be activated.
- b. State and county staffs will receive status updates from WE communicators.

EP EXERCISE 09-88
Section 7

CARD NO. 25

CUE

TIME: 0919

MESSAGE FOR: Control Room

MESSAGE: Alarms and Indication

1C04

- "PORV not shut" alarm then alarm clears
- PORV (PCV-430) indication intermediate then shut
- "Pressurizer safety or relief line temp high" alarms
- "PRT level high" alarm
- "PRT pressure high" alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 26

CUE

TIME: 0920

MESSAGE FOR: Reactor Operator

MESSAGE: MOV-516 (PORV block valve) lights

Red light - Not lit when PORV block valve control
switch is shut

Green light - Not lit when PORV block valve control
switch is shut.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 27

CUE

TIME: 0920 →

MESSAGE FOR: Auxiliary operator who attempts to reset the PORV
blocking valve (MOV-516) overloads at 1B42.

MESSAGE: Breaker/overload status for MOV-516 at 1B42.

1. Breaker indicates tripped. (Will reset if attempted by AO.)
2. Pause until after control room attempts to cycle valve closed.
3. Overloads trip again after reset and after control room attempts to close blocking valve.

THIS IS A DRILL

CONTROLLER LOCATION: With the AO at 1B42.

EP EXERCISE 09-88
Section 7

CARD NO. 28

CUE

TIME: 0920 +

MESSAGE FOR: Maintenance electrician investigating PORV blocking
valve failure.

MESSAGE: Current readings for MOV-516 breaker:

Current: Increases to 2 amps
Contactor drops open

THIS IS A DRILL

CONTROLLER LOCATION: With the Maintenance electrician.

EP EXERCISE 09-88
Section 7

CARD NO. 29

CONTINGENCY

TIME: 0939 +

MESSAGE FOR: Containment Entry Team

MESSAGE: Do not enter containment.

Simulate the entry. Remain at the containment personnel hatch
and talk through your work activities.

THIS IS A DRILL

CONTROLLER LOCATION: With the containment entry team.

EP EXERCISE 09-88
Section 7

CARD NO. 30

CUE

TIME: 0940

MESSAGE FOR: Control Room Operator

MESSAGE: PRT level alarm clear.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 31

CUE

TIME: 0951

MESSAGE FOR: Control Room

MESSAGE: "Pressurizer safety or relief line temperature high" alarm clears

Temperature <190°F

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 32

CONTROLLER INSTRUCTION

TIME: 1008

MESSAGE FOR: Controller Near IRE-104 Test Panel

- MESSAGE: 1. Notify the real control room that you will soon be testing the alarm on IRE-104.
2. At 1015 depress the test button.

THIS IS A DRILL

CONTROLLER LOCATION: Auxiliary Building

7.10 1010 - PORV (PCV-430) Fails Open and Gas Bottle in #1 Pipeway Causes Damage

7.10.1 Plant Conditions

a. Unit 1:

- Hot shutdown
- The spring for PORV (PVC-430) completely fails and the PORV opens fully. Because the blocking valve for the PORV has failed open this results in a non-isolable leak to the PRT
- "A" SI pump fails to start upon SI actuation
- The PRT rupture disc is blown open by the leak and a primary leak to containment commences
- A bottle on the welding rig in pipeway #1 falls over, the cap is broken off and the bottle becomes a missile. The bottle is propelled through the #1 pipeway toward containment where it breaks the SI line supplied by the "B" SI pump. The valve stem on 1-HCV-142 (charging) is damaged and allows charging flow to exit the valve stem.
- Containment isolation valves 1-V538 and 1-V539 (PRT to gas analyzer) are damaged by the projectile and result in the containment isolation valve status lights in the control room being dim. Containment integrity is not actually breached.

b. Unit 2:

- 100% power
- Steady state

7.10.2 Meteorological Status

- a. Wind Speed = 8 mph
- b. Wind Direction = 457°
- c. Sigma Theta = 11°
- d. Delta T/35 meters = -.4°F

7.10.3 Radiological Status

a. Alarming release path monitors:

- 1RE-211 Containment Air Particulate (1010 hours)
- 1RE-212 Containment Noble Gas (1010 hours)
- RE-214 Auxiliary Building Vent (1017 - 1048)

b. Alarming area-type monitors:

- 1RE-102 Containment Low Range (1017 hours)
- 1RE-104 Charging Pump Area Low Range (1015 hours)
- 1RE-107 Seal Table (1025 hours)

c. Projected offsite whole body dose rate (downwind centerline)

RMS Projection

1 Mile 2.3E-06 Rem/Hr

d. Projected offsite thyroid dose rate (downwind centerline)

RMS Projection

1 Mile 4.6E-06 Rem/Hr

7.10.4 Emergency Action Level

- a. Per conditions: Site Emergency, Category 1, "Leak Rate Greater Than Available Pump Capacity"
- b. Declared: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"

7.10.5 Controller Actions/Emergency Organization Response

- a. Plant Operations manager may initiate a limited or whole plant evacuation.
- b. TSC personnel should reevaluate event classification.
- c. Card 33 (1010), CUE

MESSAGE: Alarms and indications

NOTE: These alarms indicate PORV failure.

- d. Card 34 (1010+), CUE

MESSAGE: Safety injection actuation alarms.

NOTE: These alarms indicate a safety injection actuation.

7.10.5 Controller Actions/Emergency Organization
Response (Continued)

e. Card 35 (1010++), CUE

MESSAGE: Unit 1 common critical control power failure.

NOTE: This gives indication to the operator that he has a control power failure.

f. Card 36 (1010+++), CUE (If asked)

MESSAGE: SI pump run lights

NOTE: When the operator inquires about SI pump run status, the cue can be given.

g. Card 37 (1010++++), CUE

MESSAGE: IRE-211 and IRE-212 alarms

NOTE: Read this card at the time of PORV failure.

h. Card 38 (~1010), CONTROLLER INSTRUCTION

MESSAGE: EOP-0

NOTE: A completed EOP-0 will be used to provide cues to control operators as they progress through the procedure.

i. Card 39 (1010 +), CUE

MESSAGE: Monitoring relay light - not lit.

NOTES: This card should be given to any operator dispatched to investigate the cause of the SI pump failure.

Monitoring relay light at top of SI pump breaker indicates blown closing power fuses for "A" SI pump.

j. Card 40 (1010 +), CUE

MESSAGE: Sparks occur when you attempt to replace closing power fuses and the fuses blow.

NOTE: Read this card to the operator investigating SI pump failure if he replaces the fuses.

7.10.5 Controller Actions/Emergency Organization
Response (Continued)

k. Card 41 (1010 - 1110), CUE

MESSAGE: "A" SI pump breaker is stuck in the racked-in position.

NOTE: This card should be given to any maintenance team or operator that attempts to rack-out the breaker for repairs. Any attempts to rack out the breaker are unsuccessful because of a jammed breaker lever. In order to get the breaker out they will need to break the lever.

l. Card 42 (1010+), CUE (If asked)

MESSAGE: These containment isolation valve status lights are dim.

NOTE: This message lists the CI valves which do not indicate closed as a result of the damage in #1 pipeway and should be given to the control room operator at about the same time the SI occurs.

m. Card 43 (1011), CONTROLLER INSTRUCTION

MESSAGE: Welder's call to control room regarding the welding gas bottle damage.

NOTE: The welder will be simulated by a controller. The call should be made using Gai-tronics near the #1 pipeway.

7.10.6 Offsite Agency Response

Offsite agencies will receive status updates regarding the emergency.

EP EXERCISE 09-88
Section 7

CARD NO. 33

CUE

TIME: 1010

MESSAGE FOR: Control Room

MESSAGE: Alarms and Indications

"PORV not shut" alarm

"Pressurizer safety or relief line temp high" alarm

"PRT high temperature" alarm

"PRT high pressure" alarm

"PRT high level" alarm

PORV (PCV-430) indication - red light (full open)

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

CARD NO. 34

CUE

TIME: 1010+

MESSAGE FOR: Control Room

MESSAGE: Safety injection actuation alarms

1C04

- Pressurizer press Hi/Lo
- Pressurizer lo pressure channel alert
- Pressurizer lo pressure (1st out - flashing)
- Pressurizer lo pressure SI (1st out - solid)

C04

- Unit 1 containment isolation

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 35

CUE

TIME: 1010++

MESSAGE FOR: Control Room

MESSAGE: "Unit 1 common critical control power failure" alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 36

CUE (If asked)

TIME: 1010+++

MESSAGE FOR: Control Room

MESSAGE: Safety injection pump run lights

"A" Safety injection pump

- White light on
- Green light on
- Red light off

"B" Safety injection pump

- Red light on

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 37

CUE

TIME: 1010++++

MESSAGE FOR: Control Room & TSC

MESSAGE: Radiation Monitoring System Alarms

1NE-211 High Alarm

1RE-212 Alert Alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room and TSC

EP EXERCISE 09-88
Section 7

CARD NO. 38

CONTROLLER INSTRUCTION

TIME: ~1010

MESSAGE FOR: Control Room Controller

MESSAGE: EOP-0

Use a previously completed EOP-0 to provide pertinent information
to control operators as they implement EOP-0.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 39

CUE

TIME: 1010 →

MESSAGE FOR: Anyone investigating the "A" safety injection pump breaker.

MESSAGE: Monitoring relay light - not lit.

THIS IS A DRILL

CONTROLLER LOCATION: With the operator investigating safety injection
pump failure at the pump breaker.

CARD NO. 40

CUE

TIME: 1010 →

MESSAGE FOR: Anyone who attempts to replace "A" safety
injection pump breaker closing power fuses.

MESSAGE: "Sparks occur whenever you attempt to replace closing power
fuses and the fuses blow."

THIS IS A DRILL

CONTROLLER LOCATION: With the person who attempts to replace the "A"
safety injection pump breaker closing power fuses.

EP EXERCISE 09-88
Section 7

CARD NO. 41

CUE

TIME: 1010 - 1110

MESSAGE FOR: AO or maintenance team attempting "A" safety injection
pump breaker repairs.

MESSAGE: Your attempts to remove the "A" safety injection pump breaker are
unsuccessful. The breaker is stuck in the racked-in position.

THIS IS A DRILL

CONTROLLER LOCATION: At safety injection pump breaker

EP EXERCISE 09-88
Section 7

CARD NO. 42

CUE (If asked)

TIME: 1010+

MESSAGE FOR: Control Room Operator

MESSAGE: These containment isolation valve status lights are dim:

1-V-538 PRT to gas analyzer

1-V-539 PRT to gas analyzer

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control room

CARD NO. 43

CONTROLLER INSTRUCTION

TIME: 1011

MESSAGE FOR: Controller at Number 1 Pipeway

MESSAGE: Welder's call to control:

1. Call the drill control room on Gai-tronics
2. Deliver the following message:

"This is a drill.

I was welding in the Unit 1 pipeway and one of my bottles blew.

There's a hell-of-a-lot of water coming out of some of the pipes."

3. Hang up.

THIS IS A DRILL

CONTROLLER LOCATION: Gai-tronics near facade elevator El. 6.5'.

1010 -
7.11 1025 - Flooding in the Area of the #1 Pipeway

7.11.1 Plant Conditions

a. Unit 1:

- Hot shutdown
- RCS leak to containment continues (leak rate > capacity of charging pumps)
- "A" SI pump has failed
- "B" SI pump is pumping BAST and RWST water to the #1 pipeway through a broken SI pipe
- Charging line is breached at 1-HCV-142 adding to the leakage into the #1 pipeway.
- Because RCS pressure is greater than SI accumulator pressure, no injection occurs. The leak rate is greater than available pump capacity and a Site Emergency declaration is warranted.

b. Unit 2:

- Steady state
- 100% power

7.11.2 Meteorological Status

- a. Wind Speed = 8 mph to 9 mph
- b. Wind Direction = 457° to 470°
- c. Sigma Theta = 11° to 3°
- d. Delta T/35 meters = -.4°F to -.2°F

7.11.3 Radiological Status

a. Alarming release path monitors:

- 1RE-211 Containment Air Particulate (1010 hours)
- 1RE-212 Containment Noble Gas (1010 hours)
- RE-214 Auxiliary Building Vent (1017 - 1048)

b. Alarming area-type monitors:

- 1RE-102 Containment Low Range (1017 hours)
- 1RE-104 Charging Pump Area Low Range (1015 hours)
- 1RE-107 Seal Table (1025 hours)

- c. Projected offsite whole body dose rate (downwind centerline)

RMS Projection

1 Mile 2.3E-06 Rem/Hr

- d. Projected offsite thyroid dose rate (downwind centerline)

RMS Projection

1 Mile 4.6E-06 Rem/Hr

7.11.4 Emergency Action Level

- a. Per conditions: Site Emergency, Category 1, "Leak Rate Greater Than Available Pump Capacity"
- b. Declared: Alert, Category 10, "Failure of Reactor Protection System to Complete a Trip"

7.11.5 Controller Actions/Emergency Organization Response

- a. Upon discovering that the SI line is broken and no injection to the primary system is occurring, the operators should secure the operating pump. The conditions in the auxiliary building will depend on how quickly the operators react. At 1013, the SI pump suction will shift from the BAST to the RWST.
- b. If the operators fail to shut the suction valves to the "B" SI pump, the BAST (if not isolated) or RWST (if lined up to the SI pumps) will continue to leak water through the idle pump to the break. Therefore, the controller at the scene will need to coordinate conditions there with the actions taken by control room operators.
- c. TSC personnel should evaluate the emergency conditions and commence EPIP 1.1.
- d. Because of the location of the break and damage to the SI pump discharge crossconnect valves (1-829A & B), SI trains will not be able to be crossconnected.
- e. The EOF may be activated by this time with headquarters support personnel.
- f. The TSC and/or EOF will be evaluating the release to determine if any protective action recommendations are necessary.

7.11.5 Controller Actions/Emergency Organization
Response (Continued)

- g. TSC and control room staff will be evaluating the RCS leak rate and trying to determine ways to stop or reduce it.
- h. TSC, Maintenance and Operations personnel will be evaluating ways to get water into the primary system. This may include ways to repair the broken SI pipe or methods to get the "A" SI pump breaker racked out and repaired.
- i. If a Site Emergency is declared, the plant will be evacuated to onsite assembly areas in accordance with EPIP 1.1 or 6.2.
- j. The JPIC may be operational. The first press statement may have been coordinated with DEG and released by this time by corporate headquarters communications department staff.
- k. Card 44 (1010 +), CONTINGENCY

MESSAGE: Coordinate sounding of the evacuation alarm with the control room.

NOTE: Provide this card to the person who will announce the evacuation at the time he reaches that step in EPIP 1.1.

7.11.5 Controller Actions/Emergency Organization
Response (Continued)

l. Card 45 (1010 →), CUE

MESSAGE: Conditions in the auxiliary building in the vicinity of #1 pipeway. (SI <5 min.)

NOTES: Issue this card to players inspecting the scene if SI flow was secured by 1015. Obtain that time from the CR controller.

The information on this card should be provided to any operator, maintenance team, repair team, etc., who is in the vicinity of the #1 pipeway. The conditions depend on how fast the operators secure the "B" SI pump and whether they shut the SI pump suction valves or RWST isolation valves.

Charging water will continue to flow from the break at approximately 120 gpm until 1130 unless secured by operators. The water spraying into the pipeway will prevent an accurate assessment of damage inside. After 1130, charging will be secured; the flow from the pipeway will cease and the water will slowly drain to the sump.

m. Card 46 (1010 - 1130), CUE

MESSAGE: Water is flowing from the pipeway.

NOTE: If operators secure both SI and charging prior to 1130, this is no longer a valid cue. The water that continues to flow after SI has been secured is from a broken charging line valve.

n. Card 47 (1010 →), CONTINGENCY

MESSAGE: Call the Manitowoc County EOC.

NOTE: This card should be given to the site manager if the decision is made to release non-essential personnel offsite and if he doesn't make the call himself. This will enable Manitowoc County to demonstrate an objective of the exercise.

7.11.5 Controller Actions/Emergency Organization
Response (Continued)

o. Card 48 (1011 - 1020), CONTINGENCY

MESSAGE: Scenario assumes SI secure at 1020.

NOTE: Read this card to the DSS any time after he secures the SI pumps during the time period indicated.

p. Card 49 (1011), CUE

MESSAGE: BAST low level alarm (46%)

NOTE: If the SI pump is secured prior to 1013, SI pump suction switchover to the RWST will still occur unless the pump suction valves are shut.

q. Card 50 (1011 +), CUE

MESSAGE: South auxiliary building sump - high alarm

NOTE: This card provides indication that water from the #1 pipeway drains to the sump. Sump pumps are running.

r. Card 51 (1011), CUE (If asked)

MESSAGE: Oil lift pump interlock light is not on. (Reactor coolant pumps will not start.)

NOTE: Adverse conditions in the containment have failed the lift pump pressure switches.

s. Card 52 (1013), CUE

MESSAGE: SI pump suction shifts from BAST to RWST.

NOTE: Read this card at the time indicated.

t. Card 53 (1015), CUE

MESSAGE: 1RE-104 alert alarm

7.11.5 Controller Actions/Emergency Organization
Response (Continued)

u. Card 54 (1015 - 1130), CUE

MESSAGE: Conditions in the auxiliary building in the vicinity of #1 pipeway (SI >5 min.)

NOTE: Issue this card to players inspecting the scene if SI flow was secured after 1015. Obtain that time from the CR controller.

The information on this card should be provided to any operator, maintenance team, repair team, etc., who is in the vicinity of the #1 pipeway. The conditions depend on how fast the operators secure the "B" SI pump and whether they shut the SI pump suction valves or RWST isolation valves.

Charging water will continue to flow from the break at approximately 120 gpm until 1130 unless secured by operators. The water spraying into the pipeway will prevent an accurate assessment of damage inside. After 1130, charging will be secured; the flow from the pipeway will cease and the water will slowly drain to the sump.

v. Card 55 (1015 - 1130), CONTINGENCY

MESSAGE: Scenario assumes charging is secured at 1130 hours.

NOTE: Issue this card at 1130 or any time prior to 1130 that operators secure charging flow.

w. Card 56 (1016), CUE

MESSAGE: RWST 98% level alert

x. Card 57 (1017), CUE

MESSAGE: 1RE-102 Alarm
RE-214 Alarm

7.11.5 Controller Actions/Emergency Organization
Response (Continued)

y. Card 58 (1021 - 1130), CUE

MESSAGE: Water is streaming from 1-HCV-142 charging line valve stem.

NOTE: This cue should be issued to any team entering the pipeway to determine damage and source of additional water.

z. Card 59 (1025), CUE

MESSAGE: 1RE-107 Alarm

aa. Card 60 (1030 →), CUE

MESSAGE: Because of the drought I have no stored feed.

NOTE: Issue this card after and only if sheltering of dairy herds is ordered. An evacuee to the reception center can issue this cue to personnel doing registration and screening. Persist in obtaining assistance.

bb. Card 61 (1030), CONTROLLER INSTRUCTION

NOTE: Designate 6-8 WE personnel to role play offsite public and to go to Roncalli High School for registration and screening. The controller at the EOC will have to communicate with the PBNP controller regarding the actual public evacuation time.

cc. Card 62 (1030 →), CUE

MESSAGE: Siren failure

NOTES: Issue card to person polling Manitowoc County sirens after the first sounding. Resync/alert/poll results in status 48, "Run Vfy" for siren MKC. Siren MCA continues "No response to poll."

dd. Card 63 (1030 →), CUE

MESSAGE: Team members have contaminated PCs.

NOTE: Provide the information to team members from pipeway #1 when they frisk their clothing when returning from the area of #1 pipeway.

7.11.5 Controller Actions/Emergency Organization
Response (Continued)

ee. Card 64 (1030 +), CUE

MESSAGE: Person confined to a wheel chair in the
evacuated area needs ride to Roncalli High
School.

NOTE: Issue this card within 30 minutes of the
EBS evacuation order.

ff. Card 65 (1040), CUE

MESSAGE: Waste disposal alarm - C01

gg. Card 66 (1040), CUE

MESSAGE: C59 waste holdup tank alarm

NOTE: This card should be given to the PAB
AO if he goes to the C59 panel.

hh. Card 67 (1045 +), CUE

MESSAGE: Superintendent of Mishicot schools calls
EOC about protective actions.

NOTE: This card should be issued anytime after
Manitowoc County has paged schools
regarding an ALERT or SITE EMERGENCY
classification.

ii. Card 68 (1048), CUE

MESSAGE: RE-214 alarm clears

jj. Card 69 (1100), CONTINGENCY

MESSAGE: Assure members of the emergency organization
are provided with lunch and a beverage.

NOTE: This contingency should be issued if the
administrative supervisor has not begun
preparation for food, etc. for emergency
workers.

7.11.6 Offsite Agency Response

Offsite agencies will receive and verify the notification
of the Site Emergency.

EP EXERCISE 09-88
Section 7

CARD NO. 44

CONTINGENCY

TIME: 1010 +

MESSAGE FOR: Control Room and Drill Control Room

MESSAGE: Coordinate sounding of the evacuation alarm with the control room.

Using Gai-tronics make the announcements from the drill control room.

THIS IS A DRILL

CONTROLLERS LOCATIONS: Drill Control Room

Real Control Room

CARD NO. 45

CUE

TIME: 1010 →

MESSAGE FOR: Any person investigating the damage near #1 pipeway.

MESSAGE: Conditions in the auxiliary building in the vicinity of #1 pipeway for personnel arriving:

1-4 Minutes After Break

Water is rapidly flowing from valve gallery cubicle surrounding #1 pipeway into the 8' fan room. There appears to be vapor rising from the liquid surface. Edge of the water extends from the door from fan room to U1 facade to just inside the charging pump room.

4-6 minutes after break

Water is rapidly flowing from the valve gallery cubicle surrounding #1 pipeway into the 8' fan room. The floor of the fan room is almost completely covered with liquid and extends to "A" charging pump cubicle. The area monitor near the charging pumps is alarming (if after 1015) and reads 15 mRem/hr.

>6 minutes after break

Charging water will continue to flow from the break at approximately 120 gpm until 1130 unless secured by operators. The water spraying into the pipeway will prevent an accurate assessment of damage inside. After charging is secured, the flow from the pipeway will cease and the water will slowly drain to the sump.

THIS IS A DRILL

CONTROLLER LOCATION: El. 2' PAB near Pipeway #1

EP EXERCISE 09-88
Section 7

CARD NO. 46

CUE

TIME: 1010 - 1130

MESSAGE FOR: Damage Assessment Teams in the Area #1 Pipeway

MESSAGE: Water continues to flow from the pipeway.

THIS IS A DRILL

CONTROLLER LOCATION: With any #1 Pipeway Team.

EP EXERCISE 09-88
Section 7

CARD NO. 47

CONTINGENCY

TIME: 1010 →

MESSAGE FOR: Site Manager

MESSAGE: "Call the Manitowoc County EOC.

Discuss with the Director of Emergency Government the upcoming
release from site of unnecessary plant personnel."

THIS IS A DRILL

CONTROLLER LOCATION: TSC

EP EXERCISE 09-88
Section 7

CARD NO. 48

CONTINGENCY

TIME: 1011 - 1020

MESSAGE FOR: DSS

MESSAGE: Your decision to secure the SI pumps was appropriate. However,
the scenario data assumes that SI would be terminated at 1020 hours.
Scenario data will follow that assumption.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 49

CUE

TIME: 1011

MESSAGE FOR: Control Room Operator

MESSAGE: "BAST low level" alarm (46%)

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 50

CUE

TIME: 1011 →

MESSAGE FOR: Control Room

MESSAGE: South auxiliary building sump - high alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 51

CUE (If asked)

TIME: 1011 →

MESSAGE FOR: Control Room

MESSAGE: Oil lift pump, interlock light is not on.
(Reactor coolant pumps will not start.)

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 52

CUE

TIME: 1013

MESSAGE FOR: Drill Control Room

MESSAGE: SI pump suction has just shifted from the BAST to the RWST.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

WARD NO. 53

CUE

TIME: 1015

MESSAGE FOR: Control Room & TSC RMS Operators

MESSAGE:

1RE-104 Alert Alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room and TSC

CARD NO. 54

CUE

TIME: 1015 - 1130

MESSAGE FOR: Any person investigating the damage near #1 pipeway

MESSAGE: Conditions in the auxiliary building in the vicinity of #1 pipeway.

SI Secured (when told or after 1020)

Water continues to flow from the valve gallery cubicle surrounding #1 pipeway, but not as rapidly. There is standing water in the fan room and charging pump room. It appears the drains are not adequately handling the water. Area monitor is alarming near the charging pumps. Still can't see the break origin in the pipeway.

SI Running (until 1020)

Water still rapidly flowing from valve gallery cubicle around #1 pipeway. Floor drains are not handling the water in the fan room and charging pump room. A small amount of liquid has leaked into the facade through the fan room door. The outer edge of the water is nearing the SI pump room. Charging pump area monitor is alarming.

Charging Secured (when told or after 1130)

Charging water will continue to flow from the break at approximately 120 gpm until 1130 unless secured by operators. The water spraying into the pipeway will prevent an accurate assessment of damage inside. After 1130, charging will be secured; the flow from the pipeway will cease and the water will slowly drain to the sump. Within an hour after charging is secured water levels on the floor will have been reduced to a film, with puddles in low spots and around drains. Some boric acid crystals will begin to form around puddle edges and drains.

THIS IS A DRILL

CONTROLLER LOCATION: El. 8¹ PAB near Pipeway #1

EP EXERCISE 09-88
Section 7

CARD NO. 55

CONTINGENCY

TIME: 1015 - 1130

MESSAGE FOR: DSS

MESSAGE: Your decision to secure charging flow is appropriate. Scenario data, however, assumes that charging flow is secured at 1130 hours. Remaining scenario data will follow that assumption.

THIS IS A DRILL.

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 56

CUE

TIME: 1016

MESSAG. FOR: Control Room

MESSAGE:

"RWST low level" alert.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 57

CUE

TIME: 1017

MESSAGE FOR: Control Room & TSC

MESSAGE: Radiation Alarms

1RE-102 Alarm

RE-214 Alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room and TSC

EP EXERCISE 09-88
Section 7

CARD NO. 58

CUE

TIME: 1021 - 1130

MESSAGE FOR: Damage Assessment Teams Entering #1 Pipeway

MESSAGE: The AOV (1-HCV-142) on the charging line is damaged and water
is streaming from the area of the valve stem.

THIS IS A DRILL

CONTROLLER LOCATION: Pipeway #1

EP EXERCISE 09-88
Section 7

CARD NO. 59

CUE

TIME: 1025

MESSAGE FOR: Control Room & TSC

MESSAGE: Radiation Alarms

1RE-107 Alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room and TSC

EP EXERCISE 09-88
Section 7

CARD NO. 60

CUE

TIME: 1030 →

MESSAGE FOR: County Ag

MESSAGE: Because of the drought I have no stored feed. I have
sheltered my herd. Can you get some feed?

Address: Tannery Road
1/2 mile south of Tapawingo Rd

THIS IS A DRILL

CONTROLLER LOCATION: Roncalli High School

EP EXERCISE 09-88
Section 7

CARD NO. 61

CONTROLLER INSTRUCTION

TIME: 1030 →

MESSAGE FOR: Controllers (6-8)

MESSAGE: An offsite evacuation has been ordered. Drive in your personal vehicles to Roncalli High School for registration. Role play members of the general public from the evacuated zone.

THIS IS A DRILL

CONTROLLER LOCATION: PBNP/EOC

CARD NO. 62

CUE

TIME: 1030 →

MESSAGE FOR: Person Polling Siren System

MESSAGE: Siren failure

"This is a drill.

Upon polling the sirens you discovered that siren MKC
responded status 20 "sync_error." Siren MCA shows
"No response to poll."

THIS IS A DRILL

CONTROLLER LOCATION: Manitowoc EOC

EP EXERCISE 09-88
Section 7

CARD NO. 63

CUE

TIME: 1030 →

MESSAGE FOR: Pipeway 1 Team

MESSAGE: Team members have all contaminated PCs.

Upon frisking protective clothing you find that pant legs generally are reading from 1,000 to 10,000 cpm above background.

THIS IS A DRILL

CONTROLLER LOCATION: With #1 Pipeway Team

EP EXERCISE 09-88
Section 7

CARD NO. 64

CUE

TIME: 1030 +

MESSAGE FOR: Manitowoc EOC (683-4207)

MESSAGE: This is a drill.

I live at 1215 Nuclear Road and am confined to a wheelchair.

I need a ride to the evacuation center.

THIS IS A DRILL

CONTROLLER LOCATION: Nuclear Road/EOC

EP EXERCISE 09-88
Section 7

CARD NO. 65

CUE

TIME: 1040

MESSAGE FOR: Control Room Operator

MESSAGE: "Waste Disposal Alarm" C01

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 66

CUE

TIME: 1040

MESSAGE FOR: PAB Auxiliary Operator

MESSAGE: C59 - "Waste holdup tank alarm"

Level is 14% and increasing

THIS IS A DRILL

CONTROLLER LOCATION: Auxiliary building with auxiliary operator

EP EXERCISE 09-88
Section 7

CARD NO. 67

CUE

TIME: 1045 +

MESSAGE FOR: Sheriff Dispatch 683-4200 or EG office 683-4207

MESSAGE: Superintendent of Mishicot schools calls EOC about protective actions.

"This is a drill.

"This is _____, Superintendent of Mishicot
schools confirming announcement of _____ event at
the Point Beach Nuclear Plant. At this time what protective
actions should be taken for school children in Mishicot?

THIS IS A DRILL

CONTROLLER LOCATION: Manitowoc EOC

EP EXERCISE 09-88
Section 7

CARD NO. 68

CUE

TIME: 1048

MESSAGE FOR: Control Room & TSC

MESSAGE:

RE-214 alarm clears

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room and TSC

EP EXERCISE 09-88
Section 7

CARD NO. 69

CONTINGENCY

TIME: 1100

MESSAGE FOR: Tech Support Manager

MESSAGE: Assure that the administrative supervisor has made provisions to supply food and beverages to exercise players during the lunch period. Previous arrangements for food during the exercise have not been made.

THIS IS A DRILL

CONTROLLER LOCATION: TSC

7.12 1107 - Core Uncovery Occurs

7.12.1 Plant Conditions

a. Unit 1:

- Hot shutdown
- RCS leaking to containment through the PORV and a recently developed steam space leak
- Core uncovery occurs prior to SI accumulator injection causing a fission product release to the RCS and containment equivalent to the gap activity in one fuel assembly.

b. Unit 2:

- Steady state
- 100% power

7.12.2 Meteorological Status

- a. Wind Speed = 13 mph
- b. Wind Direction = 470°
- c. Sigma Delta = -0.1
- d. Delta T/35 meters = -.3°F

7.12.3 Radiological Status

a. Alarming release path monitors - None

1RE-211 Containment Air Particulate
1RE-212 Containment Noble Gas

b. Alarming area-type monitors

1RE-102 Containment Low Range
1RE-104 Charging Pump Area Low Range
1RE-107 Seal Table
1RM-126 Containment High Range (1108)
1RM-127 Containment High Range (1108)
1RM-128 Containment High Range (1108)

- c. Projected offsite whole body dose rate (downwind centerline)
(Assumes GAP source term, one assembly damaged)

MAD Projection

1 Mile	2.39E-04 Rem/Hr
2 Miles	9.80E-05 Rem/Hr
5 Miles	3.10E-05 Rem/Hr
10 Miles	1.36E-05 Rem/Hr

- d. Projected offsite thyroid dose rate (downwind centerline)
(Assumes GAP source term, one assembly damaged)

MAD Projection

1 Mile	1.38E-03 Rem/Hr
2 Miles	5.65E-04 Rem/Hr
5 Miles	1.79E-04 Rem/Hr
10 Miles	7.86E-05 Rem/Hr

7.12.4 Emergency Action Level

- a. Per conditions: General Emergency, Category 1, "Loss of primary system integrity and containment integrity with potential for fuel damage."
b. Declared: Site Emergency, Category 1, "Leak rate in excess of available pump capacity."

7.12.5 Controller Actions/Emergency Organization Response

- a. The emergency staff will see an increase in radiation levels in containment. The TSC personnel should initiate EPIP 1.1 to reevaluate the emergency classification. If not already done, they may classify the event as a general emergency based upon Category 1. Primary system leakage is ~1000 gpm, several containment isolation lights are dim, and core exit thermocouples have momentarily been >700°F.
b. Upon classification of the event as a General Emergency, TSC personnel will commence onsite and offsite notification procedures.
c. If not already done, a plant evacuation will be conducted.
d. Also, because of the General Emergency classification, automatic PARs will be made to offsite agencies: Shelter all sectors 0-2 miles and in the 5 downwind sectors from 2-5 miles.
e. Offsite monitoring teams, if not already out, will be dispatched.

7.12.5 Controller Actions/Emergency Organization
Response (Continued)

f. Card 70 (1107), CONTINGENCY

MESSAGE: Do not evacuate the EOF.

NOTE: If for any reason the emergency support manager decides to evacuate the EOF give him this card.

g. Card 71 (1108 +), CUE

MESSAGE: Containment high range monitors alarm

NOTE: The card should be read to control room personnel. Values are available on PPCS.

h. Card 72 (1108 +), CONTINGENCY

MESSAGE: 1RE-109 and 1RE-106 alarm for PASS

NOTE: Provide this cue to control room personnel and TSC RMS operators if containment isolation is breached to obtain RCS and containment atmosphere samples.

7.12.6 Offsite Agency Response

- a. The offsite agencies will receive and verify the notification call for the General Emergency declaration.
- b. Evaluate the protective action recommendations made by WE.
- c. If PARs are to be made to the public, the sirens will be activated (growled) and an EBS message broadcast (EBS tested).
- d. Information will be released to the public by agency PIOs at the JPIC.

EP EXERCISE 09-88
Section 7

CARD NO. 70

CONTINGENCY

TIME: 1107 ~

MESSAGE FOR: ESM

MESSAGE: Do not evacuate the EOF.

The decision to evacuate the EOF may be appropriate, however, for the purpose of this drill do not evacuate. Evacuation to the AEOF is not an exercise objective.

THIS IS A DRILL

CONTROLLER LOCATION: EOF

EP EXERCISE 09-88
Section 7

CARD NO. 71

CUE

TIME: 1108 +

MESSAGE FOR: Control Room Personnel

MESSAGE: Radiation Alarms

RM-126

RM-127

RM-128

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room and TSC

EP EXERCISE 09-88
Section 7

CARD NO. 72

CONTINGENCY

TIME: 1108 +

MESSAGE FOR: Control Room and TSC RMS Operator

MESSAGE: "RE-109 and RE-106" alarm.

Data on the RMS and PPCS for these two monitors is no longer valid.

THIS IS A DRILL

CONTROLLER LOCATION: Control Room and TSC

7.13 1113 - SI Accumulator Injection

7.13.1 Plant Conditions

a. Unit 1:

- RCS leaking to containment via the PORV and pressurizer steam space leak.
- Accumulator injection covered the core as RCS pressure dropped below 700#.
- Core temperature <700°F.

b. Unit 2:

- Steady state
- 100% power

7.13.2 Meteorological Status

- a. Wind Speed = 13 mph
- b. Wind Direction = 470°
- c. Sigma Theta = -6°
- d. Delta T/35 meters = -.3°F

7.13.3 Radiological Status

a. Alarming release path monitors

IRE-211 Containment Air Particulate
IRE-212 Containment Noble Gas

b. Alarming area-type monitors

IRE-102 Containment Low Range
IRE-104 Charging Pump Area Low Range (clear at
1420 hours)
IRE-107 Seal Table
IRM-126 Containment High Range
IRM-127 Containment High Range
IRM-128 Containment High Range

- c. Projected offsite whole body dose rate (downwind centerline)
(Assumes GAP source term, one assembly damaged)

MAD Projector

1 Mile	2.39E-04 Rem/Hr
2 Miles	9.80E-05 Rem/Hr
5 Miles	3.10E-05 Rem/Hr
10 Miles	1.36E-05 Rem/Hr

- d. Projected offsite thyroid dose rate (downwind centerline)
(Assumes GAP source term, one assembly damaged)

MAD Projection

1 Mile	1.38E-03 Rem/Hr
2 Miles	5.65E-04 Rem/Hr
5 Miles	1.79E-04 Rem/Hr
10 Miles	7.86E-05 Rem/Hr

7.13.4 Emergency Action Level

- a. Per conditions: General Emergency, Category 1, "Loss of primary system integrity and containment integrity with potential for fuel damage."
b. Declared: Site Emergency, Category 1, "Leak rate in excess of available pump capacity."

7.13.5 Controller Actions/Emergency Organization Response

- a. TSC personnel may request a post accident sample to evaluate the extent of fuel damage.
b. During this time, maintenance and operations personnel will be evaluating methods to restore SI. This should include replacing the faulty "A" SI pump breaker with either the "B" pump breaker, Unit 2 SI pump breaker or the heater drain tank pump breaker.
c. Card 73 (1113), CUE
MESSAGE: Accumulator alarms
NOTE: This indicates to the operator that the accumulators have discharged.
d. Card 74 (1140), CUE
MESSAGE: The 22nd Street drawbridge in Two Rivers is stuck in the open position.

7.13.5 Controller Actions/Emergency Organization
Response (Continued)

e. Card 75 (1205), CONTINGENCY

MESSAGE: Declare a General Emergency.

NOTE: This card should be given to the POM if TSC personnel have decided not to declare a GE or if they have not reevaluated plant conditions since core uncover occurred. The POM should be instructed to implement EPIP 1.1.

f. Card 76 (~1220), CONTINGENCY

MESSAGE: Move traffic control points

NOTE: If PARs impact an area less than 10 miles distant from the plant, the controller should issue this cue selecting a distance just outside the evacuation zone.

g. Card 77 (1225), CONTINGENCY

MESSAGE: Conduct a plant evacuation.

NOTES: Issue this card if the plant has not been evacuated and discussion of doing so is not in progress.

h. Card 78 (1230), CONTINGENCY

MESSAGE: Demonstrate the ability to distribute KI to emergency workers (Manitowoc County)

NOTE: This card should be issued immediately after any decision not to distribute KI.

7.13.5 Controller Actions/Emergency Organization
Response (Continued)

i. Card 79 (1245), CONTINGENCY

MESSAGE: Escalated PARs with evacuation are
required for Manitowoc County.

NOTES: This card is necessary to ensure that
Manitowoc County gets an opportunity to
demonstrate objectives related to public
evacuation. This card should be provided
to the ESM if protective action
recommendations do not include evacuation.

7.13.6 Offsite Agency Response

- a. Offsite agencies will continue to receive notification
calls and evaluate WE's PARs.
- b. State of Wisconsin field monitoring teams will be
dispatched.
- c. Manitowoc and Kewaunee counties will man EPZ traffic
control points.

EP EXERCISE 09-88
Section 7

CARD NO. 73

CUE

TIME: 1113

MESSAGE FOR: Control Room

MESSAGE: C01

"Unit 1 Accumulator "A" Pressure Hi-Lo" alarm

"Unit 1 Accumulator "B" Pressure Hi-Lo" alarm

"Unit 1 Accumulator "A" Level Hi-Lo" alarm

"Unit 1 Accumulator "B" Level Hi-Lo" alarm

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 74

CUE

TIME: 1140

MESSAGE FOR: Sheriff's Dispatch

MESSAGE: This is a drill.

The 22nd Street drawbridge on State Highway 42 in Two Rivers has stuck in the open position. Repairs are likely to take 3-4 hours. You just received this call from the Two Rivers Police Department.

THIS IS A DRILL

CONTROLLER LOCATION: County EOC

EP EXERCISE 09-88
Section 7

CARD NO. 75

CONTINGENCY

TIME: 1205

MESSAGE FOR: POM

MESSAGE: "Declare a General Emergency based on Category 1 abnormal primary
leak rate."

Although you may not agree, this declaration is necessary for
demonstration of certain onsite and offsite objectives.

THIS IS A DRILL

CONTROLLER LOCATION: TSC

EP EXERCISE 09-88
Section 7

CARD NO. 76

CONTINGENCY

TIME: ~1220

MESSAGE FOR: Director of Police Services

MESSAGE: Although you may not agree, for the purposes of this drill, move the traffic control points to just outside _____ miles from the plant.

THIS IS A DRILL

CONTROLLER LOCATION: Manitowoc EOC

EP EXERCISE 09-88
Section 7

CARD NO. 77

CONTINGENCY

TIME: 1225

MESS: POM

MESS: Conduct a plant evacuation.

Although you may not agree, this is necessary to assure demonstration of certain onsite exercise objectives.

THIS IS A DRILL

CONTROLLER LOCATION: TSC

EP EXERCISE 09-88
Section 7

CARD NO. 78

CONTINGENCY

TIME: 1230

MESSAGE FOR: County Board Chairman

MESSAGE: This is a drill.

Although you may not agree, for the purpose of this exercise
demonstrate that KI can be distributed to emergency workers.

THIS IS A DRILL

CONTROLLER LOCATION: Maritowoc EOC

EP EXERCISE 09-88
Section 7

CARD NO. 79

CONTINGENCY

TIME: 1245

MESSAGE FOR: ESM

MESSAGE: Although you may not agree, recommend, at a minimum, evacuation
of all sectors out to 2 miles.

Escalated FARs which include evacuation are required for Manitowoc
County to demonstrate certain exercise objectives.

THIS IS A DRILL

CONTROLLER LOCATION: EOF

7.14 1250 - Simulated House Fire Within the Evacuated EPZ and Other Events

7.14.1 Plant Conditions

- a. Unit 1: NA
- b. Unit 2: NA

7.14.2 Meteorological Status

- a. Wind Speed = 9 mph
- b. Wind Direction = 473°
- c. Sigma Theta = -4°
- d. Delta T/35 meters = -.5°F

7.14.3 Radiological Status

- a. Alarming release path monitors
 - Not germane to this event
- b. Alarming area-type monitors
 - Not germane to this event

7.14.4 Emergency Action Level

- a. Per conditions: General Emergency, Category 1, "Loss of Primary System Integrity and Containment Integrity With Potential for Fuel Damage."
- b. Declared: General Emergency, Category 1, "Loss of Primary System Integrity and Containment Integrity With Potential for Fuel Damage."

7.14.5 Controller Actions/Emergency Organization Response

a. Card 80 (1250), CUE

MESSAGE: House fire at 6511 Nuclear Road

NOTES: The controller at the SBCC should issue this card after the public evacuation has been ordered. Assure that PBK personnel call the Manitowoc Sheriff to report the fire.

The controller at the Manitowoc County EOC should assure that the dispatcher understands that this is a drill. Fire department response need not be simulated.

b. Card 81 (1300), CUE

MESSAGE: PBNP employee attempts to report to the plant via a Manitowoc County roadblock. If you need assistance locating a manned roadblock, call the controller at the EOC.

c. Card 82 (1300), CONTINGENCY

MESSAGE: Send out a repair/reentry/HP/Maintenance team.

NOTE: If a team is not/will not be in the plant at 1325 to allow for an injured man, this card should be given to the Operations support director. The controller will have to keep aware of what activities teams have responded to and then decide which activity the team should be sent out for. Likely repair evolutions include: repairs/replacement of the SI pump breaker in the PAB, 4160 switchgear and Number 1 pipeway inspection/repair/cleanup.

d. Card 83 (1300), CONTROLLER INSTRUCTION

MESSAGE: Materials required for simulating injuries.

NOTE: Make arrangements to have clean clothing available at the TRCH.

7.14.5 Controller Actions/Emergency Organization
Response (Continued)

e. Card 84 (1325+), CUE

MESSAGE: Milk truck within the evacuated area has stalled and is unable to be restarted.

NOTE: Issue after a public evacuation has been ordered. An evacuee to the reception center can issue this cue.

7.14.6 Offsite Agency Response

Manitowoc County EOC will coordinate the fire department response. The response may involve monitoring worker exposure or a decision to allow the building to continue burning.

EP EXERCISE 09-88
Section 7

CARD NO. 80

CUE

TIME: 1250

MESSAGE FOR: Security Guard at SBCC

MESSAGE: This is a drill.

You just noticed that the home at 6511 Nuclear Road has smoke seeping through the roof and attic vents. It appears to be on fire. Report these observations to the emergency support manager.

THIS IS A DRILL

CONTROLLER LOCATION: SBCC and Manitowoc EOC

EP EXERCISE 09-88
Section 7

CARD NO. 81

CUE

TIME: 1300

MESSAGE FOR: Sheriff officer or highway department at roadblock

MESSAGE: This is a drill.

" _____ " is an employee at PBNP and is attempting
to report to the plant. Should we allow him access?"

This is a drill.

THIS IS A DRILL

CONTROLLER LOCATION: At manned roadblock

EP EXERCISE 09-88
Section 7

CARD NO. 82

CONTINGENCY

TIME: 1300

MESSAGE FOR: Operations Support Director

MESSAGE: Send out a team to _____.

Although you may not think it is necessary, this is necessary to demonstrate certain exercise objectives.

THIS IS A DRILL

CONTROLLER LOCATION: Operations Support Center

EP EXERCISE 09-88
Section 7

CARD NO. 83

CONTROLLER INSTRUCTION

TIME: 1300

MESSAGE FOR: Controller playing injured man

MESSAGE: 1. Wear an old T-shirt and swim trunks.

2. Begin applying wound moulage.

Moulage to include: Compound fracture of the lower arm,
head wound, blood for arm fracture.

3. Dress in clothing appropriate for the team. If it is a
controlled side team, wear at a minimum:

Single coveralls
Plastic shoe covers
Surgical cap

THIS IS A DRILL

CONTROLLER LOCATION: OSC/Checkpoint Charlie

CARD NO. 84

CUE

TIME: 1325+

MESSAGE FOR: County Ag

MESSAGE: This is a drill.

I'm a milk hauler for Lake-to-Lake Dairy. I was picking up milk at the Smith farm at Nuclear Road and 42 when the sirens went off. I could not get my truck started. I evacuated with the Smiths. When can I get my truck, what should I do with the milk?

THIS IS A DRILL

CONTROLLER LOCATION: Manitowoc County EOC or Roncalli High School
Reception Center.

7.15 1330 - OSC Team Member is Injured

7.15.1 Plant Conditions

a. Unit 1:

- RCS continues to leak to containment via the PORV and pressurizer steam space leak.

b. Unit 2:

- Steady state
- 100% power

7.15.2 Meteorological Status

- a. Wind Speed = 9 mph
- b. Wind Direction = 464°
- c. Sigma Theta = -12°
- d. Delta T/35 meters = -.7°F

7.15.3 Radiological Status

a. Alarming release path monitors

1RE-211 Containment Air Particulate
1RE-212 Containment Noble Gas

b. Alarming area-type monitors

1RE-102 Containment Low Range
1RE-104 Charging Pump Area Low Range (clear at
1420 hours)
1RE-107 Seal Table
1RM-126 Containment High Range
1RM-127 Containment High Range
1RM-128 Containment High Range

7.15.4 Emergency Action Level

- a. Per conditions: General Emergency, Category 1, "Loss of Primary System Integrity and Containment Integrity With Potential for Fuel Damage."
- b. Declared: General Emergency, Category 1, "Loss of Primary System Integrity and Containment Integrity With Potential for Fuel Damage."

7.15.5 Controller Actions/Emergency Organization Response

- a. One member of an OSC team is injured. The OSC controllers should be coordinating among themselves who is to be injured and where.
- b. EPIP 11.2, "Injured Person's Immediate Care," and EPIP 11.3, "Hospital Assistance" will be implemented by the OSC. The call to "911" should not be simulated.
- c. Card 85 (1330 →), CUE

MESSAGE: Victim's injury

NOTES: Symptoms are as described. Observe for proper first aid treatment and modify symptoms and behavior in response to effective treatment.

A controller may take the place of the victim for the duration of the exercise. The player can depart the exercise and return to his normal work station.

- RESPONSE:
1. Control bleeding of the head and arm. (Direct pressure and pressure point.)
 2. Keep broken bone ends and adjacent joints from moving (splinting, if victim is moved.)
 3. Treat for shock by:
 - keeping the victim laying down
 - the victim should be covered enough to prevent the body from losing heat.
 - fluids should not be administered if medical attention can be obtained within an hour.

7.15.5 Controller Actions/Emergency Organization
Response (Continued)

d. Card 86 (1330 +), CONTINGENCY

MESSAGE: Do not simulate calls related to the
medical emergency

NOTE: If the DSS or Operations support director
or designee decides to simulate these
calls, read this card.

e. Card 87 (1330 +), CONTINGENCY

MESSAGE: Assign drill name to injured man.

NOTE: Issue this cue after the name of the
victim has been determined.

f. Card 88 (1330 +), CONTINGENCY

MESSAGE: Simulate calls to injured man's family.

NOTE: Issue this card when players have
determined that the family of the
injured man should be notified.

g. Card 89 (1330 +), CONTINGENCY

MESSAGE: Vehicle search

NOTE: Issue this card to assure that the
ambulance is actually searched prior to
site entry.

h. Card 90 (1330 +), CONTINGENCY

MESSAGE: Issue dosimetry and necessary PCs to
ambulance personnel.

NOTES: Issue this contingency if it appears
that ambulance personnel are being
granted site access without being
issued dosimetry and appropriate
protective clothing.

7.15.5 Controller Actions/Emergency Organization
Response (Continued)

i. Card 91 (1330 +), CONTINGENCY

MESSAGE: Perform a normal controlled side exit

NOTE: Issue this card to the injured person and rescue team to ensure that the players actually frisk out and log SRD readings. Drill play should be suspended during this evolution.

j. Card 92 (1330 +), CONTROLLER INSTRUCTION

MESSAGE: Victim's condition

NOTE: If the victim is injured on the controlled side. Assume that he is contaminated (~10,000 cpm > background). Two decontamination efforts will remove detectable contamination.

k. Card 93 (1330 +), CONTINGENCY

MESSAGE: Document HP surveys

NOTE: Ensure actual surveys are performed and documented for the following areas:
Ambulance, pathway from ambulance to NFAR and the NFAR.

If necessary, assure that the ambulance is ready for unrestricted release as soon as possible.

l. Card 94 (1420), CUE

MESSAGE: 1RE-104 alarm clears

m. Card 95 (1425), CUE

MESSAGE: "PRT temp hi" alarm clears

n. Card 96 (1430), CONTINGENCY

MESSAGE: Request federal assistance through FEMA.

NOTE: Requesting federal assistance is an objective to be demonstrated by the state; to ensure that it is demonstrated this card should be provided to the State DEG if they have not yet requested federal assistance.

7.15.6 Offsite Agency Response

- a. Manitowoc and Kewaunee Evacuation Reception Centers have been activated.
- b. Protective action decisions for Mishicot school children have been implemented. This may include sheltering, early dismissal or no action.
- c. Congregate care facilities are activated in Manitowoc and Kewaunee Counties.
- d. Upon receipt of the call regarding the injury. The Manitowoc County dispatcher should call for the Mishicot area ambulance service to respond.
- e. Mishicot ambulance service will respond to the plant.
- f. Two Rivers Community Hospital will prepare to receive the injured man. If he is contaminated, the nuclear first aid room will be activated.

CARD NO. 85

CUE

TIME: 1330 →

MESSAGE FOR: Injured man

MESSAGE: You have just become injured.

Your condition is as follows:

1. You are conscious and in considerable pain.
2. You have suffered a laceration of the forehead. The wound is bleeding considerably. Direct pressure is effective in controlling bleeding.
3. You have also suffered a compound fracture of the right lower arm. The wound is bleeding considerably. Direct pressure and use of a pressure point are effective in controlling bleeding. You should resist any attempts by rescuers to move you.
4. Symptoms of shock
 - a. Early - skin is pale, bluish, cold, moist and clammy
 - breathing is irregular
 - you may retch and vomit
 - complain of thirstSymptoms should stabilize if proper treatment is provided
 - b. Late stages - become apathetic and unresponsive
 - you may pass in and out of consciousness

THIS IS A DRILL

CONTROLLER LOCATION: With injured man

EP EXERCISE 09-88
Section 7

CARD NO. 86

CONTINGENCY

TIME: 1330 +

MESSAGE FOR: Operations Support Director

MESSAGE: Do not simulate calls related to the medical emergency. Make all
as directed by the procedure.

THIS IS A DRILL

CONTROLLER LOCATION: OSC

EP EXERCISE 09-88
Section 7

CAPD NO. 87

CONTINGE' Y

TIME: 1330 →

MESSAGE FOR: POM or DSS

MESSAGE: Injured man #1

* Real Name: _____

Drill Name: _____

* Use personnel records for this person.

THIS IS A DRILL

CONTROLLER LOCATION: Control Room or TSC

EP EXERCISE 09-88
Section 7

CARD NO. 88

CONTINGENCY

TIME: 1330 +

MESSAGE FOR: POM/DCS

MESSAGE: Simulate calls to injured man's family.

THIS IS A DRILL

CONTROLLER LOCATION: Control/TSC/JJZ office

EP EXERCISE 09-88
Section 7

CARD NO. 89

CONTINGENCY

TIME: 1330 →

MESSAGE FOR: South Gate Security Guard

MESSAGE: Complete a normal vehicle inspection of the Mishicot Ambulance
as required for entry to the protected area.

THIS IS A DRILL

CONTROLLER LOCATION: South gatehouse

EP EXERCISE 09-88
Section 7

CARD NO. 90

CONTINGENCY

TIME: 1330 +

MESSAGE FOR: South Gate Security

MESSAGE: Issue dosimetry and protective clothing to ambulance personnel
according to your procedure.

If the EMTs are to enter the controlled zone issue packets
containing protective clothing.

THIS IS A DRILL

CONTROLLER LOCATION: South gatehouse

EP EXERCISE 09-88
Section 7

CARD NO. 91

CONTINGENCY

TIME: 1330 +

MESSAGE FOR: Victim and Rescue Team

MESSAGE: Prior to exiting the controlled zone, terminate drill play and
perform a normal controlled side exit, then resume drill play.

THIS IS A DRILL

CONTROLLER LOCATION: With victim.

CARD NO. 92

CONTROLLER INSTRUCTION

TIME: 1330 →

MESSAGE FOR: Responders giving first aid and medical care

- MESSAGE: 1. Use the table below to report the victim's condition throughout the drill.
2. The victim's condition will stabilize if appropriate treatment is provided.

VITAL SIGNS
Assuming No Treatment

	Time of Injury	+ 30 min.	+ 45 min.	+ 90 min.
Pulse	Detectable	Rapid	Difficult to detect at wrist	*
Breathing	Detectable	Rate increased Irregular	Shallow Irregular	
Blood Pressure	150/90	120/80	110/70	Very low
Temperature	Normal	Cool+	Cool+	Cool+
Skin	Flushed	Pale Clammy	Bluish Clammy	Cool Bluish Mottled
Bleeding** (head)	Steady** Draining	Steady** Draining	Steady** Draining	Seeping
Bleeding** (arm)	Flowing**	Flowing**	Flowing**	Seeping
Conscious	Yes	Yes	In and out	No
Pupils	Normal	Normal	Dilated	Widly dilated

*Detectable only at the carotid (neck) or femoral (groin) arteries.

**Bleeding can be controlled by proper treatment.

THIS IS A DRILL

CONTROLLER LOCATION: With victim

EP EXERCISE 09-88
Section 7

CARD NO. 93

CONTINGENCY

TIME: 1330 →

MESSAGE FOR: HP Dispatched to TRCH

MESSAGE: Document HP surveys.

The potential for actual contamination is real. Document actions,
surveys, etc. appropriately.

THIS IS A DRILL

CONTROLLER LOCATION: TRCH/NFAR

EP EXERCISE 09-88
Section 7

CARD NO. 94

CUE

TIME: 1420

MESSAGE FOR: Control Room and TSC

MESSAGE: 1RE-104 Alarm Clears

THIS IS A DRILL.

CONTROLLER LOCATION: Drill Control Room and TSC

EP EXERCISE 09-88
Section 7

CARD NO. 95

CUE

TIME: 1425

MESSAGE FOR: Control Room

MESSAGE: "PRT temperature hi" alarm clears

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-08
Section 7

CARD NO. 96

CONTINGENCY

TIME: 1430

MESSAGE FOR: State of Wisconsin DEG

MESSAGE: Although you may not think it is necessary, request federal assistance through FEMA, in order to demonstrate certain exercise objectives.

THIS IS A DRILL

CONTROLLER LOCATION: State EOC

7.16 1700 - Exercise is Terminated

7.16.1 Plant Conditions

Not germane to this event

7.16.2 Meteorological Status

Not germane to this event

7.16.3 Radiological Status

Not germane to this event

7.16.4 Emergency Action Level

a. Per conditions: General Emergency, Category 1, "Loss of Primary System Integrity and Containment Integrity With Potential for Fuel Damage."

b. Declared: General Emergency, Category 1, "Loss of Primary System Integrity and Containment Integrity With Potential for Fuel Damage."

7.16.5 Controller Actions/Emergency Organization Response

Secure from the exercise, return all facilities to their pre-drill condition.

7.16.6 Offsite Agency Response

Secure from exercise, return all facilities to their pre-drill condition.

7.16.7 Controller Response

a. Card 97 (1500), CONTROLLER INSTRUCTION

MESSAGE: Check with EOCs regarding exercise termination.

b. Card 98 (1700), CONTINGENCY

MESSAGE: Calculate total population exposure

NOTE: This card should be given to the rad/con waste manager if he has not yet calculated total population exposure when it is time to secure.

7.16.7 Controller Response

c. Card 99 (1700), CONTINGENCY

MESSAGE: CR secure from exercise.

d. Card 100 (1700), CONTINGENCY

MESSAGE: TSC/OSC secure from exercise.

e. Card 101 (1700), CONTINGENCY

MESSAGE: EOF secure from exercise.

f. Card 102 (1700), CONTINGENCY

MESSAGE: Announce exercise termination.

g. Card 103 (1700), CONTINGENCY

MESSAGE: JPIC secure from exercise.

NOTE: Ensure that a final news briefing is conducted describing sources of continued information had the event been real.

EP EXERCISE 09-88
Section 7

CARD NO. 97

CONTROLLER INSTRUCTION

TIME: 1500

MESSAGE FOR: Main Controller

MESSAGE: After determining that on-site objectives have been met, check
with controllers at

- Manitowoc EOC
- Kewaunee EOC
- Madison EOC

to determine when they expect to be ready to secure from the drill.

Upon receipt of concurrence from all parties, implement cues with
time 1700 for exercise termination.

THIS IS A DRILL

CONTROLLER LOCATION: TSC

EP EXERCISE 09-88
Section 7

CARD NO. 98

CONTINGENCY

TIME: 1700

MESSAGE FOR: Rad Con Waste Manager

MESSAGE: Calculate the total population exposure. This is required to
demonstrate certain exercise objectives.

THIS IS A DRILL

CONTROLLER LOCATION: EOF

EP EXERCISE 09-88
Section 7

CARD NO. 99

CONTINGENCY

TIME: 1700

MESSAGE FOR: DSS

- MESSAGE:
1. Secure from the exercise when the site manager indicates that information from the control room is no longer required to complete exercise activities.
 2. A player "minicritique" will be held in the TSC following exercise termination. Be sure that control room drill players are represented at that critique.

THIS IS A DRILL

CONTROLLER LOCATION: Drill Control Room

EP EXERCISE 09-88
Section 7

CARD NO. 100

CONTINGENCY

TIME: 1700

MESSAGE FOR: Site Manager

- MESSAGE:
1. The control room will not secure without your permission.
 2. All personnel except those required to communicate with the EOF may secure from the exercise. When the EOF no longer needs information from the TSC, all personnel can secure.
 3. Conduct a "minicritique" with TSC/OSC exercise players. Invite players from the drill control room. Identify strengths, problems and "areas for improvement."
 4. Return all onsite facilities to their pre-drill condition.
 5. A post-drill critique will be conducted in the front conference room at about _____ hours at which time you will summarize the "minicritique."

CONTROLLER LOCATION: TSC

CARD NO. 101

CONTINGENCY

TIME: 1700

MESSAGE FOR: Emergency Support Manager and Offsite Health Physics Director

- MESSAGE:
1. The TSC will not secure without your permission.
 2. All personnel, except those required to communicate with JPIC may secure from the exercise. When the JPIC no longer needs information from the EOF, all personnel may secure.
 3. Notify offsite agencies of drill termination.
 4. Conduct a "minicritique" in your facility. Discuss strengths, problems, and "areas for improvement."
 5. Return the EOF/SBCC to its original, pre-drill condition.
 6. A post-drill critique will be held in the PBNP front conference room at about _____ hours. At that time you can summarize the "minicritique."

CONTROLLER LOCATION: SBCC

EP EXERCISE 09-88
Section 7

CARD NO. 102

CONTINGENCY

TIME: 1700

MESSAGE FOR: Site Manager

MESSAGE: Using Gai-tronics announce

"Attention all personnel,

Attention all personnel

The Emergency Plan exercise has been terminated.

The Emergency Plan exercise has been terminated."

THIS IS A DRILL

CONTROLLER LOCATION: TSC

EP EXERCISE 09-88
Section 7

CARD NO. 103

CONTINGENCY

TIME: 1700

MESSAGE FOR: JPIC Director

- MESSAGE:
1. Begin to secure from the exercise.
 2. A final news briefing should be conducted to discuss sources of followup information and recovery activities if the event had been real and was to continue.
 3. Return the JPIC to its pre-drill condition.
 4. Conduct a "minicritique" with drill players. Develop a list of strengths, problems and "areas for improvement."
 5. A post-drill critique will be conducted in the front conference room at the plant for major drill participants at about hours. You can present the findings of your minicritique at that time.

CONTROLLER LOCATION: JPIC

EP EXERCISE 09-88
Section 8

8.0 PUBLIC INFORMATION

8.0 PUBLIC INFORMATION

- 8.1 Media Calls to the Media Hotline
- 8.2 Calls to the Telephone Group and Operators
- 8.3 Employee Calls to Various Company Locations
- 8.4 Public calls to the JPIC Information Hotline
- 8.5 Public Information Message Cards

POINT BEACH NUCLEAR POWER PLANT

PUBLIC INFORMATION

INTRODUCTION

A significant aspect of emergency response is providing news media and the public with accurate and timely information about the accident. The public's perception and reaction are influenced by the information relayed to them. Certain elements within the exercise will test the Public Information response to ensure Wisconsin Electric Power Company is prepared for an emergency at Point Beach Nuclear Plant (PBNP). The Joint Public Information Center (JPIC), including rumor control will be activated and fully exercised.

Preselected individuals will pose questions to players as concerned citizens, employees, members of the legal and financial communities, government officials, and as members of the media. A name and media outlet (print or electronic) should be used when acting as media. The following pages include questions for callers to test public information activities. Each list of questions is grouped by time in relation to specific events in the Exercise Scenario. Free play by callers is encouraged. Always precede call-in questions with "This is a Drill."

If you are playing a reporter at the JPIC, free play question based on the information given during the briefings are encouraged. Additionally, questions about Wisconsin Electric Power Company, the state or counties, background on PBNP, radiation, protective actions, etc. can be asked.

8.1 Media Calls to the Media Hotline

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH THE STATEMENT "THIS IS A DRILL."

CALL: 221-4444

<u>TIME</u>	<u>QUESTIONS</u>
0730	1. This is Bob Jones, WCUB radio, just checking in regard to Point Beach. Is one unit down for refueling? When is the next refueling? I know this has been one of the nation's most reliable plants--why is that? Let's do some audio for my next news show.
0300	2. Manitowoc Herald-Times calling. What's happening at the Point Beach Nuclear Plant? We have a report of a problem. 3. Is Unit 1 operating? If not, why not? 4. Was the unit shut down automatically? If not, why not? 5. Was the reactor out of control? 6. This is Gene Mueller of WTKI radio, Milwaukee. You're live with Reitman and Mueller and our seven listeners. You're just trying to liven up the dog days of summer, right? There's not an emergency up at Point Beach, is there? Is my family in Sheboygan safe? Give us an update, please. 7. This is the Associated Press in Milwaukee. Our station in Manitowoc tells us there's a problem at Point Beach Nuclear Plant. What can you tell us? Can we send a reporter to the plant? 8. I'm Frank Mills from the Dow Jones News Service--Wall Street Journal. Your stock has been up lately, but this will probably send it tumbling on the market today. You've had a good safety record at Point Beach but was this accident just a matter of time? 9. I'm Kevin Rookie, the intern at WNFL radio in Green Bay. I'm doing the news today and I need a description of how a nuclear plant works and what went wrong. Our listeners are wondering if they should evacuate. 10. This is Paul Hayes of the Milwaukee Journal, on deadline for the early edition. I need a quick quote from an officer about this accident, and some technical detail on what happened. Who can I talk to? Is Sol Burstein there? Bud Fay?

11. This is Tom Luljak of WTMJ-TV. We're sending a copter and crew up to the plant. Where should we land? Who can we talk to up there?
12. WHBY in Appleton calling. Let me talk to Rick Janka please. I need a quick rundown of the accident sequence for our listeners. Let's go live in 5 seconds ... 5, 4, 3, 2, 1: Please tell our listeners just what's happened at Point Beach and what's the current situation.
13. Who's to blame for this accident?
14. Is this going to get worse? When will you know?
15. Has the NRC been notified? What about the state? What's the plant status at this moment? What's the emergency level at the plant?
- 0930 16. CBS, New York, this is Douglas Edwards Jr. How close is the plant to Minneapolis? Lake Superior? Is this going to affect the lakes in Minnesota? What's an ALERT declaration mean?
17. Jerry Taff from WISN, Milwaukee. Can I do a live shot at 5 from outside the plant? How close can I get? We want to talk to someone up there, not in Milwaukee, for our noon news--who should we see? Is it dangerous?
18. WOMET radio, Manitowoc. Are there any emergency centers set up by the county or state or WE? Where are they? Can we check in there? When will there be someone up here to talk to us live? Can we do a quick tape situationer please, I'm rolling tape now ...
19. Once you tripped the reactor, shouldn't everything have just cooled down automatically? What's the problem?
20. At what time were offsite agencies notified?
21. What emergency facilities away from the plant is WE operating?
- 1030 22. Calling for NBC, New York, for our noon network update. Are there indications of radiation where it doesn't belong in the plant?
24. This is INPO (Institute of Nuclear Power Operations) calling for an update on the Point Beach situation. Who can we speak with so we can advise others in the industry of conditions there?
- 1115 25. WISN Radio, Milwaukee. We're live with (insert PI name) of Wisconsin Electric Power Co. who has an update on the situation at the Point Beach Nuclear Plant, where a nuclear accident this morning threatens to spread a radioactive cloud across much of east-central Wisconsin. What's the situation at this moment?

26. What's the emergency classification? (If now a site emergency, what led to that declaration?) (If not, ask for general status.)
27. WCUB, Manitowoc. I've just talked to a plant employee who reports that his brother, working at the plant told him some kind of missile inside the plant has damaged equipment and created holes in containment, which is supposed to keep radioactivity inside. Is that correct? Are there terrorists inside? How did the missile get there?
28. Is radiation escaping from containment? Will you be ordering people to leave the area?
29. Frank Taylor, Ph.d, New York Times Energy reporter here. What's the leak rate of the reactor coolant system at Point Beach? My NRC source says you're not getting safety injection into the coolant system. Why not?
- 1200 30. CUB Radio, Manitowoc. What do you know about evacuation orders or plans? If you can't tell me, who can?
31. This is Joan Miller. I farm just up the road from your plant and I thought I heard some sirens going off. What's happening? Do you work at the plant? My radio is broken so I haven't heard any news.
32. This is WBBM, all-news radio in Chicago. Could you give me a quick 20-second soundbite on the situation at your nuclear plant? OK? Let's go with it.
33. How dangerous is it? How much radiation has escaped?
34. Isn't your plant the same as the Commonwealth plant in Zion, Ill.? Have they been notified of this accident?
35. We've heard reports of a missile penetrating your containment. Have you captured the terrorists? Are they holding hostages? How did they get past your security forces?
36. What protective actions have been initiated for residents?
37. Ray Waiter, WHBY radio, Appleton. I need an answer quickly please--how much radiation are you releasing and how dangerous is it?
38. Is this going to affect power supplies in Appleton? What about your customers elsewhere in Wisconsin and Michigan?

39. Should children be given potassium iodine? Where is it available?
40. What are the requirements for a general emergency being declared? What led to the declaration this morning, exactly? Should it have been declared sooner?
- 1330 41. Paul Joseph, meteorologist for Channel 4 in Milwaukee, calling to ask about fallout. I'm forecasting rain and I suspect that will increase radiation readings on the ground up there. What are your calculations? What do you show for wind speed and direction?
42. This is Carl Carlson of the Wall Street Journal calling from our Chicago bureau. We're putting together tomorrow's paper and wonder if you think you'll have this emergency under control in time for our 4:30 deadline?
43. Your stock is down 12 points in heavy trading today--what's your response to that?
44. What kind of liability problems to you expect growing out of this? What's your insurance coverage?
45. Point Beach and the industry have had problems with steam generator tube corrosion. Is that connected to this accident? Have you figured out yet why the reactor didn't automatically trip?
46. WCUB again, live this time at the scene of the 22nd St. drawbridge in Two Rivers, which has failed in the open position. What are the alternate evacuation routes?
47. This is the Two Creeks fire department dispatcher. I got your number from the radio station reporter and didn't know who else to call. We've got a house fire inside the evacuation zone and need to know whether it's safe to go in there. Is it?
- 1415 48. This is Ted Smith. I'm Tom Brokaw's researcher for the Nightly News. He's putting together tonight's lead story and needs to set up a live remote interview at our NBC affiliate in Milwaukee for 5:30 your time. Who can you have for us?
49. Quincy Dadisman, Milwaukee Sentinel. I've got several questions for my interpretive piece. Who can I talk to?
50. What precipitated the accident? Which systems failed to work properly, and why?

51. Was operator error involved? How much radioactive water was released into containment and how "hot" was it?
52. Why was the gas bottle on the welding rig not secured better?
53. Was containment integrity breached or not? Why did it take so long to startup safety injection?
54. How much of a release was there to the environment?
55. Mark McLaughlin, News 4 medical reporter. I'm at Two Rivers Community Hospital awaiting the injured employee. Who is it and what happened to him? Is he contaminated?
56. What facilities are available to treat people who are contaminated? Are other patients in the hospital at risk? Who can I talk to at the hospital? They don't want to talk to me.
57. WOMT, Manitowoc calling. I understand several of the sirens didn't work. Which ones, and what are you doing (did you do) to notify residents in the areas of any non-working sirens?
58. Once you declare a general emergency, what about the non-essential workers who are still on site? Are they evacuated? How? Aren't their cars contaminated?
59. What's your customer demand today? Where are you getting the electricity if Point Beach is shut down? How much more expensive will it be?
60. When did you recommend evacuation to the state? What took so long?
61. This is Morton Downey. I do a TV talk show and I'd like your Point Beach plant manager to be on with me to discuss the accident. Would tomorrow evening be okay? We'll pay his air fare and expenses to New York City. If he can't do it, perhaps one of your PR people could join us?

8.2 Calls to the Telephone Group and Operators

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH THE STATEMENT "THIS IS A DRILL."

CALL: 221-3333, 221-3700, 221-2345

<u>TIME</u>	<u>QUESTIONS</u>
0900	<ol style="list-style-type: none">1. This is the Wall Street Journal in New York calling about the accident at the Point Beach Nuclear Plant. What can you tell me?2. I'd like to speak to Mr. McNeer about the Point Beach accident. I have friends in that area and I'm worried about them. What's happening? I'm one of your customers.3. I hear there's been an accident at your nuclear plant. Is it safe to send my children outside to play? I live in Appleton.4. I'm a neighbor of the Point Beach Nuclear Plant and I'm scared. How do I get the latest information on the emergency?5. Hello. I'm a Wisconsin Electric stockholder and I'm concerned about my investment. Can someone tell me whether I should sell?6. I understand there's an emergency at the nuclear plant. Can I still pay my bill downtown today or are you closed?7. Will the Point Beach accident affect my supply of electricity? I own a factory in West Bend. Should I shut down?8. I live about 2 miles from Point Beach. Should I evacuate?9. This is WCUB radio in Manitowoc and I'd like to talk to Mr. Fay about the accident at Point Beach.10. This is Paul Hayes of the Milwaukee Journal. Can you tell me what's happening at the nuclear plant? What are you telling customers?
1200	<ol style="list-style-type: none">11. Is there an emergency at the nuclear plant? Are people being evacuated? I have relatives near Manitowoc. Are they safe?12. How dangerous is the accident at Point Beach?13. Please give me information about the nuclear disaster.

14. This is Hal Holmes from WISN radio and you're live on the air with me right now. My listeners want to know if they are at risk because of the Point Beach accident. What can you tell them?
15. This is Dennis Kois of the Communications Department. I'm out of town and can't get through to the department. What's happening?

8.3 Employee Calls to Various Company Locations

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH THE STATEMENT "THIS IS A DRILL."

CALL: 793-1497, 544-7088, 794-1178, 755-2321

TIME

QUESTIONS

1000

1. This is the Milwaukee Journal calling. Do you know anything about what's happening at Point Beach? I can't get through to the Communications Department.
2. I'm a customer who lives in Appleton. Do you know if there has been an accident at Point Beach?
3. WCUB Radio calling. I'm looking for any information about the accident at Point Beach Nuclear Plant. Can you help?
4. I'm calling for the Wall Street Journal. I understand your plant is having some mechanical problems today. Can you give me any details?

EMPLOYEE CALLS, 221-2577, 221-2898, 221-3168, 221-3436

1130

1. Repeat 1-4 above

EMPLOYEE CALLS, 221-3795, 55-7666, 221-3399, 221-2990

1330

1. Repeat 1-4 above

8.4 Public Calls to the JPIC Information Hotline

CAUTION: PRECEDE AND FOLLOW ALL CALLS WITH THE STATEMENT "THIS IS A DRILL."

CALL: 793-5594

TIME QUESTIONS

(Begin when hotline is activated)

- Hour 1
1. I heard something on the radio about an accident at your nuclear plant. What's happening there?
 2. I was planning to go fishing this afternoon. Is it safe?
 3. There is a site emergency at Point Beach? What does that mean?
 4. This is WCUB radio calling. This is the rumor hotline, right? What kinds of rumors are you hearing from people?
 5. I heard some sirens going off. What does that mean?
- Hour 2
6. There's a rumor that some terrorists shot a missile inside the nuclear plant and now radiation is leaking. What's going on?
 7. My wife works at Point Beach. Is she safe?
 8. Should I pick up my children at school? They are in Two Rivers.
 9. I heard on the radio they are evacuating children from school. How do I find out where they've taken them? Is it safe for me to go get them?
 10. This is WTMJ Radio in Milwaukee. You're live on the air and we'd like you to tell our listeners what kinds of rumors are circulating about the accident at Point Beach. Go ahead.
- Hour 3
11. Is it true that several plant employees have been suspended because of failure to respond adequately to the accident?
 12. I heard sirens but don't know what to do. How do I find out?
 13. I live in Mishicot. What should I do?
 14. How much radiation is being released?
 15. I'm a farmer. What about animals? Who'll pay if they're sick?

Hour 4

16. If I think I've been exposed to radiation what do I do?
17. I need to know where the radiation is going and how dangerous it is. What areas are being evacuated?
18. Is there a problem with the draw ridge (22nd St.) in Two Rivers? How will we evacuate? I live on the north side of Two Rivers.
19. I heard a rumor that there's a fire in the area that's been evacuated. Was it caused by radiation? How did it start? How will they fight it if the area is contaminated?
20. Is this like the accident at Chernobyl?

8.5 Public Information Message Cards

E/ EXERCISE 09-88
Section 8

PI CARD #1

Time: 0900

Message for: Vice President, Communications

MESSAGE:

THIS IS A DRILL

You have just received the following telephone call:

"This is your neighbor. There is a fire in your garage. I've called the fire department. No one is home at your place. You'd better get back here quickly."

NOTE: You remain out of the scenario until 10:00, when you return from your home. Do not tell other staff members in advance of your scheduled return. The fire caused minimal damage.

For Controller Use Only

PSB Controller should hand the message to Vice President, Communications.

EP EXERCISE 09-88
Section 8

PI CARD #2

Time: 1000

Message for: PSB Communications Coordinator

MESSAGE:

THIS IS A DRILL

You have just received the following telephone call:

"This is Security in the Annex lobby. There are two television news crews here and they want to interview someone about the situation at Point Beach. What should we tell them?"

NOTE: Deliver your response to the controller.

For Controller Use Only

PSB Controller should hand the message to PSB Communications Coordinator. Coordinator will respond to the controller. Controller should note the response.

PI CARD #3

Time: 1130

Message for: JPIC Assistant Director

MESSAGE:

THIS IS A DRILL

You have just received the following telephone call:

"This is Wayne Peters, issues manager for the Dukakis campaign. We're heading to Milwaukee for a speech tonight and the candidate will be discussing nuclear energy issues. He needs as much timely information about this accident as possible. I'll be in Milwaukee by 1:00 p.m. and will call you for answers to these questions:

1. How serious is the accident?
2. What was the cause?
3. What protective actions have been called for?
4. How long will the unit (plant) be out of service?
5. How is the plant similar to the Seabrook Nuclear Plant?"

For Controller Use Only

PSB Controller should hand the message to JPIC Assistant Director. A followup message will be provided at 1315.

EP EXERCISE 09-88
Section 8

PI CARD #4

Time: 1130

Message for: Public Info Rep assigned to PSB

MESSAGE:

THIS IS A DRILL

You have just received the following telephone call:

Bill Thomas of CBS, Chicago, has requested that WE's CEO be available for an interview at the plant as soon as possible. They want to use it on the network news at 5:30 p.m.

NOTE: The response should be delivered to the PSB controller.

For Controller Use Only

PSB Controller should hand the message to public info rep assigned to PSB.

Note the time and content of the response, which will be made to the controller.

EP EXERCISE 09-88
Section 8

PI CARD #5

Time: 1130

Message for: Information Hotline, 793-5594

MESSAGE:

THIS IS A DAXILL

You have just received the following telephone call:

"Bill Thomas of CBS, Chicago, requests that WE's CEO be available for an interview at the plant as soon as possible. They want to use it on the network news at 5:30 p.m. He will call back within the hour to confirm."

For Controller Use Only

JPIC Controller should hand or telephone the message to the Information Hotline (793-5594) operator.

EP EXERCISE 09-88
Section 8

PI CARD #6

Time: 1200

Message for: Public Affairs Coordinator, Assigned to JPIC

MESSAGE:

THIS IS A DRILL

You have just received the following telephone call:

"Senator Kasten's office calling. We'd like an update and the senator is thinking about flying to Green Bay and going to the plant. We'd like your advice on this and the latest on the accident. I'll be checking back with you in 45 minutes for your response."

For Controller Use Only

JPIC Controller should hand the message to the Public Affairs Coordinator assigned to the JPIC.

EP EXERCISE 09-88
Section 8

PI CARD #7

Time: 1210

For Controller Use Only

JPIC Controller should contact the Information Hotline (793-5594) operator and followup on the 11:30 request for a CBS interview with the CEO. Note the response.

EP EXERCISE 09-88
Section 8

PI CARD #8

Time: 1230

Message for: JPIC Assistant Manager

MESSAGE:

THIS IS A DRILL

The copying machine in the Wisconsin Electric workroom has just failed.

For Controller Use Only

JPIC Controller should hand the message to JPIC Assistant Manager.

EP EXERCISE 09-88
Section 8

PI CARD #9

Time: 1300

For Controller Use Only

JPIC Controller should ask the Public Affairs Coordinator assigned to JPIC for a response for Senator Kasten's office. Note the response. This is a followup of PI card #6.

EP EXERCISE 09-88
Section 8

PI CARD #10

Time: 1315

Message for: JPIC Assistant Director

MESSAGE:

THIS IS A DRILL

This is Wayne Peters again from the Dukakis campaign. I'm in Milwaukee at the Pfister and am ready to take that information related to the accident. Can you fill me in please?

For Controller Use Only

JPIC Controller should call the message to JPIC assistant Director.

The JPIC assistant director should have a response prepared.

EP EXERCISE 09-88
Section 8

PI CARD #11

Time: 1315

Message for: JPIC Assistant Manager

MESSAGE:

THIS IS A DRILL

The copying machine in the Wisconsin Electric workroom has been repaired.

For Controller Use Only

JPIC Controller should hand the message to JPIC Assistant Manager.

9.1 Plant Parameters - Digital

9.1.1 Plant parameters display (control room)

9.1.2 Plant process computer (SPDS)

PLANT PARAMETER DISPLAY

THE DATA WHICH FOLLOWS REPRESENTS DATA AVAILABLE ON CONTROL ROOM INSTRUMENTATION. IT WILL BE DISPLAYED TO CONTROL ROOM PLAYERS ON COMPUTER MONITORS AS SHOWN BELOW.

		15:10:56	07-26-1988		
IBM PLANT PARAMETER DISPLAY					
SUBCOOLING	DEG F	45.6	RV LEVEL NR	FEET	27.8
			RV LEVEL NR	FEET	29.7
N11 SOURCE RANGE		1547.4	PRR LEVEL	%	120.0
N12 SOURCE RANGE		1547.4	RC SYSTEM PRESSURE A	PSIG	120.0
N13 INTERM RANGE		1548-12	RC SYSTEM PRESSURE B	PSIG	120.0
N14 INTERM RANGE		1548-12	PRR PRESSURE	PSIG	102.1
N41 POWER RANGE %		0.0	PRESSURIZER RELIEF TANK		
T AVERAGE	DEG F	169.2	TEMPERATURE	DEG F	104.0
T HOT LOOP A	DEG F	169.2	LEVEL	%	100.0
T HOT LOOP B	DEG F	169.2	PRESSURE	PSIG	22.3
T COLD LOOP A	DEG F	169.2	LINE TEMP	DEG F	259.7
T COLD LOOP B	DEG F	169.2			
AVERAGE INCORE TO	DEG F	120.0	LETDOWN	GPM	0.0
HOTTEST INCORE TO	DEG F	120.0	CHARGING	GPM	0.0
INCORE T (E10)	DEG F	120.0	VOT LEVEL	%	50.2
INCORE T (E06)	DEG F	120.0			
INCORE T (J03)	DEG F	120.0			
INCORE T (J09)	DEG F	120.0			
INCORE T (C08)	DEG F	120.0			
INCORE T (D05)	DEG F	120.0			

		15:11:15	07-26-1988		
IBM PLANT PARAMETER DISPLAY					
'A' STEAM GENERATOR			A ACCUMULATOR LEVEL %		0.0
LEVEL NR %		1.1	A ACCUMULATOR PRESS	PSIG	12.1
LEVEL NR IN		181.1	B ACCUMULATOR LEVEL %		0.0
STM FLOW PPM E+04		0.00	B ACCUMULATOR PRESS	PSIG	12.1
FD FLOW PPM E+04		0.00	RNST LEVEL %		16.1
PRESSURE	PSIG	4.8	RNR		
AUX FEED FLOW	GPM	200.0	PUMP A DISCH PRESS	PSIG	147.7
			PUMP A FLOW	GPM	200.0
OST LEVEL FT		9.1	KX A OUTLET TEMP	DEG F	27.0
'B' STEAM GENERATOR			PUMP B DISCH PRESS	PSIG	147.7
LEVEL NR %		1.1	PUMP B FLOW	GPM	200.0
LEVEL NR IN		181.1	KX B OUTLET TEMP	DEG F	27.0
STM FLOW PPM E+04		0.00	HP SI		
FD FLOW PPM E+04		0.00	PUMP A PRESS	PSIG	0.0
PRESSURE	PSIG	4.8	PUMP A FLOW	GPM	0.0
AUX FEED FLOW	GPM	0.0	PUMP B PRESS	PSIG	0.0
CONTAINMENT			PUMP B FLOW	GPM	0.0
PRESSURE	PSIG	0.5			
TEMP	DEG F	106.5	01-803 480 VOLT BUSES		480.0
HUMIDITY %		60.9	01-804 480 VOLT BUSES		480.0
RADIATION K.R. R/HT		420.9	02-803 480 VOLT BUSES		480.0
SUMP % FT		4.8	02-804 480 VOLT BUSES		480.0

0	SUBCOOLING	DEG F
1	N31 SOURCE RANGE	
2	N32 SOURCE RANGE	
3	N35 INTERM RANGE	
4	N36 INTERM RANGE	
5	N41 POWER RANGE %	
6	T AVERAGE	DEG F
7	T HOT LOOP A	DEG F
8	T HOT LOOP B	DEG F
9	T COLD LOOP A	DEG F
10	T COLD LOOP B	DEG F
11	AVERAGE INCORE TC	DEG F
12	HOTTEST INCORE TC	DEG F
13	INCORE T(E10)	DEG F
14	INCORE T(E06)	DEG F
15	INCORE T(J03)	DEG F
16	INCORE T(J09)	DEG F
17	INCORE T(C08)	DEG F
18	INCORE T(D05)	DEG F
19	RV LEVEL NR	FEET
20	RV LEVEL WR	FEET
21	PRZR LEVEL	%
22	RC SYSTEM PRESSURE A	PSIG
23	RC SYSTEM PRESSURE B	PSIG
24	PRZR PRESSURE	PSIG
25	PRESSURIZER RELIEF TANK	
26	TEMPERATURE	DEG F
27	LEVEL	%
28	PRESSURE	PSIG
29	LINE TEMP	DEG F
30	LETDOWN	GPM
31	CHARGING	GPM
32	VCT LEVEL	%
33	'A' STEAM GENERATOR	
34	LEVEL NR	%
35	LEVEL WR	IN
36	STM FLOW	PPH E+06
37	FD FLOW	PPH E+06
38	PRESSURE	PSIG
39	AUX FEED FLOW	GPM
40	CST LEVEL	FT
41	'B' STEAM GENERATOR	
42	LEVEL NR	%
43	LEVEL WR	IN
44	STM FLOW	PPH E+06
45	FD FLOW	PPH E+06
46	PRESSURE	PSIG
47	AUX FEED FLOW	GPM
48	CONTAINMENT	
49	PRESSURE	PSIG
50	TEMP	DEG F

51 HUMIDITY %
52 RADIATION H.R. R/hr
53 SUMP B FT
54 A ACCUMULATOR LEVEL %
55 A ACCUMULATOR PRESS PSIG
56 B ACCUMULATOR LEVEL %
57 B ACCUMULATOR PRESS PSIG
58 RWST LEVEL %
59 RHR
60 PUMP A DISCH PRESS PSIG
61 PUMP A FLOW GPM
62 HX A OUTLET TEMP DEG F
63 PUMP B DISCH PRESS PSIG
64 PUMP B FLOW GPM
65 HX B OUTLET TEMP DEG F
66 HP SI
67 PUMP A PRESS PSIG
68 PUMP A FLOW GPM
69 PUMP B PRESS PSIG
70 PUMP B FLOW GPM
71 U1-BO3 480 VOLT BUSES
72 U1-BO4 480 VOLT BUSES
73 U2-BO3 480 VOLT BUSES
74 U2-BO4 480 VOLT BUSES

0 SUBCOOLING		DEG F
660	5:30: 0	3.60E+01
920	7:40: 0	3.60E+01
921	7:40:30	5.10E+01
924	7:42: 0	5.20E+01
928	7:44: 0	6.90E+01
1118	9:19: 0	8.60E+01
1119	9:19:30	7.60E+01
1130	9:25: 0	8.60E+01
1220	10:10: 0	8.80E+01
1221	10:10:30	0.00E+00
1333	11: 6:30	0.00E+00
1334	11: 7: 0	-1.00E+01
1338	11: 9: 0	-5.00E+01
1348	11:14: 0	-5.00E+01
1350	11:15: 0	6.00E+01
1351	11:15:30	6.50E+01
1356	11:18: 0	0.00E+00
1358	11:19: 0	3.10E+01
1374	11:27: 0	1.00E+00
1920	16: 0: 0	5.10E+01
2160	18: 0: 0	5.10E+01

1 N31 SOURCE RANGE		
660	5:30: 0	0.00E+00
948	7:54: 0	0.00E+00
950	7:55: 0	1.00E+04
1920	16: 0: 0	1.00E+03
2160	18: 0: 0	1.00E+03

2 N32 SOURCE RANGE		
660	5:30: 0	0.00E+00
948	7:54: 0	0.00E+00
950	7:55: 0	1.00E+04
1920	16: 0: 0	1.00E+03
2160	18: 0: 0	1.00E+03

3 N35 INTERM RANGE		
660	5:30: 0	1.00E-03
920	7:40: 0	1.00E-03
922	7:41: 0	4.00E-04
924	7:42: 0	1.00E-11
926	7:43: 0	1.00E-11
930	7:45: 0	1.00E-11

1920	16: 0: 0	1.00E-12
2160	18: 0: 0	1.00E-12

4 N36 INTERM RANGE

660	5:30: 0	1.00E-03
920	7:40: 0	1.00E-03
922	7:41: 0	6.00E-04
924	7:42: 0	1.00E-06
926	7:43: 0	1.00E-07
930	7:45: 0	1.00E-11
1920	16: 0: 0	1.00E-12
2160	18: 0: 0	1.00E-12

5 N41 POWER RANGE %

660	5:30: 0	1.00E+02
920	7:40: 0	9.99E+01
922	7:41: 0	5.50E+01
924	7:42: 0	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

6 T AVERAGE

DEG F

660	5:30: 0	5.70E+02
920	7:40: 0	5.70E+02
921	7:40:30	5.84E+02
924	7:42: 0	5.60E+02
928	7:44: 0	5.48E+02
1220	10:10: 0	5.44E+02
1221	10:10:30	5.46E+02
1332	11: 6: 0	5.07E+02
1335	11: 7:30	5.43E+02
1340	11:10: 0	6.11E+02
1350	11:15: 0	6.17E+02
1351	11:15:30	3.87E+02
1374	11:27: 0	2.34E+02
1920	16: 0: 0	1.60E+02
2160	18: 0: 0	1.60E+02

7 T HOT LOOP A

DEG F

660	5:30: 0	5.99E+02
920	7:40: 0	5.99E+02
921	7:40:30	6.07E+02

924	7:42: 0	5.40E+02
928	7:44: 0	5.50E+02
1220	10:10: 0	5.45E+02
1221	10:10:30	5.49E+02
1332	11: 6: 0	5.18E+02
1335	11: 7:30	6.50E+02
1340	11:10: 0	7.05E+02
1350	11:15: 0	7.08E+02
1351	11:15:30	3.90E+02
1374	11:27: 0	2.45E+02
1920	16: 0: 0	1.60E+02
2160	18: 0: 0	1.60E+02

8 T HOT LOOP B		DEG F
660	5:30: 0	5.99E+02
920	7:40: 0	5.99E+02
921	7:40:30	6.07E+02
924	7:42: 0	5.40E+02
928	7:44: 0	5.50E+02
1220	10:10: 0	5.45E+02
1221	10:10:30	5.49E+02
1332	11: 6: 0	5.18E+02
1335	11: 7:30	6.50E+02
1340	11:10: 0	7.06E+02
1350	11:15: 0	7.09E+02
1351	11:15:30	3.90E+02
1374	11:27: 0	2.45E+02
1920	16: 0: 0	1.60E+02
2160	18: 0: 0	1.60E+02

9 T COLD LOOP A		DEG F
660	5:30: 0	5.41E+02
920	7:40: 0	5.40E+02
924	7:42: 0	5.80E+02
928	7:44: 0	5.45E+02
1220	10:10: 0	5.42E+02
1222	10:11: 0	5.43E+02
1332	11: 6: 0	5.17E+02
1340	11:10: 0	6.00E+02
1350	11:15: 0	6.10E+02
1352	11:16: 0	3.78E+02
1374	11:27: 0	2.46E+02
1920	16: 0: 0	1.60E+02
2160	18: 0: 0	1.60E+02

10 T COLD LOOP B		DEG F
660	5:30: 0	5.41E+02
920	7:40: 0	5.40E+02
924	7:42: 0	5.80E+02
928	7:44: 0	5.45E+02
1220	10:10: 0	5.42E+02
1222	10:11: 0	5.43E+02
1332	11: 6: 0	5.17E+02
1340	11:10: 0	6.00E+02
1350	11:15: 0	6.10E+02
1352	11:16: 0	3.78E+02
1374	11:27: 0	2.46E+02
1920	16: 0: 0	1.60E+02
2160	18: 0: 0	1.60E+02

11 AVERAGE INCORE TC		DEG F
660	5:30: 0	6.00E+02
920	7:40: 0	6.01E+02
922	7:41: 0	6.08E+02
924	7:42: 0	5.80E+02
928	7:44: 0	5.80E+02
930	7:45: 0	5.53E+02
960	8: 0: 0	5.45E+02
1220	10:10: 0	5.40E+02
1332	11: 6: 0	5.19E+02
1334	11: 7: 0	5.50E+02
1336	11: 8: 0	5.73E+02
1338	11: 9: 0	5.81E+02
1340	11:10: 0	5.96E+02
1342	11:11: 0	6.37E+02
1346	11:13: 0	6.47E+02
1348	11:14: 0	5.28E+02
1350	11:15: 0	3.00E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

12 HOTTEST INCORE TC		DEG F
660	5:30: 0	6.11E+02
920	7:40: 0	6.05E+02
922	7:41: 0	6.18E+02
924	7:42: 0	5.90E+02
928	7:44: 0	5.90E+02
930	7:45: 0	5.61E+02
960	8: 0: 0	5.48E+02
1220	10:10: 0	5.45E+02

1332	11: 6: 0	5.25E+02
1334	11: 7: 0	7.12E+02
1336	11: 8: 0	7.25E+02
1338	11: 9: 0	7.10E+02
1340	11:10: 0	7.11E+02
1342	11:11: 0	7.50E+02
1346	11:13: 0	7.91E+02
1348	11:14: 0	6.00E+02
1350	11:15: 0	3.00E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

13 INCORE T(E10)		DEG F
660	5:30: 0	5.99E+02
920	7:40: 0	6.00E+02
922	7:41: 0	6.15E+02
924	7:42: 0	5.81E+02
928	7:44: 0	5.80E+02
930	7:45: 0	5.55E+02
960	8: 0: 0	5.45E+02
1220	10:10: 0	5.43E+02
1332	11: 6: 0	5.13E+02
1334	11: 7: 0	7.12E+02
1336	11: 8: 0	7.25E+02
1338	11: 9: 0	7.00E+02
1340	11:10: 0	6.00E+02
1342	11:11: 0	7.50E+02
1346	11:13: 0	6.88E+02
1348	11:14: 0	5.02E+02
1350	11:15: 0	3.00E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

14 INCORE T(E06)		DEG F
660	5:30: 0	6.01E+02
920	7:40: 0	5.98E+02
922	7:41: 0	6.00E+02
924	7:42: 0	5.79E+02
928	7:44: 0	5.80E+02
930	7:45: 0	5.50E+02
960	8: 0: 0	5.43E+02
1220	10:10: 0	5.40E+02
1332	11: 6: 0	5.19E+02
1334	11: 7: 0	5.20E+02

1336	11: 8: 0	6.15E+02
1338	11: 9: 0	7.10E+02
1340	11:10: 0	7.11E+02
1342	11:11: 0	7.40E+02
1346	11:13: 0	7.91E+02
1348	11:14: 0	4.88E+02
1350	11:15: 0	2.99E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

15 INCORE T(J03) DEG F

660	5:30: 0	6.02E+02
920	7:40: 0	6.02E+02
922	7:41: 0	6.02E+02
924	7:42: 0	5.90E+02
928	7:44: 0	5.90E+02
930	7:45: 0	5.60E+02
960	8: 0: 0	5.44E+02
1220	10:10: 0	5.42E+02
1332	11: 6: 0	5.20E+02
1334	11: 7: 0	5.30E+02
1336	11: 8: 0	6.00E+02
1338	11: 9: 0	6.01E+02
1340	11:10: 0	7.05E+02
1342	11:11: 0	7.30E+02
1346	11:13: 0	7.51E+02
1348	11:14: 0	6.00E+02
1350	11:15: 0	3.00E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

16 INCORE T(J09) DEG F

660	5:30: 0	5.98E+02
920	7:40: 0	5.98E+02
922	7:41: 0	6.18E+02
924	7:42: 0	5.70E+02
928	7:44: 0	5.70E+02
930	7:45: 0	5.49E+02
960	8: 0: 0	5.48E+02
1220	10:10: 0	5.41E+02
1332	11: 6: 0	5.18E+02
1334	11: 7: 0	5.35E+02
1336	11: 8: 0	5.41E+02
1338	11: 9: 0	5.41E+02

1340	11:10: 0	5.20E+02
1342	11:11: 0	6.15E+02
1346	11:13: 0	7.04E+02
1348	11:14: 0	5.50E+02
1350	11:15: 0	3.00E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

17 INCORE T(C08) DEG F

660	5:30: 0	5.89E+02
920	7:40: 0	6.02E+02
922	7:41: 0	6.10E+02
924	7:42: 0	5.80E+02
928	7:44: 0	5.80E+02
930	7:45: 0	5.61E+02
960	8: 0: 0	5.44E+02
1220	10:10: 0	5.39E+02
1332	11: 6: 0	5.17E+02
1334	11: 7: 0	5.18E+02
1336	11: 8: 0	5.20E+02
1338	11: 9: 0	5.20E+02
1340	11:10: 0	5.20E+02
1342	11:11: 0	5.30E+02
1346	11:13: 0	5.50E+02
1348	11:14: 0	5.00E+02
1350	11:15: 0	3.00E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

18 INCORE T(D05) DEG F

660	5:30: 0	6.11E+02
920	7:40: 0	6.05E+02
922	7:41: 0	6.08E+02
924	7:42: 0	5.85E+02
928	7:44: 0	5.80E+02
930	7:45: 0	5.51E+02
960	8: 0: 0	5.43E+02
1220	10:10: 0	5.32E+02
1332	11: 6: 0	5.25E+02
1334	11: 7: 0	5.40E+02
1336	11: 8: 0	5.25E+02
1338	11: 9: 0	5.25E+02
1340	11:10: 0	5.80E+02
1342	11:11: 0	6.80E+02

1346	11:13: 0	6.51E+02
1348	11:14: 0	6.00E+02
1350	11:15: 0	2.97E+02
1800	15: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

19 RV	LEVEL NR	FEET
660	5:30: 0	4.50E+01
1222	10:11: 0	4.50E+01
1224	10:12: 0	3.20E+01
1230	10:15: 0	2.50E+01
1294	10:47: 0	2.10E+01
1334	11: 7: 0	9.00E+00
1344	11:12: 0	7.00E+00
1348	11:14: 0	3.00E+01
1920	16: 0: 0	2.80E+01
2160	18: 0: 0	2.80E+01

20 RV	LEVEL WR	FEET
660	5:30: 0	1.45E+02
1222	10:11: 0	1.45E+02
1224	10:12: 0	3.30E+01
1230	10:15: 0	2.60E+01
1294	10:47: 0	2.20E+01
1334	11: 7: 0	1.00E+01
1344	11:12: 0	7.00E+00
1348	11:14: 0	3.00E+01
1920	16: 0: 0	3.00E+01
2160	18: 0: 0	3.00E+01

21 PRZR	LEVEL	%
660	5:30: 0	4.58E+01
920	7:40: 0	4.60E+01
921	7:40:30	6.58E+01
924	7:42: 0	6.80E+01
925	7:42:30	2.65E+01
960	8: 0: 0	2.90E+01
996	8:18: 0	2.00E+01
1022	8:31: 0	3.00E+01
1220	10:10: 0	3.00E+01
1221	10:10:30	1.00E+02
1225	10:12:30	1.00E+02
1290	10:45: 0	0.00E+00

1356	11:18: 0	0.00E+00
1390	11:35: 0	1.00E+02
1920	16: 0: 0	1.00E+02
2160	18: 0: 0	1.00E+02

22 RC SYSTEM PRESSURE A PSIG

660	5:30: 0	1.93E+03
920	7:40: 0	1.93E+03
921	7:40:30	2.33E+03
925	7:42:30	1.63E+03
970	8: 5: 0	1.93E+03
1118	9:19: 0	1.93E+03
1119	9:19:30	1.83E+03
1126	9:23: 0	1.93E+03
1220	10:10: 0	1.94E+03
1222	10:11: 0	1.02E+03
1254	10:27: 0	9.03E+02
1336	11: 8: 0	8.12E+02
1350	11:15: 0	7.44E+02
1356	11:18: 0	1.20E+02
1920	16: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

23 RC SYSTEM PRESSURE B PSIG

660	5:30: 0	1.93E+03
920	7:40: 0	1.93E+03
921	7:40:30	2.33E+03
925	7:42:30	1.63E+03
970	8: 5: 0	1.93E+03
1118	9:19: 0	1.93E+03
1119	9:19:30	1.83E+03
1126	9:23: 0	1.93E+03
1220	10:10: 0	1.94E+03
1222	10:11: 0	1.02E+03
1254	10:27: 0	9.03E+02
1336	11: 8: 0	8.12E+02
1350	11:15: 0	7.44E+02
1356	11:18: 0	1.20E+02
1920	16: 0: 0	1.20E+02
2160	18: 0: 0	1.20E+02

24 PRZR PRESSURE	PSIG
660 5:30: 0	1.99E+03

920	7:40: 0	1.99E+03
921	7:40:30	2.33E+03
925	7:42:30	1.63E+03
970	8: 5: 0	1.98E+03
1118	9:19: 0	1.99E+03
1119	9:19:30	1.81E+03
1126	9:23: 0	1.98E+03
1218	10: 9: 0	1.99E+03
1220	10:10: 0	1.60E+03
2160	18: 0: 0	1.60E+03

25 PRESSURIZER RELIEF TANK

0	0: 0: 0	0.00E+00
2880	24: 0: 0	0.00E+00

26	TEMPERATURE	DEG F
660	5:30: 0	9.00E+01
922	7:41: 0	9.00E+01
924	7:42: 0	1.15E+02
928	7:44: 0	1.10E+02
1118	9:19: 0	9.50E+01
1120	9:20: 0	1.10E+02
1220	10:10: 0	9.60E+01
1226	10:13: 0	1.50E+02
1228	10:14: 0	1.55E+02
1334	11: 7: 0	2.05E+02
1392	11:36: 0	2.25E+02
1394	11:37: 0	1.75E+02
1920	16: 0: 0	9.50E+01
2160	18: 0: 0	9.50E+01

27	LEVEL	%
660	5:30: 0	7.20E+01
922	7:41: 0	7.20E+01
924	7:42: 0	7.60E+01
928	7:44: 0	7.50E+01
1118	9:19: 0	7.10E+01
1120	9:20: 0	7.80E+01
1220	10:10: 0	7.20E+01
1226	10:13: 0	9.00E+01
1228	10:14: 0	1.00E+02
1334	11: 7: 0	1.00E+02
1392	11:36: 0	1.00E+02

1394	11:37: 0	1.00E+02
1920	16: 0: 0	1.00E+02
2160	18: 0: 0	1.00E+02

28	PRESSURE	PSIG
660	5:30: 0	4.00E+00
922	7:41: 0	4.00E+00
924	7:42: 0	1.50E+01
928	7:44: 0	1.00E+01
1118	9:19: 0	6.00E+00
1120	9:20: 0	1.20E+01
1220	10:10: 0	8.50E+00
1226	10:13: 0	1.04E+02
1228	10:14: 0	3.10E+01
1334	11: 7: 0	2.50E+01
1392	11:36: 0	2.50E+01
1394	11:37: 0	2.50E+01
1920	16: 0: 0	2.20E+01
2160	18: 0: 0	2.20E+01

29	LINE TEMP	DEG F
660	5:30: 0	1.07E+02
922	7:41: 0	1.07E+02
924	7:42: 0	2.80E+02
928	7:44: 0	1.10E+02
1116	9:18: 0	9.50E+01
1118	9:19: 0	2.20E+02
1220	10:10: 0	9.50E+01
1226	10:13: 0	3.60E+02
1228	10:14: 0	3.00E+02
1334	11: 7: 0	3.20E+02
1392	11:36: 0	3.15E+02
1394	11:37: 0	3.80E+02
1920	16: 0: 0	2.40E+02
2160	18: 0: 0	2.40E+02

30	LETDOWN	GPM
660	5:30: 0	3.40E+01
923	7:41:30	3.40E+01
924	7:42: 0	0.00E+00
960	8: 0: 0	0.00E+00
961	8: 0:30	3.40E+01
1220	10:10: 0	3.40E+01

1221	10:10:30	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

31 CHARGING GPM

660	5:30: 0	2.40E+01
920	7:40: 0	2.40E+01
921	7:40:30	1.80E+01
923	7:41:30	8.60E+01
960	8: 0: 0	9.60E+01
961	8: 0:30	2.40E+01
1221	10:10:30	2.40E+01
1222	10:11: 0	1.00E+01
1232	10:16: 0	1.00E+01
1234	10:17: 0	1.16E+02
1380	11:30: 0	1.20E+02
1382	11:31: 0	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

32 VCT LEVEL %

660	5:30: 0	5.30E+01
920	7:40: 0	5.20E+01
924	7:42: 0	5.40E+01
1000	8:20: 0	5.40E+01
1140	9:30: 0	5.20E+01
1920	16: 0: 0	5.00E+01
2160	18: 0: 0	5.00E+01

33 'A' STEAM GENERATOR

0	0: 0: 0	0.00E+00
2880	24: 0: 0	0.00E+00

34 LEVEL NR %

660	5:30: 0	5.20E+01
920	7:40: 0	5.20E+01
921	7:40:30	2.70E+01
924	7:42: 0	2.00E+01
926	7:43: 0	0.00E+00
1080	9: 0: 0	0.00E+00
1100	9:10: 0	1.50E+01
1920	16: 0: 0	0.00E+00

2160 18: 0: 0 0.00E+00

35 LEVEL WR IN
660 5:30: 0 3.10E+02
920 7:40: 0 3.10E+02
930 7:45: 0 2.20E+01
1100 9:10: 0 4.08E+02
1920 16: 0: 0 3.90E+02
2160 18: 0: 0 3.90E+02

36 STM FLOW PPH E+06
660 5:30: 0 3.31E+00
920 7:40: 0 3.33E+00
921 7:40:30 5.00E-01
922 7:41: 0 1.65E+00
923 7:41:30 1.65E+00
924 7:42: 0 2.88E+00
925 7:42:30 2.80E+00
926 7:43: 0 0.00E+00
928 7:44: 0 0.00E+00
929 7:44:30 4.10E-01
930 7:45: 0 0.00E+00
1920 16: 0: 0 0.00E+00
2160 18: 0: 0 0.00E+00

37 FD FLOW PPH E+06
660 5:30: 0 3.31E+00
920 7:40: 0 3.31E+00
921 7:40:30 0.00E+00
1920 16: 0: 0 0.00E+00
2160 18: 0: 0 0.00E+00

38 PRESSURE PSIG
660 5:30: 0 8.26E+02
920 7:40: 0 8.26E+02
921 7:40:30 1.09E+03
923 7:41:30 1.06E+03
925 7:42:30 4.00E+02
926 7:43: 0 9.85E+02
932 7:46: 0 1.06E+03
1220 10:10: 0 1.04E+03
1360 11:20: 0 9.89E+02

1440	12: 0: 0	4.00E+01
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

39	AUX FEED FLOW	GPM
660	5:30: 0	0.00E+00
918	7:39: 0	0.00E+00
920	7:40: 0	2.00E+02
1070	8:55: 0	2.00E+02
1072	8:56: 0	5.00E+01
1222	10:11: 0	2.00E+02
1250	10:25: 0	2.00E+02
1920	16: 0: 0	2.00E+02
2160	18: 0: 0	2.00E+02

40	CST LEVEL	FT
660	5:30: 0	1.70E+01
920	7:40: 0	1.70E+01
1080	9: 0: 0	1.10E+01
1920	16: 0: 0	9.00E+00
2160	18: 0: 0	9.00E+00

41	'B' STEAM GENERATOR	
0	0: 0: 0	0.00E+00
2880	24: 0: 0	0.00E+00

42	LEVEL NR	%
660	5:30: 0	5.20E+01
920	7:40: 0	5.20E+01
921	7:40:30	2.70E+01
924	7:42: 0	2.00E+01
926	7:43: 0	0.00E+00
1080	9: 0: 0	0.00E+00
1100	9:10: 0	1.50E+01
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

43	LEVEL WR	IN
660	5:30: 0	3.10E+02
920	7:40: 0	3.10E+02
930	7:45: 0	2.20E+01

1100	9:10: 0	4.08E+02
1920	16: 0: 0	3.90E+02
2160	18: 0: 0	3.90E+02

44	STM FLOW PPH E+06	
660	5:30: 0	3.31E+00
920	7:40: 0	3.33E+00
921	7:40:30	5.00E-01
922	7:41: 0	1.65E+00
923	7:41:30	1.65E+00
924	7:42: 0	2.88E+00
925	7:42:30	2.80E+00
926	7:43: 0	0.00E+00
928	7:44: 0	0.00E+00
929	7:44:30	4.10E-01
930	7:45: 0	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

45	FD FLOW PPH E+06	
660	5:30: 0	3.31E+00
920	7:40: 0	3.31E+00
921	7:40:30	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

46	PRESSURE PSIG	
660	5:30: 0	8.26E+02
920	7:40: 0	8.26E+02
921	7:40:30	1.09E+03
923	7:41:30	1.06E+03
925	7:42:30	4.00E+02
926	7:43: 0	9.85E+02
932	7:46: 0	1.06E+03
1220	10:10: 0	1.04E+03
1360	11:20: 0	9.89E+02
1440	12: 0: 0	4.00E+01
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

47	AUX FEED FLOW GPM	
660	5:30: 0	0.00E+00

918	7:39: 0	0.00E+00
920	7:40: 0	2.00E+02
1070	8:55: 0	2.00E+02
1072	8:56: 0	5.00E+01
1222	10:11: 0	2.50E+02
1250	10:25: 0	2.00E+02
1920	16: 0: 0	2.00E+02
2160	18: 0: 0	2.00E+02

48 CONTAINMENT

0	0: 0: 0	0.00E+00
2880	24: 0: 0	0.00E+00

49 PRESSURE PSIG

660	5:30: 0	1.00E-01
1270	10:35: 0	2.00E-01
1350	11:15: 0	3.50E+00
1920	16: 0: 0	2.00E-01
2160	18: 0: 0	2.00E-01

50 TEMP DEG F

660	5:30: 0	9.20E+01
1224	10:12: 0	9.10E+01
1360	11:20: 0	1.46E+02
1560	13: 0: 0	1.35E+02
1920	16: 0: 0	1.01E+02
2160	18: 0: 0	1.01E+02

51 HUMIDITY %

660	5:30: 0	3.80E+01
1222	10:11: 0	3.90E+01
1240	10:20: 0	1.00E+02
1580	13:10: 0	1.00E+02
1920	16: 0: 0	8.90E+01
2160	18: 0: 0	8.90E+01

52 RADIATION H.R. R/hr

660	5:30: 0	1.00E-01
1334	11: 7: 0	1.00E-01
1410	11:45: 0	6.65E+02
1460	12:10: 0	7.46E+02

1680	14: 0: 0	7.10E+02
2160	18: 0: 0	4.75E+02

53	SUMP B	FT
660	5:30: 0	0.00E+00
1230	10:15: 0	0.00E+00
1440	12: 0: 0	1.10E+00
1800	15: 0: 0	4.80E+00
2160	18: 0: 0	4.80E+00

54 A	ACCUMULATOR	LEVEL	%
660	5:30: 0	3.00E+01	
1334	11: 7: 0	3.00E+01	
1350	11:15: 0	3.00E+01	
1354	11:17: 0	0.00E+00	
1920	16: 0: 0	0.00E+00	
2160	18: 0: 0	0.00E+00	

55 A	ACCUMULATOR	PRESS	PSIG
660	5:30: 0	7.40E+02	
1334	11: 7: 0	7.40E+02	
1350	11:15: 0	7.40E+02	
1354	11:17: 0	1.20E+02	
1920	16: 0: 0	0.00E+00	
2160	18: 0: 0	0.00E+00	

56 B	ACCUMULATOR	LEVEL	%
660	5:30: 0	2.00E+01	
1334	11: 7: 0	2.00E+01	
1350	11:15: 0	2.00E+01	
1354	11:17: 0	0.00E+00	
1920	16: 0: 0	0.00E+00	
2160	18: 0: 0	0.00E+00	

57 B	ACCUMULATOR	PRESS	PSIG
660	5:30: 0	7.50E+02	
1334	11: 7: 0	7.50E+02	
1350	11:15: 0	7.50E+02	
1354	11:17: 0	1.22E+02	
1920	16: 0: 0	0.00E+00	
2160	18: 0: 0	0.00E+00	

58 RWST LEVEL	%	
660	5:30: 0	9.90E+01
1224	10:12: 0	9.80E+01
1244	10:22: 0	9.40E+01
1360	11:20: 0	9.10E+01
1390	11:35: 0	7.90E+01
1920	16: 0: 0	3.10E+01
2160	18: 0: 0	3.10E+01

59 RHR		
0	0: 0: 0	0.00E+00
2880	24: 0: 0	0.00E+00

60 PUMP A DISCH PRESS	PSIG	
660	5:30: 0	0.00E+00
923	7:41:30	0.00E+00
925	7:42:30	1.80E+02
970	8: 5: 0	1.80E+02
972	8: 6: 0	0.00E+00
1220	10:10: 0	0.00E+00
1221	10:10:30	1.80E+02
1356	11:18: 0	1.80E+02
1357	11:18:30	1.30E+02
1388	11:34: 0	1.31E+02
1390	11:35: 0	1.65E+02
1920	16: 0: 0	1.68E+02
2160	18: 0: 0	1.68E+02

61 PUMP A FLOW	GPM	
660	5:30: 0	0.00E+00
1336	11: 8: 0	0.00E+00
1342	11:11: 0	5.00E+01
1356	11:18: 0	7.00E+01
1358	11:19: 0	8.65E+02
1388	11:34: 0	8.50E+02
1390	11:35: 0	2.50E+02
1920	16: 0: 0	2.50E+02
2160	18: 0: 0	2.50E+02

62 HX A OUTLET TEMP	DEG F	
660	5:30: 0	7.90E+01
1680	14: 0: 0	7.70E+01
2160	18: 0: 0	7.70E+01

63	PUMP B DISCH	PRESS	PSIG
660	5:30: 0	0.00E+00	
923	7:41:30	0.00E+00	
925	7:42:30	1.80E+02	
970	8: 5: 0	1.80E+02	
972	8: 6: 0	0.00E+00	
1220	10:10: 0	0.00E+00	
1221	10:10:30	1.80E+02	
1356	11:18: 0	1.80E+02	
1358	11:19: 0	1.30E+02	
1388	11:34: 0	1.31E+02	
1390	11:35: 0	1.65E+02	
1920	16: 0: 0	1.68E+02	
2160	18: 0: 0	1.68E+02	

64	PUMP B FLOW	GPM
660	5:30: 0	0.00E+00
1336	11: 8: 0	0.00E+00
1342	11:11: 0	5.00E+01
1356	11:18: 0	7.00E+01
1358	11:19: 0	8.65E+02
1388	11:34: 0	8.50E+02
1390	11:35: 0	2.50E+02
1920	16: 0: 0	2.50E+02
2160	18: 0: 0	2.50E+02

65	HX B OUTLET	TEMP	DEG F
660	5:30: 0	7.90E+01	
1680	14: 0: 0	7.70E+01	
2160	18: 0: 0	7.70E+01	

66	HP	SI	
0	0: 0: 0	0.00E+00	
2880	24: 0: 0	0.00E+00	

67	PUMP A PRESS	PSIG
660	5:30: 0	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

68	PUMP A FLOW	GPM
660	5:30: 0	0.00E+00

1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

69	PUMP B PRESS	PSIG
660	5:30: 0	0.00E+00
1221	10:10:30	0.00E+00
1222	10:11: 0	7.60E+02
1240	10:20: 0	7.50E+02
1241	10:20:30	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

70	PUMP B FLOW	GPM
660	5:30: 0	0.00E+00
1220	10:10: 0	0.00E+00
1222	10:11: 0	1.09E+03
1240	10:20: 0	1.21E+03
1242	10:21: 0	0.00E+00
1920	16: 0: 0	0.00E+00
2160	18: 0: 0	0.00E+00

71	U1-BO3 480 VOLT BUSES	
660	5:30: 0	4.80E+02
1920	16: 0: 0	4.80E+02
2160	18: 0: 0	4.80E+02

72	U1-BO4 480 VOLT BUSES	
660	5:30: 0	4.80E+02
1920	16: 0: 0	4.80E+02
2160	18: 0: 0	4.80E+02

73	U2-BO3 480 VOLT BUSES	
660	5:30: 0	4.80E+02
1920	16: 0: 0	4.80E+02
2160	18: 0: 0	4.80E+02

74	U2-BO4 480 VOLT BUSES	
660	5:30: 0	4.80E+02
1920	16: 0: 0	4.80E+02
2160	18: 0: 0	4.80E+02

PPCS-SAS

PLANT PROCESS COMPUTER SYSTEM-SAFETY ASSESSMENT SYSTEM

* THIS DATA WILL BE DISPLAYED IN THE CONTROL ROOM, TSC,
AND EOF ON THE PLANT PROCESS COMPUTER MONITORS.

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Use EDLIN to add any amount of comments to this file. They can only be added in the top part of the file.

	#	DESCRIPTION
48600.0		Total scenario run time (sec.)
1985.0 0 PT429	1	Pressurizer press 1-1
1985.0 0 PT430	2	Pressurizer press 1-2
1985.0 0 PT431	3	Pressurizer press 1-3
1985.0 0 PT449	4	Pressurizer press 1-4
1932.0 0 PT420A	5	RCS WR Pressure Loop A
1932.0 0 PT420B	6	RCS WR Pressure Loop B
45.8 0 LT433	7	Pressurizer Level Cold Calib.
45.8 0 LT426	8	Pressurizer Level 1-1
45.8 0 LT427	9	Pressurizer Level 1-2
45.8 0 LT428	10	Pressurizer Level 1-3
600.0 0 TA07	11	Incore Thermocouple Pos A07
600.0 0 TC03	12	Incore Thermocouple Pos C03
600.0 0 TC06	13	Incore Thermocouple Pos C06
600.0 0 TC11	14	Incore Thermocouple Pos C11
600.0 0 TD07	15	Incore Thermocouple Pos D07
600.0 0 TE04	16	Incore Thermocouple Pos E04
600.0 0 TF08	17	Incore Thermocouple Pos F08
600.0 0 TG02	18	Incore Thermocouple Pos G02
600.0 0 TG12	19	Incore Thermocouple Pos G12
600.0 0 TH06	20	Incore Thermocouple Pos H06
600.0 0 TH09	21	Incore Thermocouple Pos H09
600.0 0 TH11	22	Incore Thermocouple Pos H11
600.0 0 TI02	23	Incore Thermocouple Pos I02
600.0 0 TI07	24	Incore Thermocouple Pos I07
600.0 0 TI10	25	Incore Thermocouple Pos I10
600.0 0 TJ08	26	Incore Thermocouple Pos J08
600.0 0 TK03	27	Incore Thermocouple Pos K03
600.0 0 TL07	28	Incore Thermocouple Pos L07
600.0 0 TB05	29	Incore Thermocouple Pos B05
600.0 0 TB07	30	Incore Thermocouple Pos B07
589.0 0 TC08	31	Incore Thermocouple Pos C08
600.0 0 TD02	32	Incore Thermocouple Pos D02
611.0 0 TD05	33	Incore Thermocouple Pos D05
600.0 0 TD12	34	Incore Thermocouple Pos D12
601.0 0 TE06	35	Incore Thermocouple Pos E06
599.0 0 TE10	36	Incore Thermocouple Pos E10
600.0 0 TF12	37	Incore Thermocouple Pos F12
600.0 0 TG01	38	Incore Thermocouple Pos G01
600.0 0 TG04	39	Incore Thermocouple Pos G04
600.0 0 TG07	40	Incore Thermocouple Pos G07
600.0 0 TH10	41	Incore Thermocouple Pos H10
600.0 0 TH13	42	Incore Thermocouple Pos H13
600.0 0 TI04	43	Incore Thermocouple Pos I04
602.0 0 TJ03	44	Incore Thermocouple Pos J03
600.0 0 TJ06	45	Incore Thermocouple Pos J06
598.0 0 TJ09	46	Incore Thermocouple Pos J09
600.0 0 TK11	47	Incore Thermocouple Pos K11
600.0 0 TL10	48	Incore Thermocouple Pos L10
600.0 0 TM06	49	Incore Thermocouple Pos M06
0.2 0 MT1FAHI	50	Aspirator Flow Alarm 45M

0.1 0 RE126	51 Cont Hi	5 Radiation
0.1 0 RE127	52 Cont Hi	5 Radiation
0.1 0 RE128	53 Cont High-Range	Radiation
0.2 0 MT1FALO	54 Aspirator Flow Alarm	45M
100.0 0 FT411	55 RX Coolant Flow Loop	1A-1
100.0 0 FT412	56 RX Coolant Flow Loop	1A-2
100.0 0 FT413	57 RX Coolant Flow Loop	1A-3
-0.4 0 MT1DT	58 Tower 1 Delta Temp	10M-45M
100.0 0 FT414	59 RX Coolant Flow Loop	1B-1
100.0 0 FT415	60 RX Coolant Flow Loop	1B-2
100.0 0 FT416	61 RX Coolant Flow Loop	1B-3
2.0 0 MT1ZSC	62 Tower 1 Zero/Span/Calculate	
570.0 0 T401	63 T AVE Loop	1A-1
570.0 0 T402	64 T AVE Loop	1A-2
570.0 0 T403	65 T AVE Loop	1B-1
570.0 0 T404	66 T AVE Loop	1B-2
58.0 0 T405	67 DT Loop	1A-1
58.0 0 T406	68 DT Loop	1A-2
58.0 0 T407	69 DT Loop	1B-1
58.0 0 T408	70 DT Loop	1B-2
45.0 0 LI496	71 Reactor Vessel NR Level	
45.0 0 LI497	72 Reactor Vessel NR Level	
92.0 0 T3292	73 Cont Temp Air EL	66
92.0 0 T3293	74 Cont Temp Air EL	46
0.0 0 FT924	75 High Head SI flow	1-P15B
0.0 0 FT925	76 High Head SI flow	1-P15A
36.0 0 T970	77 Subcooling Monitor	
36.0 0 T971	78 Subcooling Monitor	
0.1 0 PT945	79 Contmt Press	
0.1 0 PT947	80 Contmt Press	
0.1 0 PT949	81 Contmt Press	
0.1 0 PT946	82 Contmt Press	
0.1 0 PT948	83 Contmt Press	
0.1 0 PT950	84 Contmt Press	
1.9 0 MT2PREC	85 Tower 2 Precipitation	
53.0 0 LT112	86 VCT Level	
38.0 0 MI3208	87 Cont Humidity Unit No.	1
9.0 0 MT1WSHI	88 Tower 1 Wind Speed	45M
34.0 0 FT134	89 Letdown line flow	
24.0 0 FT128	90 Charging line flow	
0.0 0 HA964	91 Cont hydrogen conc	
0.0 0 HA965	92 Cont hydrogen conc	
0.0 0 HA966	93 Cont hydrogen conc	
0.0 0 HA967	94 Cont hydrogen conc	
2.2 0 MT3ZSC	95 Tower 3 Zero/Span/Calculate	
2.3 0 MT2ZSC	96 Tower 2 Zero/Span/Calculate	
4.00E-06 0 RI215	97 U1 Condenser air ejector gas rad	
3.40E-01 0 MT3SR	98 Solar Radiation	
5.00E-06 0 RI219	99 U1 S/G Blowdown liquid rad	
6.0 0 RI102	100 Containment low range	
3.739E+00 0 FT464V	101 STM GEN 1A-1 steam flow	
3.739E+00 0 FT465V	102 STM GEN 1A-2 steam flow	
3.702E+00 0 FT474V	103 STM GEN 1B-1 steam flow	
3.702E+00 0 FT475V	104 STM GEN 1B-2 steam flow	
67.0 0 MT1TLO	105 Outside tower 1 Temp	10M
67.0 0 MT3T	106 Outside tower 3 Temp	
145.0 0 LI494	107 Reactor Vessel WR Level	
145.0 0 LI495	108 Reactor Vessel WR Level	
52.0 0 LT461	109 Steam Generator Level	1A-1
52.0 0 LT462	110 Steam Generator Level	1A-2

52.0 0	LT463	111	Steam Generator Level 1A-3
52.0 0	LT471	112	Steam Generator Level 1B-1
52.0 0	LT472	113	Steam Generator Level 1B-2
52.0 0	LT473	114	Steam Generator Level 1B-3
310.0 0	LT460A	115	SG WR Level SG A WR
310.0 0	LT460B	116	SG WR Level SG A WR
2.2 0	R1E104	117	Charging pump area low range
310.0 0	LT470A	118	SG WR Level SG B WR
310.0 0	LT470B	119	SG WR Level SG B WR
5.0 0	R1E107	120	Seal table monitor
826.0 0	PT468	121	Steam Generator Press 1A-1
826.0 0	PT469	122	Steam Generator Press 1A-2
826.0 0	PT482	123	Steam Generator Press 1A-3
826.0 0	PT478	124	Steam Generator Press 1B-1
826.0 0	PT479	125	Steam Generator Press 1B-2
826.0 0	PT483	126	Steam Generator Press 1B-3
0.0 0	LT960	127	Cont Sump Level Sump B
0.0 0	LT961	128	Cont Sump Level Sump B
-17.0 0	LT958	129	Cont Sump Level Sump A
-17.0 0	LT959	130	Cont Sump Level Sump A
0.0 3	*	131	---Additional Parameter
0.0 3	*	132	---Additional Parameter
3.702E+00 0	FT466V	133	STM GEN 1A-1 FDWTR FLOW
3.702E+00 0	FT467V	134	STM GEN 1A-2 FDWTR FLOW
0.0 3	*	135	---Additional Parameter
3.702E+00 0	FT476V	136	STM GEN 1B-1 FDWTR FLOW
3.702E+00 0	FT477V	137	STM GEN 1B-2 FDWTR FLOW
4.38E-03 0	R1E211	138	Containment air particulate
4.00E-03 0	R1E231	139	U1 Steam Release line A rad
4.00E-03 0	R1E232	140	U1 Steam release line B rad
426.0 0	MT1WDHI	141	Tower 1 Wind Dir 45M
426.0 0	MT2WD	142	Tower 2 Wind Dir
426.0 0	MT1WDALO	143	Tower 1 Wind Dir 10M, 15 Min Ave
426.0 0	MT3WDA	144	Tower 3 Wind Dir, 15 Min Ave
0.0 0	FT4036	145	Sg A Aux Feed Flow
0.0 0	FT4037	146	Sg B Aux Feed Flow
79.0 0	T622	147	RHR HX Outlet Temp A
79.0 0	T623	148	RHR HX Outlet Temp B
4.0 0	PT440	149	PRZR Relief tank pressure
0.0 3	*	150	---Additional Parameter
100.1 0	N41	151	Power Range 1
100.1 0	N42	152	Power Range 2
100.1 0	N43	153	Power Range 3
100.1 0	N44	154	Power Range 4
599.0 0	T450B	155	RCS Wide range temp hot leg A
599.0 0	T450D	156	RCS Wide range temp hot leg A
599.0 0	T451B	157	RCS Wide range temp hot leg B
599.0 0	T451D	158	RCS Wide range temp hot leg B
3.13E-05 0	R1E212	159	U1 Cont gas radiation
0.0 3	*	160	---Additional Parameter
5.50E-08 0	RE221	161	Drumming area vent gas rad
0.0 3	*	162	---Additional Parameter
541.0 0	T450A	163	RCS Wide range temp cold leg A
541.0 0	T450C	164	RCS Wide range temp cold leg A
541.0 0	T451A	165	RCS Wide range temp cold leg B
541.0 0	T451C	166	RCS Wide range temp cold leg B
430.0 0	MT1WDLO	167	Tower 1 Wind Dir 10M
430.0 0	MT3WD	168	Tower 3 Wind Dir
430.0 0	MT1WDAHI	169	Tower 1 Wind Dir 45M, 15 Min Ave
430.0 0	MT2WDA	170	Tower 2 Wind Dir Ave

4.70E-07	0	RE214	171	Aux Budg exhaust vent gas rad
2.2	0	RIE134	172	Charging pump area high range monit
0.0	0	N31	173	Source range 1 count rate
0.0	0	N32	174	Source range 2 count rate
1.00E-02	0	N35	175	Interm range 1 current
1.00E-02	0	N36	176	Interm range 2 current
99.0	0	LT972	177	Refuel wat stor tank lvl 1-T13
99.0	0	LT973	178	Refuel wat stor tank lvl 1-T13
17.0	0	LT4038	179	Cond storage tank lvl Tank A
17.0	0	LT4040	180	Cond storage tank lvl Tank A
0.0	0	N35R	181	IR NO. 1 start up rate
0.0	0	N36R	182	IR NO. 2 start up rate
2.2	0	PT2115	183	Condenser pressure
90.0	0	T439	184	PRZR Relief Tank Liquid Temp
72.0	0	LT442	185	PRZR Relief Tank Level
0.0	0	FT928	186	Low head SI flow
0.0	0	FT626	187	Low head SI / RHR flow
60.0	0	T630	188	RHR HX Inlet
60.0	0	T627	189	RHR HX Outlet
1.0	0	MT1WDS	190	Twr 1 Stndrd Dev of Wnd Dr 10M
1.0	0	MT2WDS	191	Twr 2 Stndrd Dev of Wnd Dr
1.0	0	MT3WDS	192	Twr 3 Stndrd Dev of Wnd Dr
9.0	0	MT1WSLO	193	Tower 1 Wind Speed 10M
9.0	0	MT2WS	194	Tower 2 Wind Speed
9.0	0	MT3WS	195	Tower 3 Wind Speed
519.0	0	MT1WSS	196	Gross Megawatts output
418.0	0	MT2WSS	197	S/G Feedwater temp
418.0	0	MT3WSS	198	S/G Feedwater temp
1100.0	0	MT1WSSA	199	S/G 1A Feedwater press
1100.0	0	PT2290	200	S/G 1B feedwater press
0	0	PCV430	401	Pressurizer relief valve NO 1-430
0	0	PCV431C	402	Pressurizer relief valve NO 1-430C
1	0	BKR122	403	Unit 1 main generator breaker
1	0	BKR142	404	Unit 2 main generator breaker
1	0	PCV434A	405	Pressurizer safety valve 1-434
1	0	PCV435A	406	Pressurizer safety valve 1-435
1	0	RTA	407	Reactor trip breaker A
1	0	RTB	408	Reactor trip breaker B
0	0	BYA	409	Reactor bypass breaker A
0	0	BYB	410	Reactor bypass breaker B
0	3	*	411	---Additional Parameter
0	3	*	412	---Additional Parameter
0	3	*	413	---Additional Parameter
0	3	*	414	---Additional Parameter
0	0	A5206	415	Condensate circ wtr pump
0	0	A5212	416	Condensate circ wtr pump
0	3	*	417	---Additional Parameter
0	3	*	418	---Additional Parameter
0	3	*	419	---Additional Parameter
0	3	*	420	---Additional Parameter
0	0	RCPA	421	Reactor coolant pump A
0	0	RCPB	422	Reactor coolant pump B
1	0	SRBA	423	Source range trip block
1	0	SRBB	424	Source range trip block
0	0	NC35D	425	Interm range
0	0	NC36D	426	Interm range
0	3	*	427	---Additional Parameter
0	3	*	428	---Additional Parameter
0	3	*	429	---Additional Parameter
0	3	*	430	---Additional Parameter

0 3 * 431 ---Additional Parameter
 0 3 * 432 ---Additional Parameter
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 0 3 * 447 ---Additional Parameter
 0 3 * 448 ---Additional Parameter
 0 3 * 449 ---Additional Parameter
 0 3 * 450 ---Additional Parameter

1 19800.0 27600.0 1986.0 0 Pressurizer Pressure, coupled to
 1 27600.0 27630.0 2331.0 0 parameters 2,3,4.

1 27630.0 27750.0 1631.0 0
 1 27750.0 29100.0 1983.0 0
 1 29100.0 33540.0 1986.0 0
 1 33540.0 33570.0 1810.0 0
 1 33570.0 33780.0 1984.0 0
 1 33780.0 36540.0 1936.0 0
 1 36540.0 36600.0 1600.0 0

5 19800.0 27600.0 1933.0 0 RCS WR Pressure Loop A, coupled
 5 27600.0 27630.0 2332.0 0 to parameter 6.

5 27630.0 27750.0 1633.0 0
 5 27750.0 29100.0 1929.0 0
 5 29100.0 33540.0 1931.0 0
 5 33540.0 33570.0 1825.0 0
 5 33570.0 33780.0 1931.0 0
 5 33780.0 36600.0 1941.0 0
 5 36600.0 36660.0 1022.0 0
 5 36660.0 37620.0 903.0 0
 5 37620.0 40080.0 812.0 0
 5 40080.0 40500.0 744.0 0
 5 40500.0 40680.0 120.0 0

7 19800.0 27600.0 46.0 0 Pressurizer level, coupled to
 7 27600.0 27630.0 65.8 0 parameters 8,9,10.

7 27630.0 27720.0 68.0 0
 7 27720.0 27750.0 26.5 0
 7 27750.0 28800.0 29.0 0
 7 28800.0 29880.0 20.0 0
 7 29880.0 30660.0 30.0 0
 7 30660.0 36630.0 100.0 0
 7 36630.0 38700.0 0.0 0
 7 38700.0 41700.0 100.0 0

11 19800.0 27600.0 601.0 0 Incore thermocouple, coupled to
 11 27600.0 27660.0 608.0 0 parameters 12-49.

11 27660.0 27720.0 580.0 0
 11 27840.0 27900.0 553.0 0
 11 27900.0 28800.0 545.0 0
 11 28800.0 36600.0 540.0 0
 11 36600.0 39960.0 519.0 0
 11 39960.0 40020.0 550.0 0

11	40020.0	40080.0	573.0	0
11	40080.0	40140.0	581.0	0
11	40140.0	40200.0	596.0	0
11	40200.0	40260.0	637.0	0
11	40260.0	40380.0	647.0	0
11	40380.0	40440.0	528.0	0
11	40440.0	40500.0	300.0	0
11	40500.0	57600.0	120.0	0
31	19800.0	27600.0	602.0	1
31	27600.0	27660.0	610.0	1
31	27660.0	27720.0	580.0	1
31	27840.0	27900.0	561.0	1
31	27900.0	28800.0	544.0	1
31	28800.0	36600.0	539.0	1
31	36600.0	39960.0	517.0	1
31	39960.0	40020.0	518.0	1
31	40020.0	40080.0	520.0	1
31	40200.0	40260.0	530.0	1
31	40260.0	40380.0	550.0	1
31	40380.0	40440.0	500.0	1
31	40440.0	40500.0	300.0	1
31	40500.0	57600.0	120.0	1
33	19800.0	27600.0	605.0	1
33	27600.0	27660.0	608.0	1
33	27660.0	27720.0	585.0	1
33	27720.0	27840.0	580.0	1
33	27840.0	27900.0	551.0	1
33	27900.0	28800.0	543.0	1
33	28800.0	36600.0	532.0	1
33	36600.0	39960.0	525.0	1
33	39960.0	40020.0	540.0	1
33	40020.0	40080.0	525.0	1
33	40140.0	40200.0	580.0	1
33	40200.0	40260.0	680.0	1
33	40260.0	40380.0	551.0	1
33	40380.0	40440.0	600.0	1
33	40440.0	40500.0	299.0	1
33	40500.0	57600.0	120.0	1
35	19800.0	27600.0	598.0	1
35	27600.0	27660.0	600.0	1
35	27660.0	27720.0	579.0	1
35	27720.0	27840.0	580.0	1
35	27840.0	27900.0	550.0	1
35	27900.0	28800.0	543.0	1
35	28800.0	36600.0	540.0	1
35	36600.0	39960.0	519.0	1
35	39960.0	40020.0	520.0	1
35	40020.0	40080.0	615.0	1
35	40080.0	40140.0	710.0	1
35	40140.0	40200.0	711.0	1
35	40200.0	40260.0	740.0	1
35	40260.0	40380.0	791.0	1
35	40380.0	40440.0	488.0	1
35	40440.0	40500.0	298.0	1
35	40500.0	57600.0	120.0	1
36	19800.0	27600.0	600.0	1
36	27600.0	27660.0	615.0	1
36	27660.0	27720.0	581.0	1
36	27720.0	27840.0	580.0	1
36	27840.0	27900.0	555.0	1

Incore Thermocouple C08.

Incore Thermocouple D05.

Incore Thermocouple E06.

Incore Thermocouple E10.

36	27900.0	28800.0	545.0	1	
36	28800.0	36600.0	543.0	1	
36	36600.0	39960.0	513.0	1	
36	39960.0	40020.0	712.0	1	
36	40020.0	40080.0	725.0	1	
36	40080.0	40140.0	700.0	1	
36	40140.0	40200.0	600.0	1	
36	40200.0	40260.0	750.0	1	
36	40260.0	40380.0	688.0	1	
36	40380.0	40440.0	502.0	1	
36	40440.0	40500.0	299.0	1	
36	40500.0	57600.0	120.0	1	
44	19800.0	27660.0	602.0	1	Incore Thermocouple J03.
44	27660.0	27720.0	590.0	1	
44	27840.0	27900.0	560.0	1	
44	27900.0	28800.0	544.0	1	
44	28800.0	36600.0	542.0	1	
44	36600.0	39960.0	520.0	1	
44	39960.0	40020.0	530.0	1	
44	40020.0	40080.0	600.0	1	
44	40080.0	40140.0	601.0	1	
44	40140.0	40200.0	705.0	1	
44	40200.0	40260.0	730.0	1	
44	40260.0	40380.0	751.0	1	
44	40380.0	40440.0	600.0	1	
44	40440.0	40500.0	298.0	1	
44	40500.0	57600.0	120.0	1	
46	19800.0	27600.0	598.0	1	Incore Thermocouple J09.
46	27600.0	27660.0	618.0	1	
46	27660.0	27720.0	570.0	1	
46	27840.0	27900.0	549.0	1	
46	27900.0	28800.0	548.0	1	
46	28800.0	36600.0	541.0	1	
46	36600.0	39960.0	518.0	1	
46	39960.0	40020.0	535.0	1	
46	40020.0	40080.0	541.0	1	
46	40140.0	40200.0	520.0	1	
46	40200.0	40260.0	615.0	1	
46	40260.0	40380.0	704.0	1	
46	40380.0	40440.0	550.0	1	
46	40440.0	40500.0	299.0	1	
46	40500.0	57600.0	120.0	1	
51	40020.0	42300.0	665.0	0	Cont High-Range Rad, coupled to
51	42300.0	43800.0	748.0	0	52, 55
51	43800.0	50400.0	475.0	0	
51	50400.0	64800.0	743.0	0	
55	19800.0	36600.0	100.0	0	RX Coolant flow loop 1A-1,
55	36600.0	36605.0	0.0	0	coupled to parameters 56,57.
58	21600.0	23400.0	0.3	0	Delta Temp
58	23400.0	25200.0	1.0	0	
58	25200.0	27000.0	0.6	0	
58	27000.0	28800.0	0.1	0	
58	28800.0	30600.0	-0.4	0	
58	30600.0	32400.0	-0.5	0	
58	34200.0	36000.0	-0.4	0	
58	36000.0	37800.0	-0.2	0	
58	37800.0	39600.0	-0.7	0	
58	39600.0	41400.0	-0.8	0	
58	41400.0	43200.0	-0.5	0	
58	43200.0	45000.0	0.6	0	

58	45000.0	46800.0	-0.5	0
58	46800.0	48600.0	-0.7	0
58	48600.0	50400.0	-0.8	0
58	54000.0	55800.0	-0.5	0
58	55800.0	57600.0	0.6	0
58	57600.0	59400.0	-0.5	0
58	59400.0	61200.0	-0.7	0
58	61200.0	63000.0	-0.8	0
59	36600.0	36605.0	0.0	0
62	19800.0	64800.0	2.3	0
63	19800.0	27600.0	569.5	0
63	27600.0	27630.0	583.5	0
63	27630.0	27720.0	560.0	0
63	27720.0	27840.0	547.5	0
63	27840.0	36600.0	543.5	0
63	36600.0	36630.0	546.0	0
63	36630.0	39960.0	506.5	0
63	39960.0	40050.0	542.7	0
63	40050.0	40200.0	611.2	0
63	40200.0	40500.0	617.2	0
63	40500.0	40530.0	387.2	0
63	40530.0	41220.0	234.1	0
63	41220.0	57600.0	160.2	0
67	19800.0	27600.0	59.0	0
67	27600.0	27630.0	47.0	0
67	27630.0	27720.0	40.0	0
67	27720.0	27840.0	5.0	0
67	27840.0	36600.0	3.0	0
67	36600.0	36630.0	6.5	0
67	36630.0	39960.0	1.0	0
67	39960.0	40050.0	91.5	0
67	40050.0	40200.0	106.0	0
67	40200.0	40500.0	99.0	0
67	40500.0	40530.0	20.0	0
67	40530.0	41220.0	-1.0	0
67	41220.0	57600.0	0.0	0
71	36660.0	36720.0	32.0	0
71	36720.0	36900.0	25.0	0
71	36900.0	38820.0	21.0	0
71	38820.0	40020.0	9.0	0
71	40020.0	40320.0	7.0	0
71	40320.0	40440.0	26.0	0
71	40440.0	57600.0	28.0	0
73	19800.0	36720.0	91.0	0
73	36720.0	40800.0	146.0	0
73	40800.0	46800.0	135.0	0
73	46800.0	57600.0	101.0	0
75	19800.0	36660.0	1089.0	1
75	36660.0	37200.0	1210.0	1
75	37200.0	37230.0	0.0	1
77	27600.0	27630.0	51.0	0
77	27630.0	27720.0	52.0	0
77	27720.0	27840.0	69.0	0
77	27840.0	33540.0	86.0	0
77	33540.0	33570.0	76.0	0
77	33570.0	33900.0	86.0	0
77	33900.0	36600.0	88.0	0
77	36600.0	36630.0	0.0	0
77	39990.0	40020.0	30.0	0
77	40020.0	40500.0	60.0	0

RX Coolant flow loop 1B-1,60,61
Tower 1 ZSC
T Ave loop 1A-1, coupled to
parameters 64-66.

DT Loop 1A-1, coupled to
parameters 63-70.

Reactor vessel NR level, coupled
to parameter 72.

Cont temp air EL 66, coupled to
parameter 74.

High head SI flow 1-P15B

Subcooling Monitor

77	40500.0	40530.0	65.0	0	
77	40530.0	40680.0	0.0	0	
77	40680.0	40740.0	31.0	0	
77	40740.0	41220.0	1.0	0	
77	41220.0	57600.0	51.0	0	
78	27600.0	27630.0	51.0	0	Subcooling Monitor
78	27630.0	27720.0	52.0	0	
78	27720.0	27840.0	69.0	0	
78	27840.0	33540.0	86.0	0	
78	33540.0	33570.0	76.0	0	
78	33570.0	33900.0	86.0	0	
78	33900.0	36600.0	88.0	0	
78	36600.0	36630.0	0.0	0	
78	39990.0	40020.0	-10.0	0	
78	40020.0	40140.0	-10.0	0	
78	40140.0	40440.0	-10.0	0	
78	40440.0	40500.0	60.0	0	
78	40500.0	40530.0	65.0	0	
78	40530.0	40680.0	0.0	0	
78	40680.0	40740.0	31.0	0	
78	40740.0	41220.0	1.0	0	
78	41220.0	57600.0	51.0	0	
79	19800.0	38100.0	0.2	0	Contmt press, coupled to
79	38100.0	40500.0	3.5	0	parameters 80-84.
79	40500.0	57600.0	0.2	0	
86	19800.0	27600.0	52.0	0	VCT level.
86	27600.0	27720.0	54.0	0	
86	30000.0	34200.0	52.0	0	
86	34200.0	57600.0	50.0	0	
87	19800.0	36660.0	39.0	0	Cont humidity unit no. 1.
87	36660.0	37200.0	100.0	0	
87	47400.0	57600.0	89.0	0	
88	19800.0	21600.0	8.0	0	Tower 1 Wind Speed 45M
88	23400.0	25200.0	9.0	0	
88	25200.0	27000.0	6.0	0	
88	27000.0	28800.0	11.0	0	
88	28800.0	30600.0	13.0	0	
88	30600.0	32400.0	12.0	0	
88	32400.0	34200.0	14.0	0	
88	34200.0	36000.0	10.0	0	
88	36000.0	37800.0	9.0	0	
88	37800.0	39600.0	15.0	0	
88	41400.0	43200.0	13.0	0	
88	43200.0	45000.0	11.0	0	
88	46800.0	48600.0	10.0	0	
88	48600.0	50400.0	12.0	0	
88	50400.0	52200.0	13.0	0	
88	52200.0	54000.0	12.0	0	
88	54000.0	55800.0	15.0	0	
88	55800.0	57600.0	13.0	0	
88	57600.0	59400.0	11.0	0	
88	61200.0	63000.0	10.0	0	
88	63000.0	64800.0	12.0	0	
89	27690.0	27720.0	0.0	0	Letdown line flow.
89	28800.0	28830.0	34.0	0	
89	36600.0	36630.0	0.0	0	
90	27600.0	27630.0	18.0	0	Charging line flow.
90	27630.0	27690.0	86.0	0	
90	27690.0	28800.0	96.0	0	
90	28800.0	28830.0	24.0	0	

90	36630.0	36660.0	10.0	0	
90	36960.0	37020.0	116.0	0	
90	37020.0	41400.0	120.0	0	
90	41400.0	41460.0	0.0	0	
98	19800.0	64800.0	0.2	0	SOLAR RAD
100	36600.0	40032.0	750.0	0	Containment low range
100	40032.0	40050.0	10000.0	0	
101	27600.0	27630.0	1.062E+00	0	STM GEN 1A-1 steam flow, coupled
101	27630.0	27660.0	1.681E+00	0	to parameter 102.
101	27690.0	27720.0	3.074E+00	0	
101	27720.0	27750.0	2.960E+00	0	
101	27750.0	27780.0	0.000E+00	0	
101	27840.0	27870.0	1.042E+00	0	
101	27870.0	27900.0	0.000E+00	0	
103	27600.0	27630.0	1.062E+00	0	STM GEN 1B-1 steam flow, coupled
103	27630.0	27660.0	1.681E+00	0	to parameter 104.
103	27690.0	27720.0	3.074E+00	0	
103	27720.0	27750.0	2.960E+00	0	
103	27750.0	27780.0	0.000E+00	0	
103	27840.0	27870.0	1.042E+00	0	
103	27870.0	27900.0	0.000E+00	0	
105	23400.0	25200.0	68.0	0	Outside temperature
105	28800.0	30600.0	67.0	0	coupled to 106
105	39600.0	41400.0	66.0	0	
105	43200.0	45000.0	67.0	0	
105	46800.0	48600.0	68.0	0	
105	48600.0	50400.0	67.0	0	
105	52200.0	54000.0	68.0	0	
105	54000.0	55800.0	67.0	0	
105	57600.0	59400.0	68.0	0	
105	59400.0	61200.0	67.0	0	
105	63000.0	64800.0	68.0	0	
107	36660.0	36720.0	33.0	0	Reactor vessel WR level, coupled
107	36720.0	36900.0	26.0	0	to parameter 108.
107	36900.0	38820.0	22.0	0	
107	38820.0	40020.0	10.0	0	
107	40020.0	40320.0	7.0	0	
107	40320.0	40440.0	30.0	0	
109	27600.0	27630.0	27.0	0	Steam generator level 1A-1,
109	27630.0	27720.0	20.0	0	coupled to parameters 110,111.
109	27720.0	27780.0	0.0	0	
109	32400.0	33000.0	15.0	0	
109	33000.0	57600.0	0.0	0	
112	27600.0	27630.0	27.0	0	Steam generator level 1B-1,
112	27630.0	27720.0	20.0	0	coupled to parameters 113,114.
112	27720.0	27780.0	0.0	0	
112	32400.0	33000.0	15.0	0	
112	33000.0	57600.0	0.0	0	
115	27600.0	27900.0	22.0	0	SG WR level SG A WR, coupled to
115	27900.0	33000.0	408.0	0	parameter 116.
115	33000.0	57600.0	390.0	0	
117	36600.0	38340.0	18.0	0	Charging area low range monitor
117	41400.0	52200.0	4.0	0	
118	27600.0	27900.0	22.0	0	SG WR level SG B WR, coupled to
118	27900.0	33000.0	408.0	0	parameter 119.
118	33000.0	57600.0	390.0	0	
120	36600.0	40032.0	750.0	0	Seal table monitor
120	40032.0	40050.0	10000.0	0	
121	27600.0	27630.0	1085.0	0	Steam generator pressure 1A-1
121	27630.0	27690.0	1055.0	0	coupled to parameters 122,123.

121	27690.0	27750.0	400.0	0
121	27750.0	27780.0	985.0	0
121	27780.0	27960.0	1055.0	0
121	27960.0	36600.0	1040.0	0
121	36600.0	40800.0	989.0	0
121	40800.0	43200.0	40.0	0
121	43200.0	57600.0	0.0	0
124	27600.0	27630.0	1085.0	0
124	27630.0	27690.0	1055.0	0
124	27690.0	27750.0	400.0	0
124	27750.0	27780.0	985.0	0
124	27780.0	27960.0	1055.0	0
124	27960.0	36600.0	1040.0	0
124	36600.0	40800.0	989.0	0
124	40800.0	43200.0	40.0	0
124	43200.0	57600.0	0.0	0
127	36900.0	43200.0	1.1	0
127	43200.0	54000.0	4.8	0
129	36600.0	36800.0	90.0	0
130	36620.0	36900.0	84.0	0
130	36900.0	54000.0	88.5	0
133	27600.0	27630.0	0.0	0
136	27600.0	27630.0	0.0	0
138	36600.0	36620.0	3.0	0
139	36600.0	36620.0	2.4	0
141	19800.0	21600.0	453.0	0
141	21600.0	23400.0	442.0	0
141	23400.0	25200.0	448.0	0
141	25200.0	27000.0	444.0	0
141	27000.0	28800.0	465.0	0
141	28800.0	30600.0	455.0	0
141	30600.0	32400.0	461.0	0
141	32400.0	34200.0	444.0	0
141	34200.0	36000.0	452.0	0
141	36000.0	37800.0	473.0	0
141	37800.0	39600.0	475.0	0
141	39600.0	41400.0	450.0	0
141	41400.0	43200.0	460.0	0
141	43200.0	45000.0	457.0	0
141	45000.0	46800.0	474.0	0
141	46800.0	48600.0	461.0	0
141	48600.0	50400.0	477.0	0
141	50400.0	52200.0	473.0	0
141	52200.0	54000.0	475.0	0
141	54000.0	55800.0	450.0	0
141	55800.0	57600.0	460.0	0
141	57600.0	59400.0	457.0	0
141	59400.0	61200.0	474.0	0
141	61200.0	63000.0	461.0	0
141	63000.0	64800.0	477.0	0
145	27540.0	29760.0	200.0	0
145	32100.0	32160.0	50.0	0
145	32160.0	36660.0	200.0	0
147	19800.0	50400.0	77.0	0
148	19800.0	50400.0	77.0	0
149	27660.0	27720.0	15.0	0
149	27720.0	27840.0	10.0	0
149	27840.0	33540.0	6.0	0
149	33540.0	36600.0	12.0	0
149	36600.0	36780.0	8.5	0

Steam generator pressure 1B-1
coupled to parameters 125,126.

Cont sump level B, coupled to
parameter 128.

Cont sump level A
Cont sump level A

STM GEN 1A-1 FDWTR flow, 134
STM GEN 1B-1 FDWTR flow, 137
Containment air particulate
U1 steam release line A coupled
Wind Direction, coupled to
142, 143, 144

SG A Aux feed flow
coupled to 146

RHR HX Outlet Temp A
RHR HX Outlet Temp B
PRZR relief tank pressure.

149	36780.0	36840.0	104.0	0	
149	36840.0	40020.0	31.0	0	
149	40020.0	41820.0	25.0	0	
149	41820.0	57600.0	22.0	0	
151	19800.0	27600.0	99.9	0	Power range 1, coupled to parameter 152-154.
151	27600.0	27660.0	55.0	0	
151	27660.0	27720.0	0.0	0	
155	27600.0	27630.0	607.0	0	RCS wide range temp hot leg A, coupled with 156.
155	27630.0	27720.0	540.0	0	
155	27720.0	27840.0	550.0	0	
155	27840.0	36600.0	545.0	0	
155	36600.0	36630.0	549.0	0	
155	36630.0	39960.0	518.0	0	
155	39960.0	40050.0	650.0	0	
155	40050.0	40200.0	705.0	0	
155	40200.0	40500.0	708.0	0	
155	40500.0	40530.0	390.0	0	
155	40530.0	41220.0	245.0	0	
155	41220.0	57600.0	160.0	0	
157	27600.0	27630.0	607.0	0	RCS wide range temp hot leg B, coupled to parameter 158.
157	27630.0	27720.0	540.0	0	
157	27720.0	27840.0	550.0	1	
157	27840.0	36600.0	545.0	1	
157	36600.0	36630.0	549.0	1	
157	36630.0	39960.0	518.0	1	
157	39960.0	40050.0	650.0	1	
157	40050.0	40200.0	706.0	1	
157	40200.0	40500.0	709.0	1	
157	40500.0	40530.0	390.0	1	
157	40530.0	41220.0	245.0	1	
157	41220.0	57600.0	160.0	1	
159	36680.0	64800.0	1.50E-02	0	U1 cont gas radiation.
163	19800.0	27600.0	540.0	0	RCS wide range temp cold leg A, coupled to parameter 164.
163	27600.0	27720.0	580.0	0	
163	27720.0	27840.0	545.0	0	
163	27840.0	36600.0	542.0	0	
163	36600.0	36660.0	543.0	0	
163	36660.0	39960.0	517.0	0	
163	39960.0	40200.0	600.0	0	
163	40200.0	40500.0	610.0	0	
163	40500.0	40560.0	378.0	0	
163	40560.0	41220.0	246.0	0	
163	41220.0	57600.0	160.0	0	
165	19800.0	27600.0	540.0	0	RCS wide range temp cold leg B, coupled to parameter 166.
165	27600.0	27720.0	580.0	0	
165	27720.0	27840.0	545.0	0	
165	27840.0	36600.0	542.0	0	
165	36600.0	36660.0	543.0	0	
165	36660.0	39960.0	517.0	0	
165	39960.0	40200.0	600.0	0	
165	40200.0	40500.0	610.0	0	
165	40500.0	40560.0	378.0	0	
165	40560.0	41220.0	246.0	0	
165	41220.0	57600.0	160.0	0	
167	19800.0	21600.0	453.0	0	Wind Direction, coupled to 168, 169, 170
167	21600.0	23400.0	443.0	0	
167	23400.0	25200.0	450.0	0	
167	25200.0	27000.0	447.0	0	
167	27000.0	28800.0	469.0	0	
167	28800.0	30600.0	459.0	0	

167	30600.0	32400.0	464.0	0	
167	32400.0	34200.0	446.0	0	
167	34200.0	36000.0	453.0	0	
167	36000.0	37800.0	473.0	0	
167	37800.0	39600.0	476.0	0	
167	39600.0	41400.0	452.0	0	
167	41400.0	43200.0	463.0	0	
167	43200.0	45000.0	461.0	0	
167	45000.0	46800.0	478.0	0	
167	46800.0	48600.0	464.0	0	
167	48600.0	50400.0	479.0	0	
167	50400.0	52200.0	474.0	0	
167	52200.0	54000.0	475.0	0	
167	54000.0	55800.0	450.0	0	
167	55800.0	57600.0	461.0	0	
167	57600.0	59400.0	459.0	0	
167	59400.0	61200.0	477.0	0	
167	61200.0	63000.0	465.0	0	
167	63000.0	64800.0	481.0	0	
171	36600.0	37980.0	9.00E-06	0	Aux bldg exhaust vent gas rad
171	39588.0	64800.0	4.70E-07	0	
172	36600.0	38340.0	18.0	0	Charging pump area high range
172	41400.0	52200.0	4.0	0	
173	28440.0	28500.0	10000.0	0	Source range 1 count rate,
173	28500.0	57600.0	1000.0	0	coupled to 174
175	27600.0	27660.0	4.00E-04	1	Interm range 1 current
175	27660.0	27720.0	1.00E-11	1	
175	27900.0	57600.0	1.00E-12	1	
176	27600.0	27660.0	6.00E-04	1	Interm range 2 current
176	27660.0	27720.0	1.00E-06	1	
176	27720.0	27780.0	1.00E-07	1	
176	27780.0	27900.0	1.00E-11	1	
176	27900.0	57600.0	1.00E-12	1	
177	19800.0	36720.0	98.0	0	Refuel wat storage tank level,
177	36720.0	37320.0	94.0	0	coupled to parameter 178.
177	37320.0	40800.0	91.0	0	
177	40800.0	41700.0	79.0	0	
177	41700.0	57600.0	31.0	0	
179	27600.0	32400.0	11.0	0	Condensate storage tank level
179	32400.0	57600.0	9.0	0	A, coupled to parameter 180.
184	27660.0	27720.0	115.0	0	PRZR Relief Tank Liquid Temp
184	27720.0	27840.0	110.0	0	
184	27840.0	33540.0	95.0	0	
184	33540.0	33600.0	110.0	0	
184	33600.0	36600.0	96.0	0	
184	36600.0	36780.0	150.0	0	
184	36780.0	36840.0	155.0	0	
184	36840.0	40020.0	205.0	0	
184	40020.0	41760.0	225.0	0	
184	41760.0	41820.0	175.0	0	
184	41820.0	57600.0	95.0	0	
185	27660.0	27720.0	76.0	0	PRZR Relief Tank Liquid Level
185	27720.0	27840.0	75.0	0	
185	27840.0	33540.0	71.0	0	
185	33540.0	33600.0	78.0	0	
185	33600.0	36600.0	72.0	0	
185	36600.0	36780.0	90.0	0	
185	36780.0	36840.0	100.0	0	
186	40080.0	40260.0	50.0	0	Low head SI flow
186	40260.0	40680.0	70.0	0	

186	40680.0	40740.0	865.0	0
186	40740.0	41640.0	850.0	0
186	41640.0	41700.0	250.0	0
187	27690.0	27750.0	180.0	0
187	29100.0	29160.0	0.0	0
187	36600.0	36630.0	180.0	0
187	40680.0	40710.0	130.0	0
187	40710.0	41640.0	131.0	0
187	41640.0	41700.0	165.0	0
187	41700.0	57600.0	168.0	0
190	21600.0	23400.0	-4.0	0
190	23400.0	25200.0	2.0	0
190	25200.0	27000.0	4.0	0
190	27000.0	28800.0	-16.0	0
190	28800.0	30600.0	-11.0	0
190	30600.0	32400.0	4.0	0
190	32400.0	34200.0	13.0	0
190	34200.0	36000.0	14.0	0
190	36000.0	37800.0	2.0	0
190	37800.0	39600.0	-36.0	0
190	39600.0	41400.0	4.0	0
190	41400.0	43200.0	-1.0	0
190	43200.0	45000.0	13.0	0
190	45000.0	46800.0	-5.0	0
190	46800.0	48600.0	-12.0	0
190	48600.0	50400.0	-9.0	0
190	50400.0	52200.0	0.0	0
190	52200.0	54000.0	-3.0	0
190	54000.0	55800.0	4.0	0
190	55800.0	57600.0	-1.0	0
190	57600.0	59400.0	13.0	0
190	59400.0	61200.0	-5.0	0
190	61200.0	63000.0	-12.0	0
190	63000.0	64800.0	-9.0	0
193	19800.0	21600.0	8.0	0
193	21600.0	23400.0	6.0	0
193	23400.0	25200.0	5.0	0
193	25200.0	27000.0	7.0	0
193	27000.0	28800.0	6.0	0
193	28800.0	30600.0	9.0	0
193	30600.0	32400.0	12.0	0
193	32400.0	34200.0	14.0	0
193	34200.0	36000.0	16.0	0
193	37800.0	39600.0	11.0	0
193	39600.0	41400.0	12.0	0
193	41400.0	43200.0	9.0	0
193	43200.0	45000.0	10.0	0
193	45000.0	46800.0	9.0	0
193	46800.0	48600.0	7.0	0
193	48600.0	50400.0	8.0	0
193	50400.0	52200.0	9.0	0
193	52200.0	54000.0	5.0	0
193	54000.0	55800.0	12.0	0
193	55800.0	57600.0	9.0	0
193	57600.0	59400.0	10.0	0
193	59400.0	61200.0	9.0	0
193	61200.0	63000.0	7.0	0
193	63000.0	64800.0	8.0	0
196	19800.0	25200.0	0.0	0
197	27670.0	28200.0	300.0	0

Low head SI/RHR flow

Sigma Theta, coupled to
191, 192

Wind Speed, coupled to
194, 195

Gross Megawatts
Feedwater Temperature

197	28200.0	37800.0	100.0	0	coupled to 198
199	27610.0	27640.0	300.0	0	Feedwater Pressure
199	27640.0	28200.0	115.0	0	coupled to 200
401	27620.0	27640.0	1.0	0	Pressurizer relief valve # 1-430
401	33540.0	33550.0	1.0	0	
401	36600.0	64800.0	1.0	0	
403	27600.0	64800.0	0.0	0	Unit 1 main gen breaker
404	27600.0	64800.0	0.0	0	Unit 2 main gen breaker
421	36645.0	64800.0	1.0	0	RCP 1A
422	36645.0	64800.0	1.0	0	RCP 1B
423	27720.0	64800.0	0.0	0	Source range trip block
424	27720.0	64800.0	0.0	0	Source range trip block
425	27720.0	64800.0	1.0	0	Interm range permissive
426	27720.0	64800.0	1.0	0	Interm range permissive

9.2 Plant and Meteorological Parameters - Analogue

T ave, Deg F

Loop A T Hot/T Cold, Deg F

Loop B T Hot/T Cold, Deg F

SG A/B WR Level, Inches

SG A FD Water, pph

SG B FD Water, pph

Interim Range Det, amps

Source Range Det, cnts

RV Level WR, ft

Cont Pressure, psig

Pressurizer Level, %

RCS Pressure, psig

VCT Level, %

Subcooling, Deg F

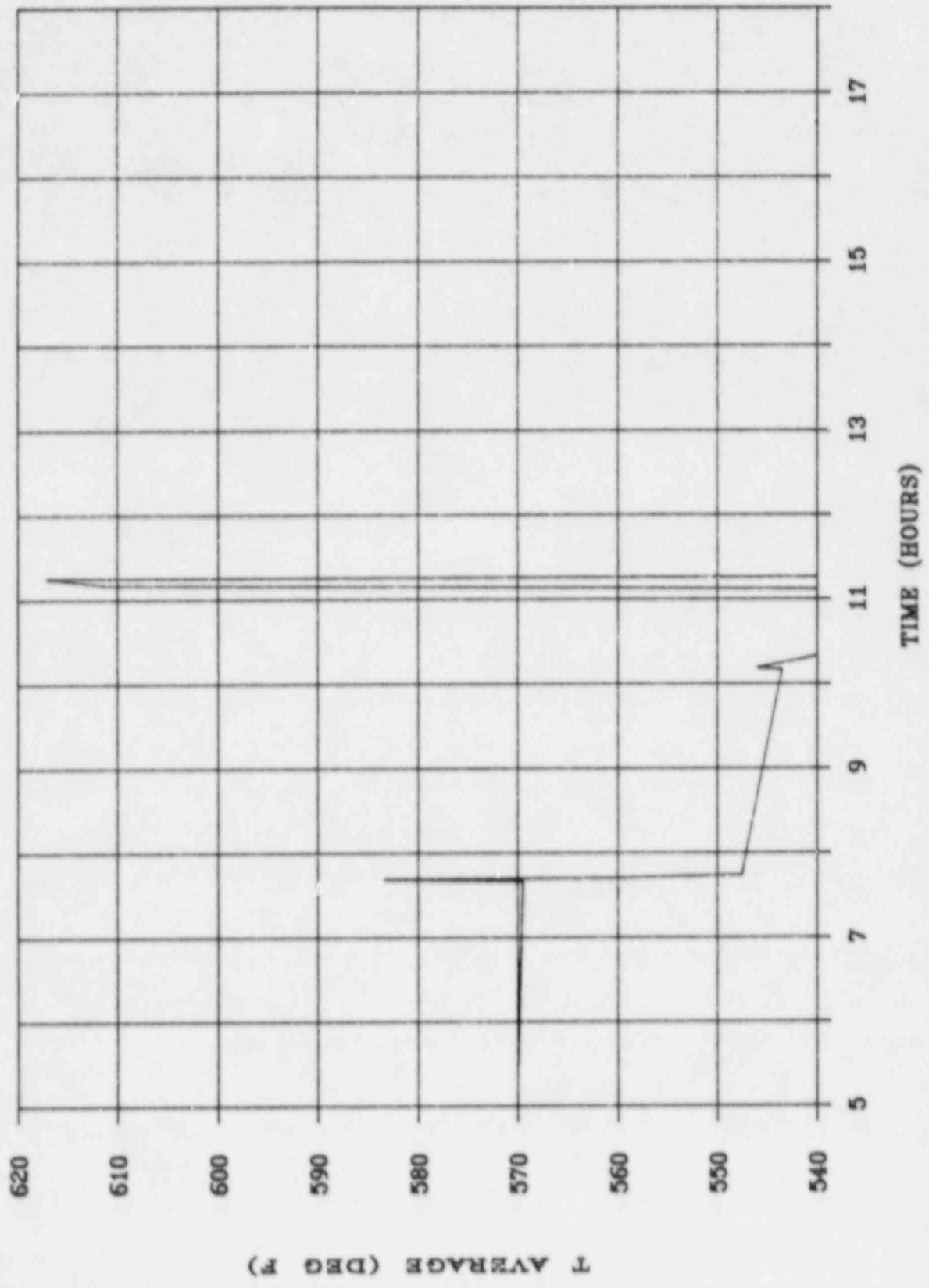
Sigma Theta, Deg

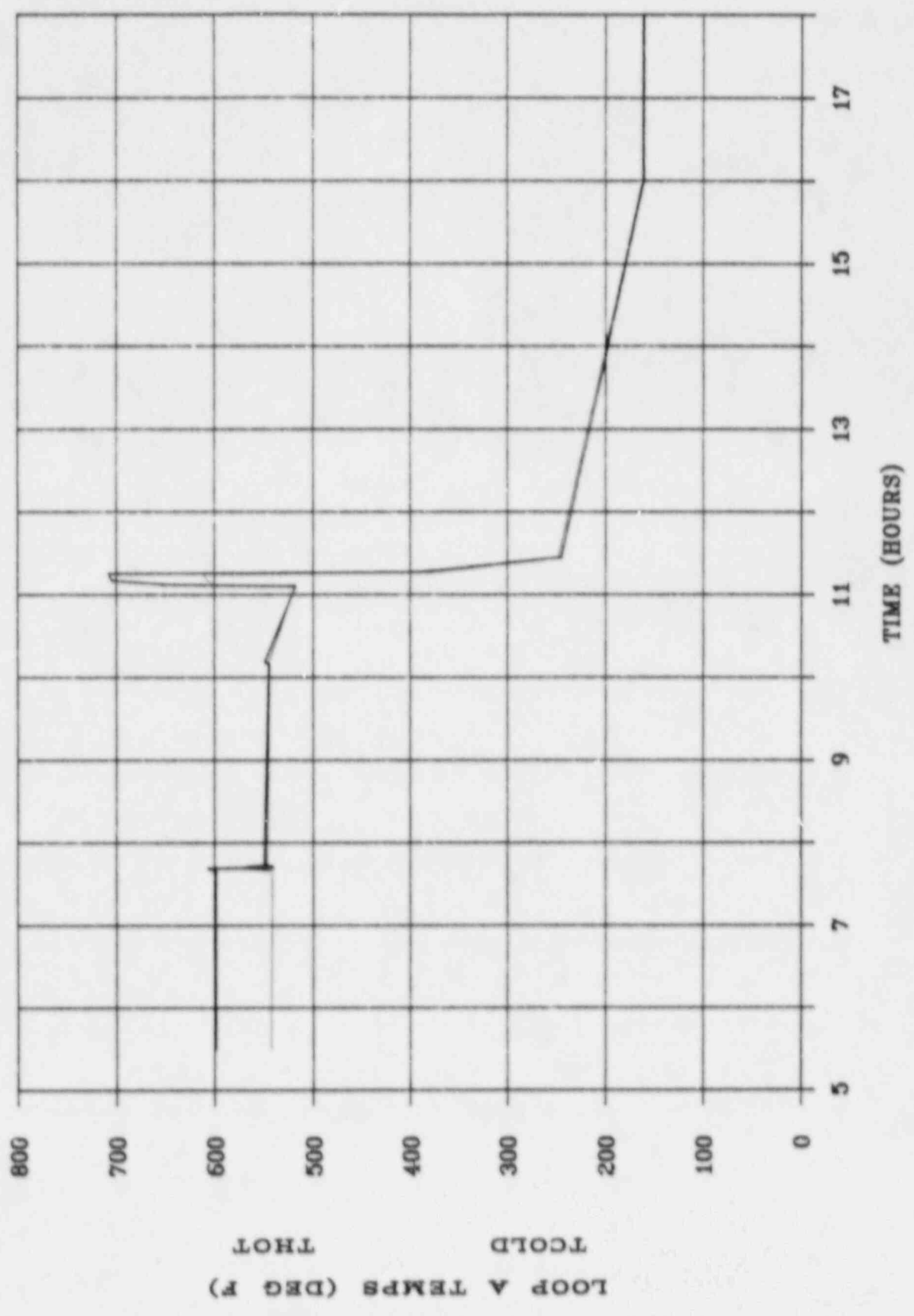
Delta T. Delta H, deg F

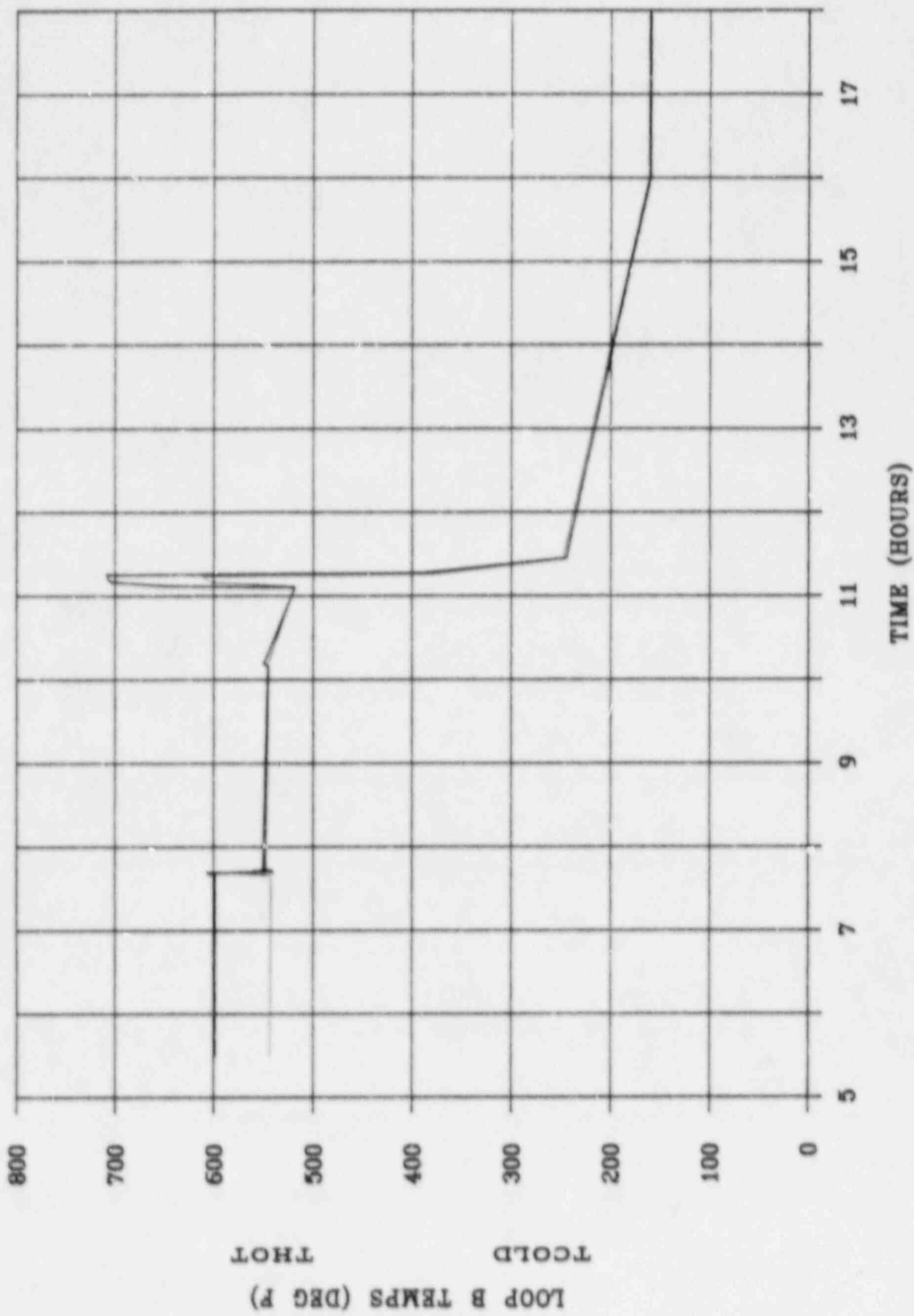
Wind Speed, mph (primary/inland)

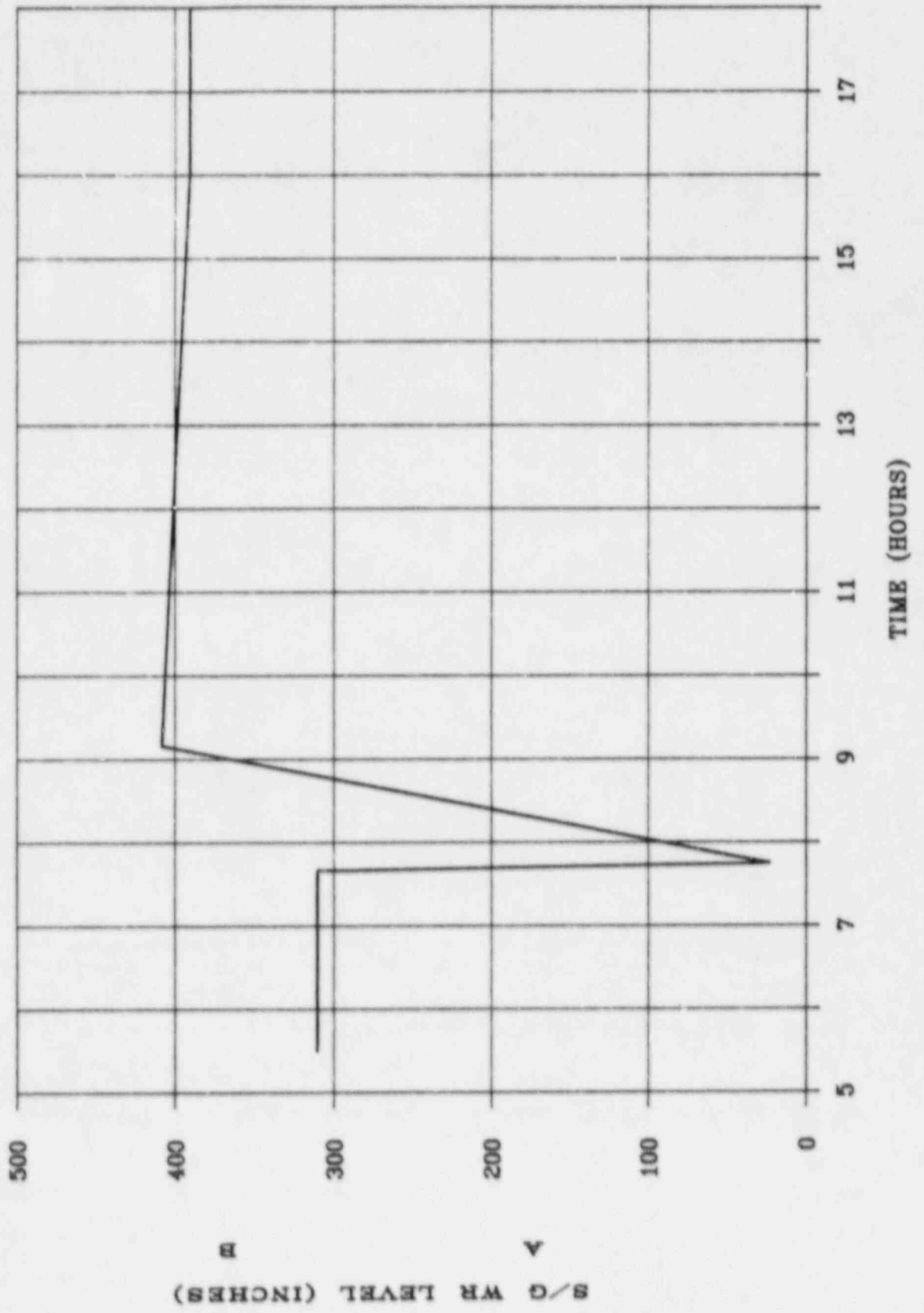
Wind Direction, deg (primary/inland)

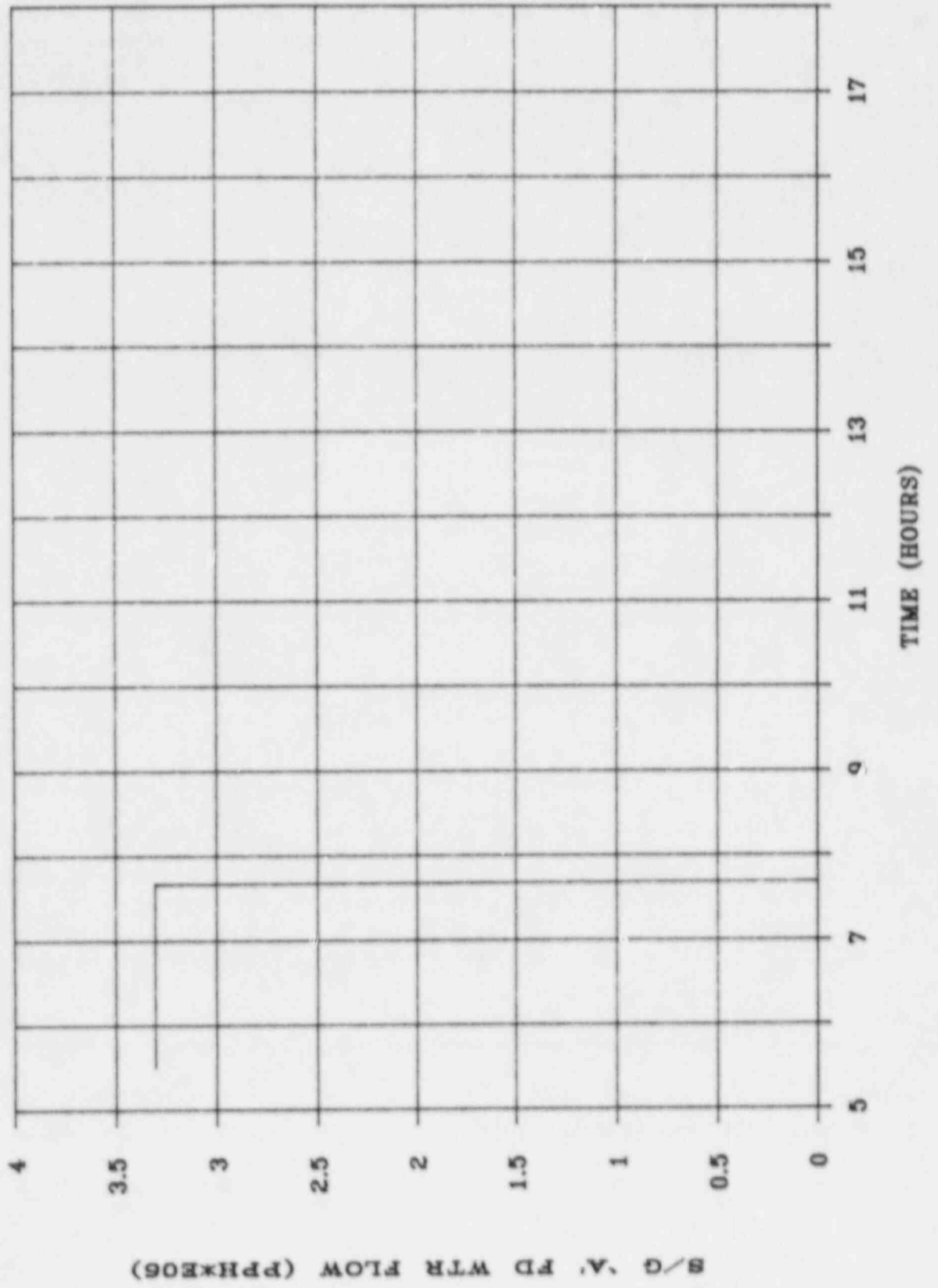
NOTE: THE GRAPHS ABOVE REPRESENT CONTROL ROOM STRIP CHARTS AND WILL BE AVAILABLE IN THE DRILL CONTROL ROOM.

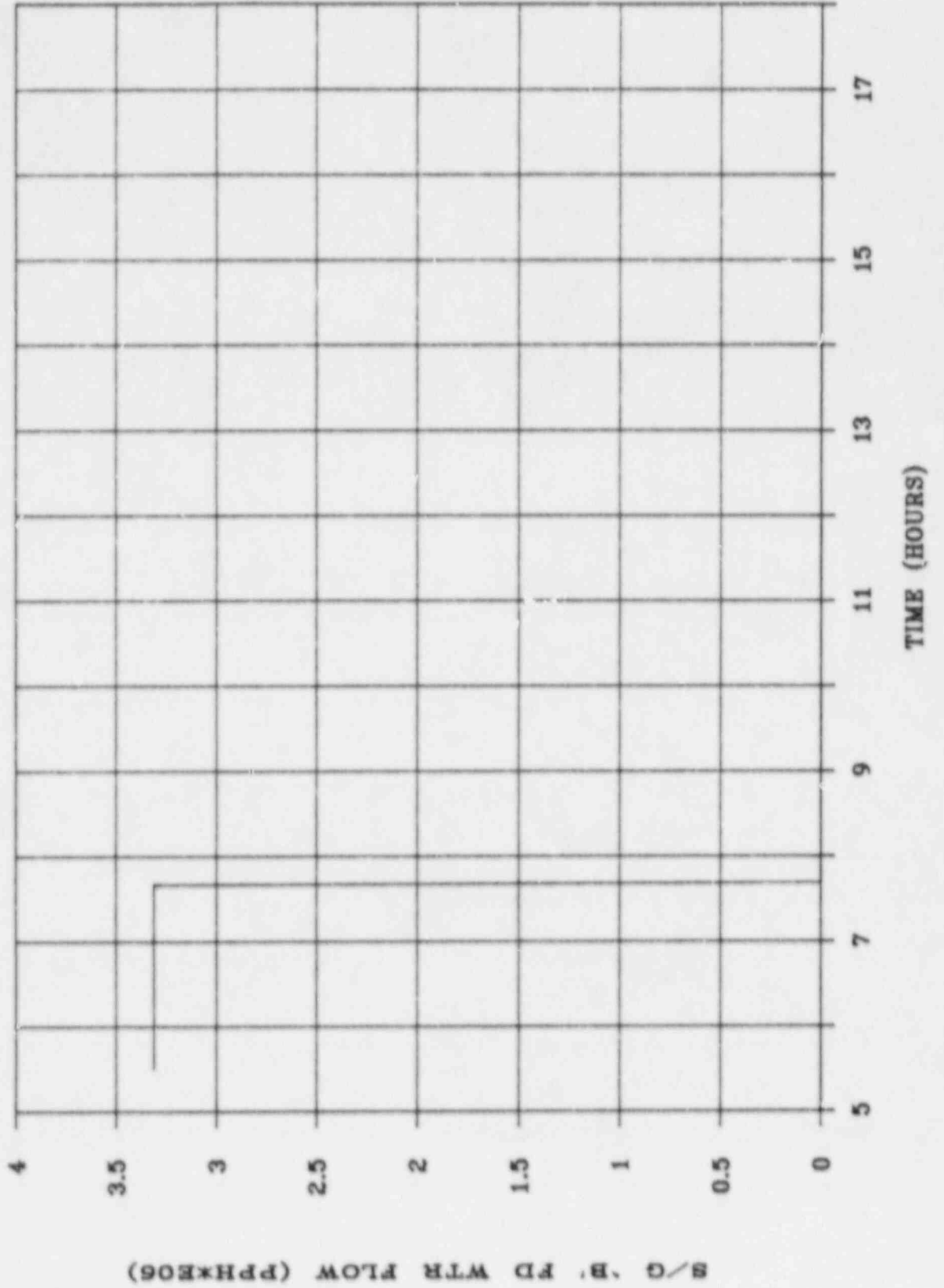




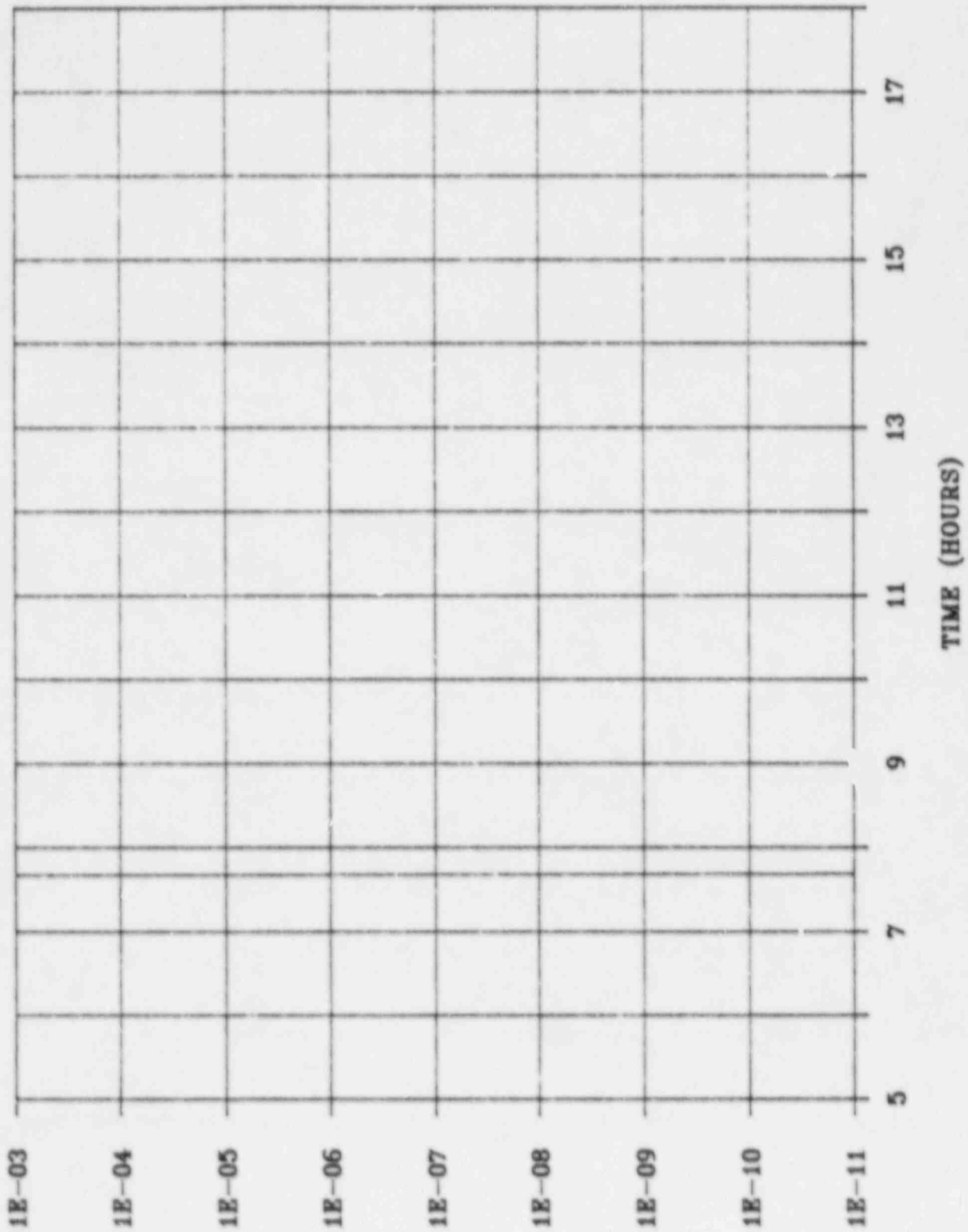


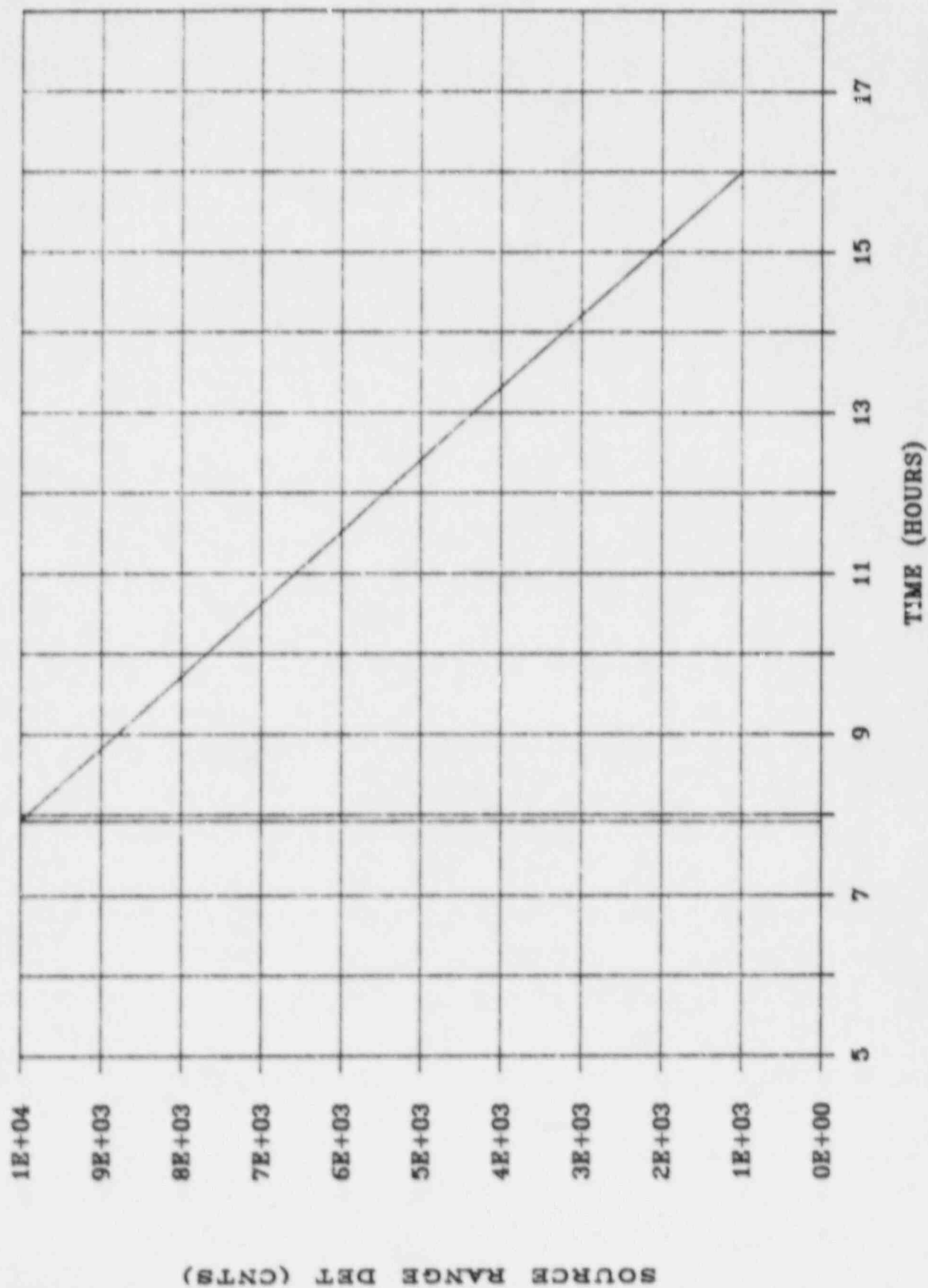


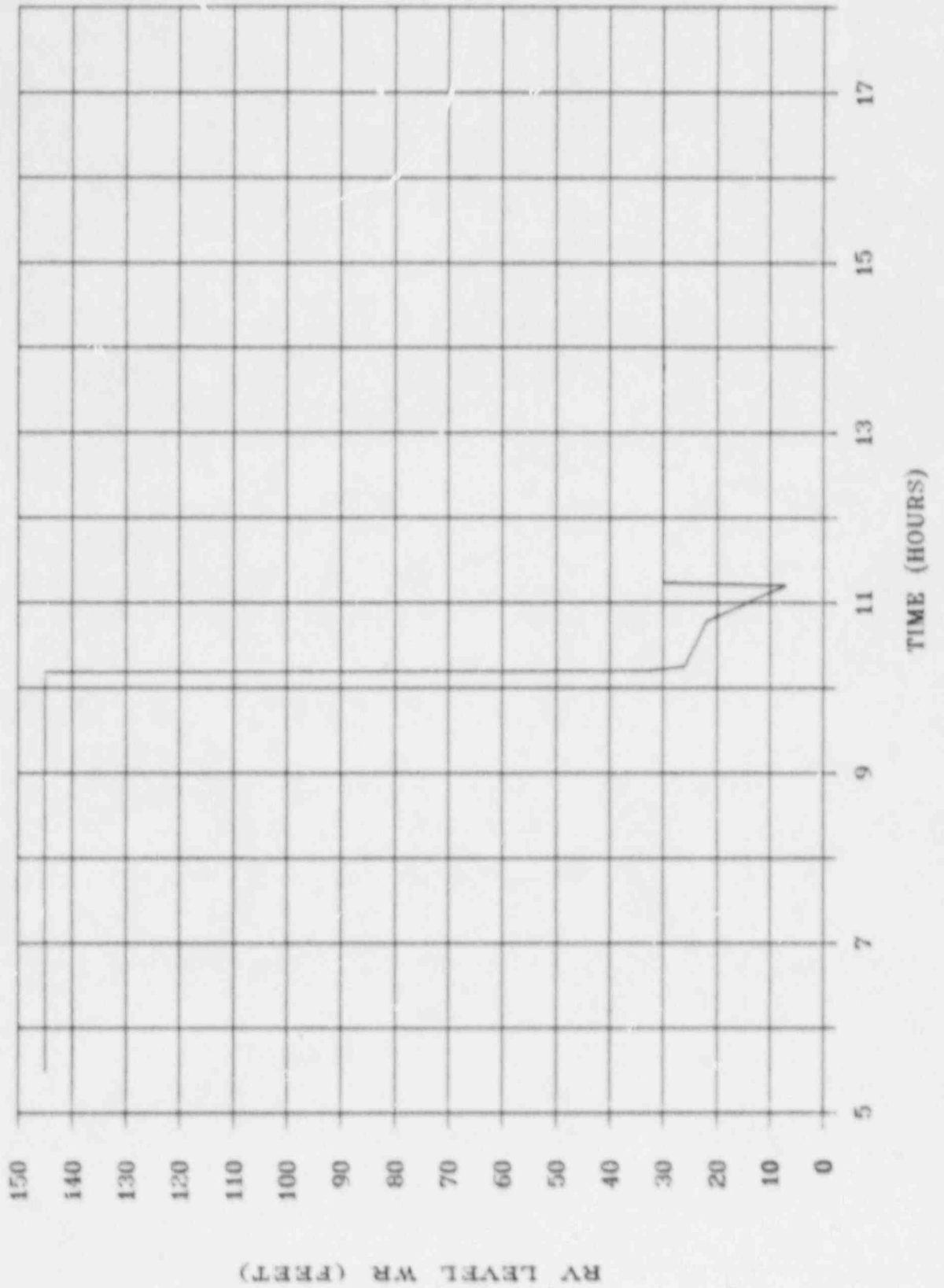


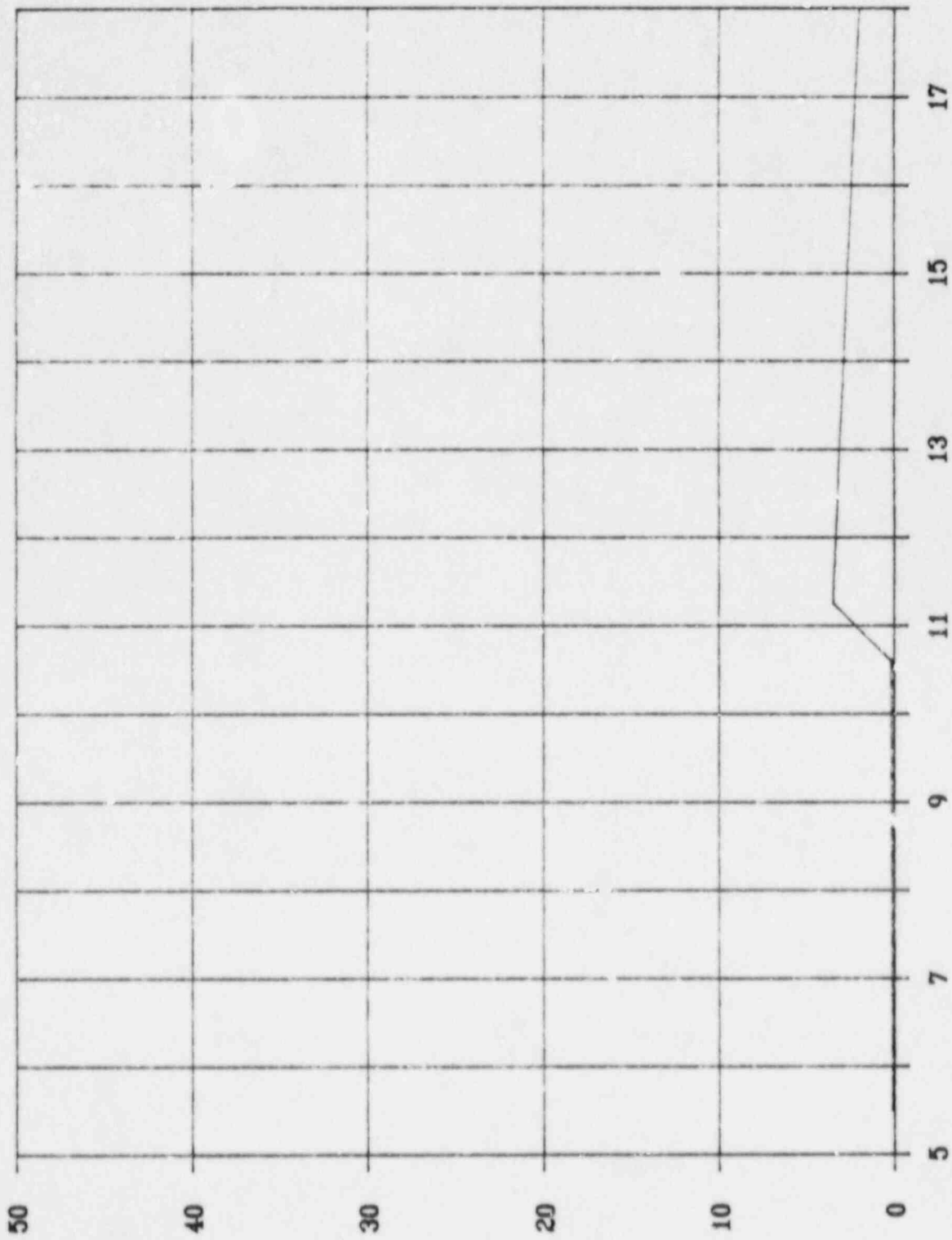


INTERM. RANGE DET (AMPS)



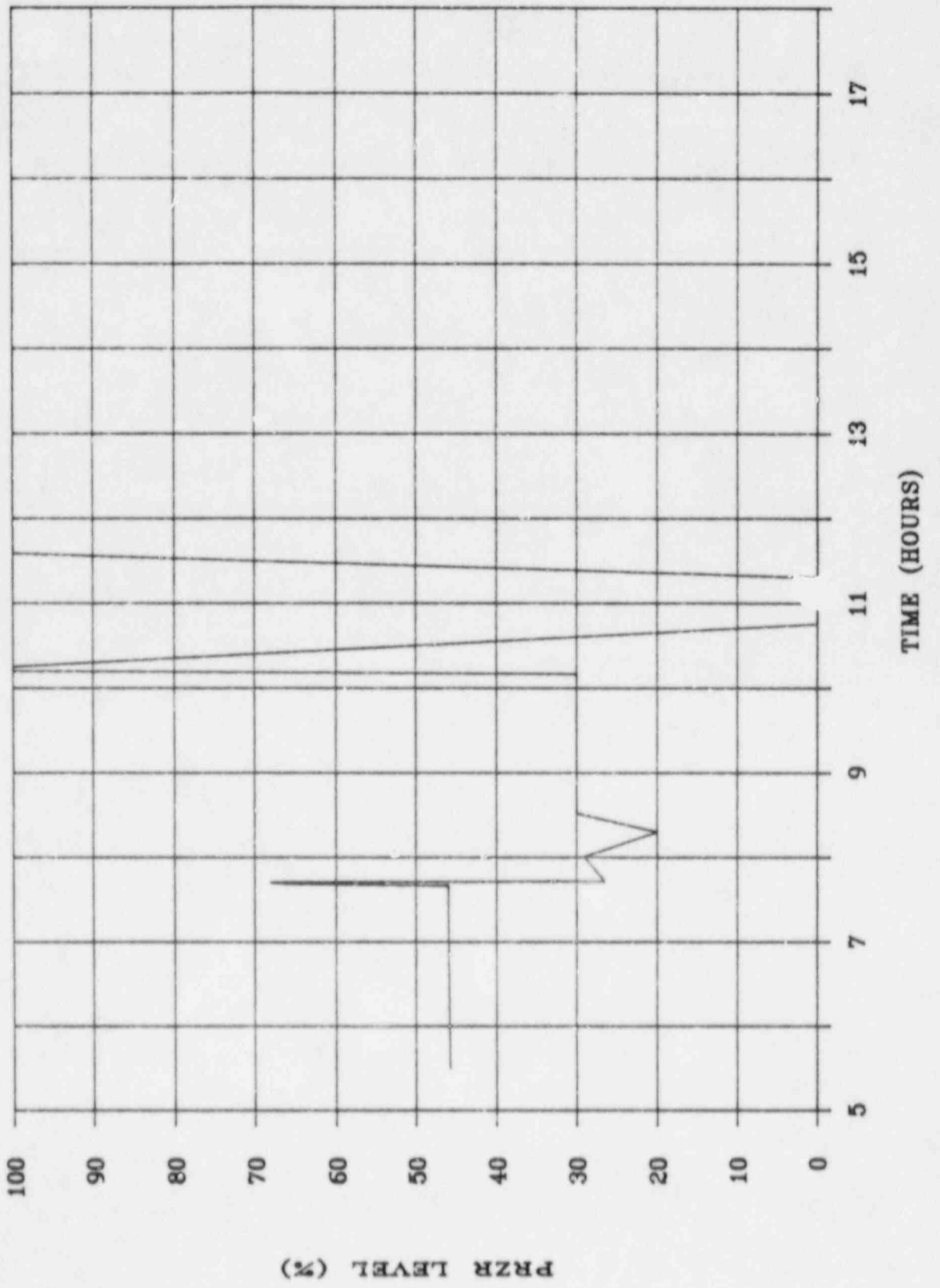


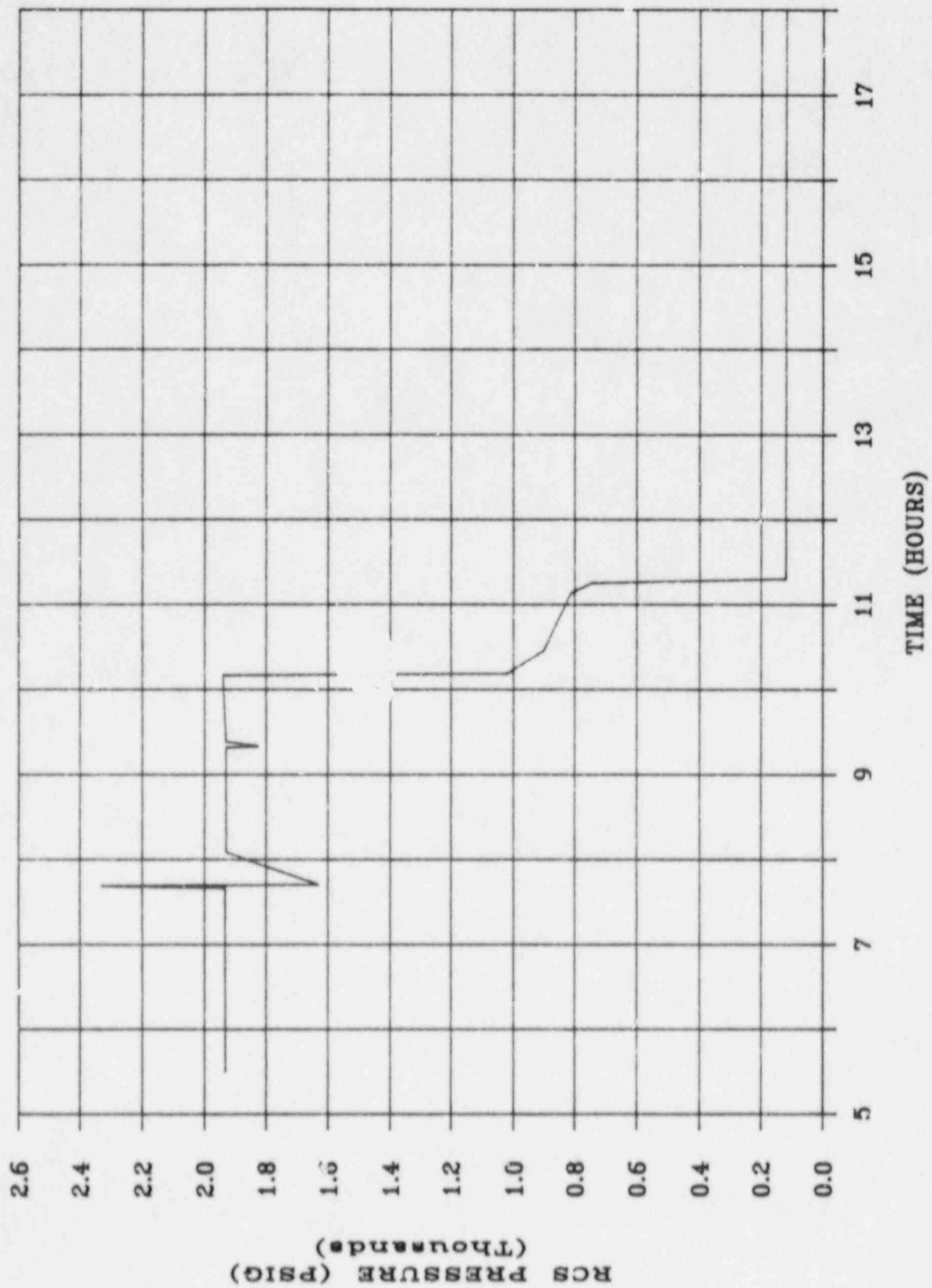


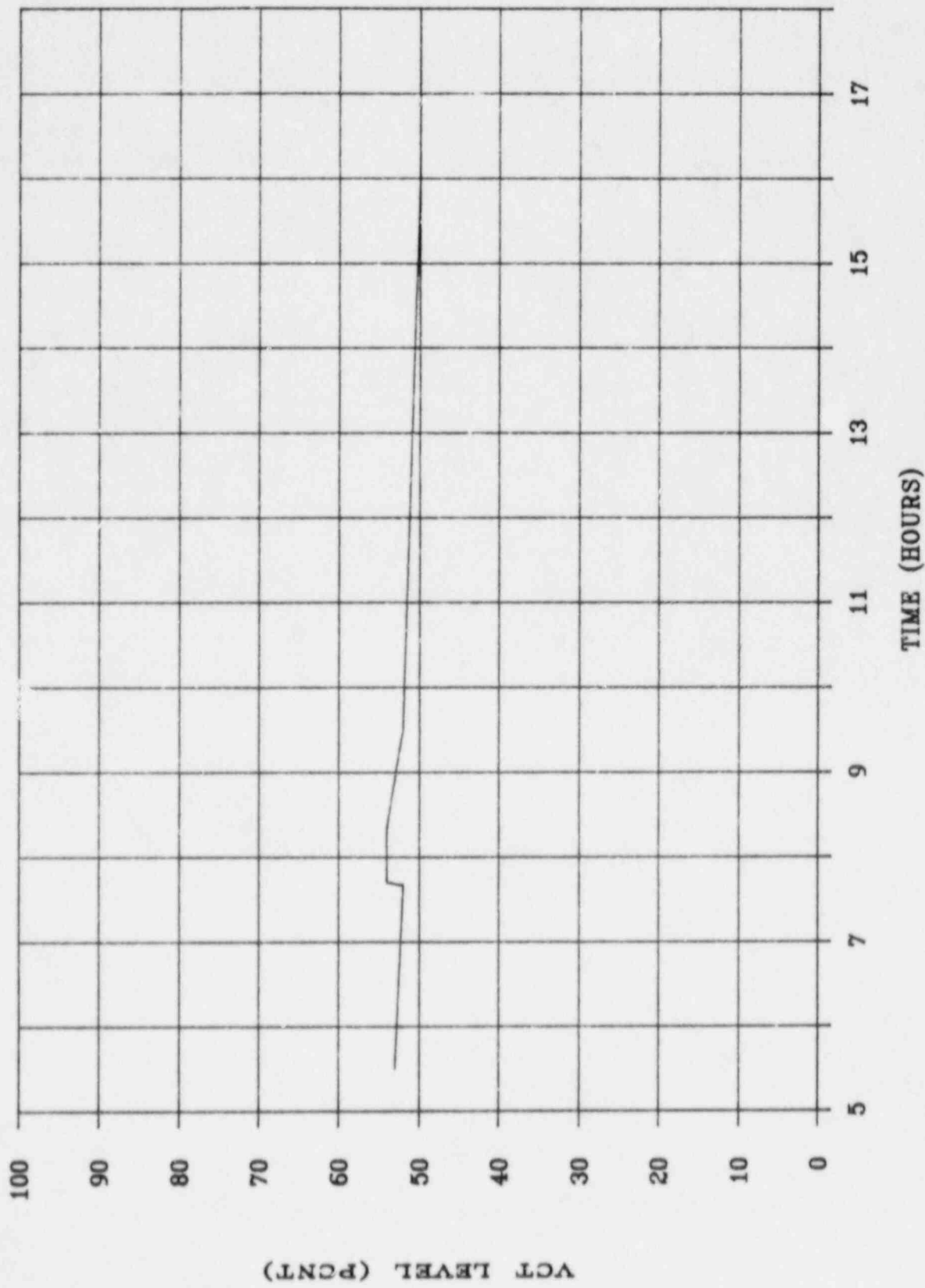


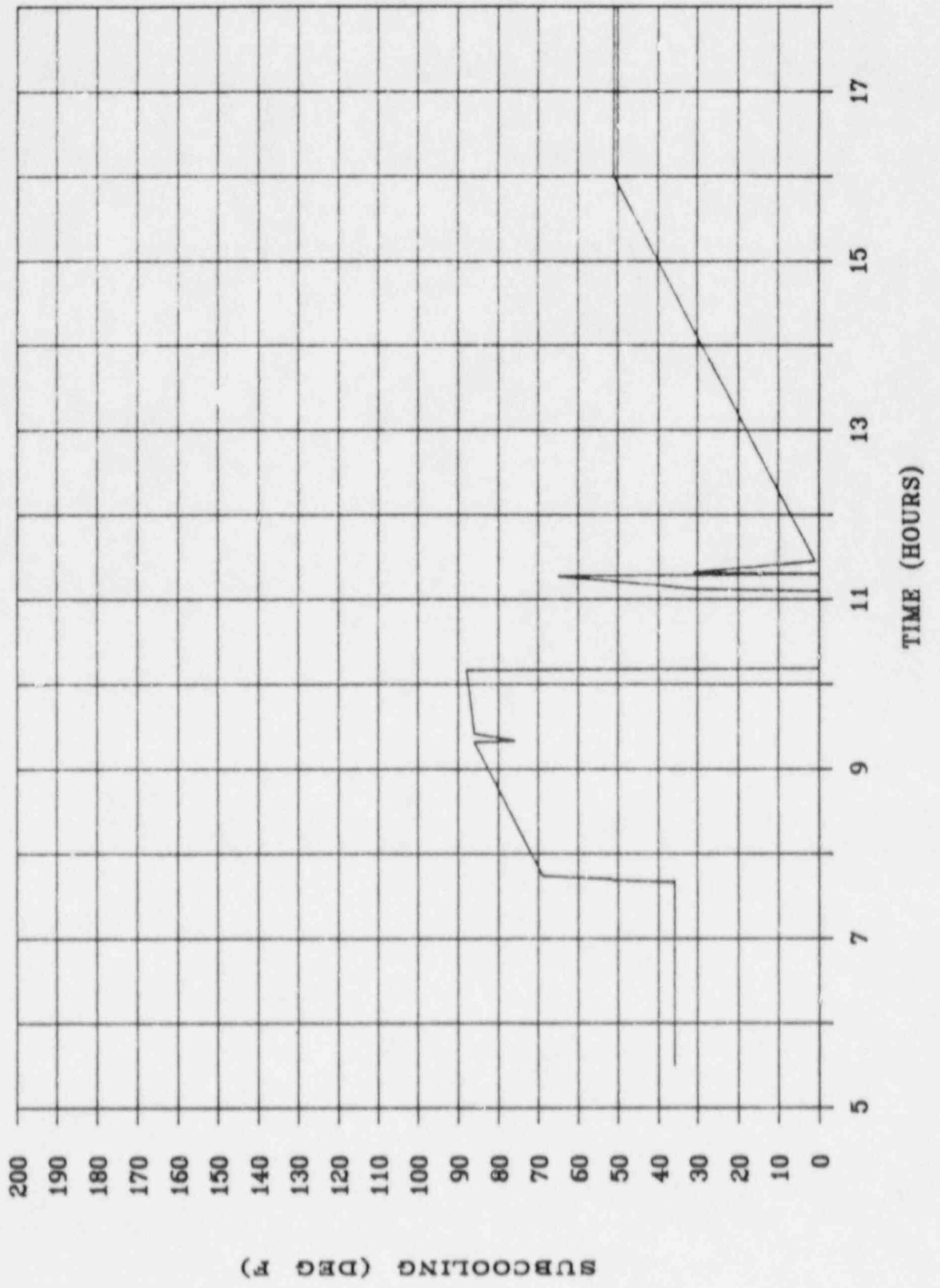
CONTAINMENT PRESSURE (PSIG)

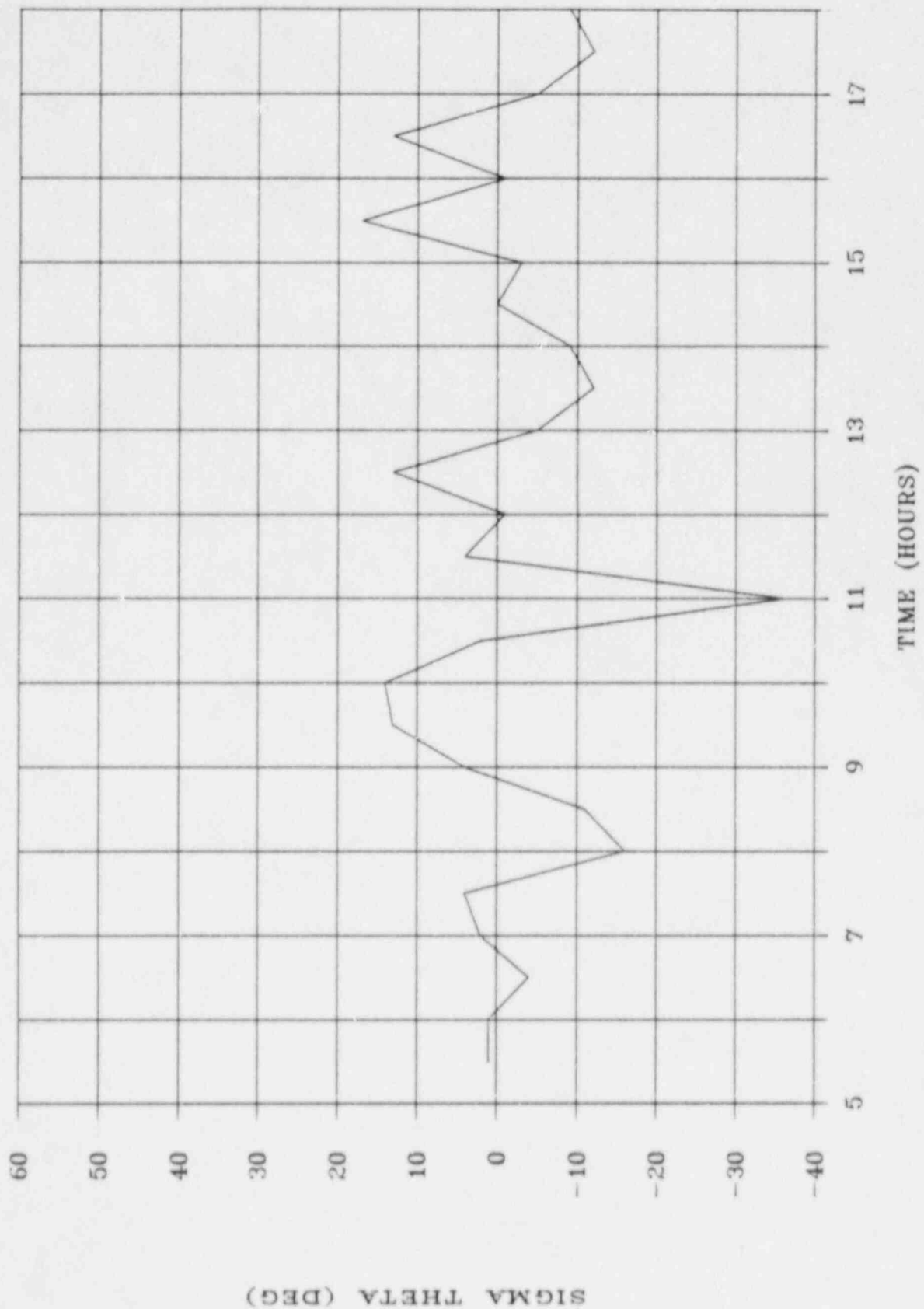
TIME (HOURS)

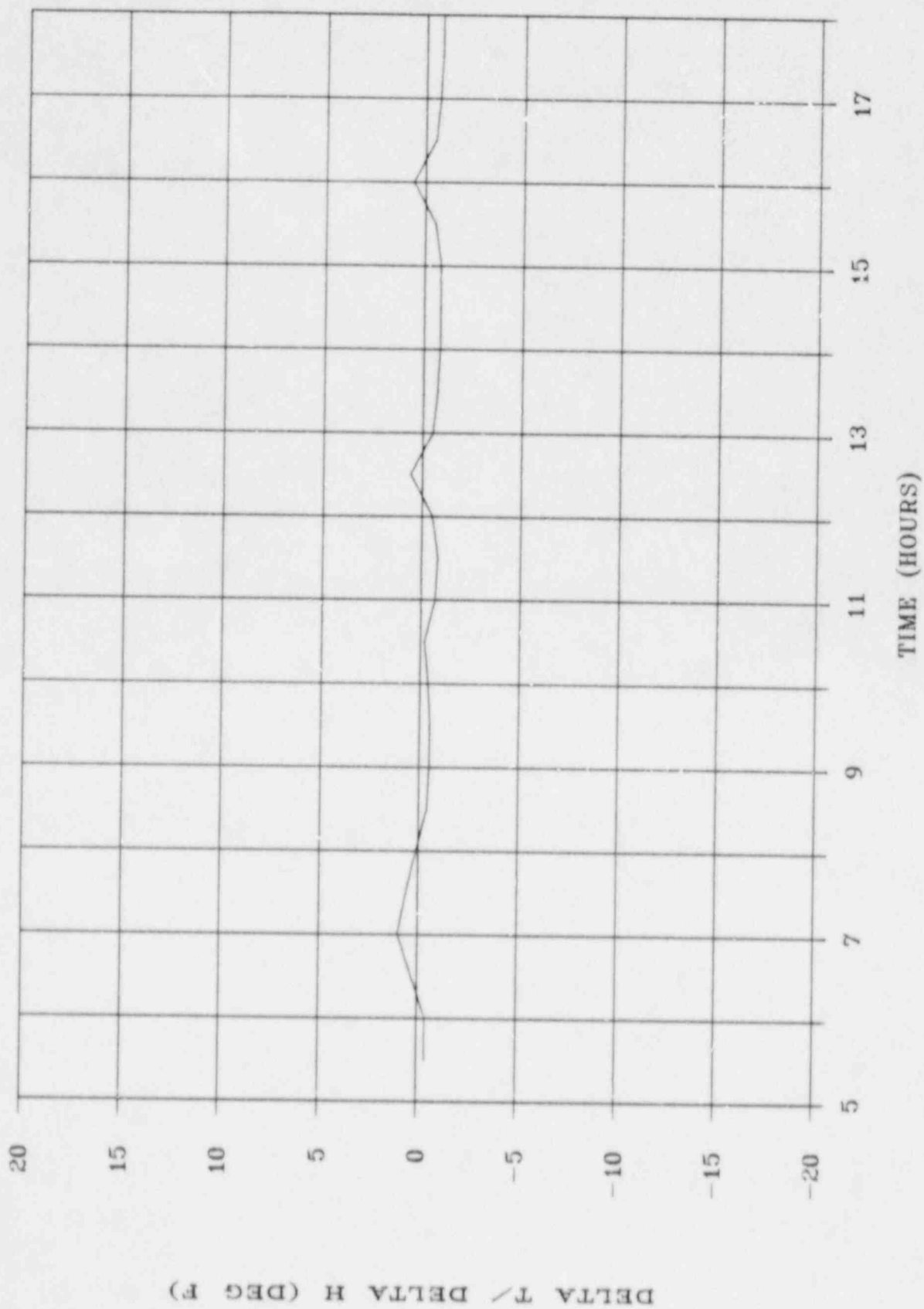


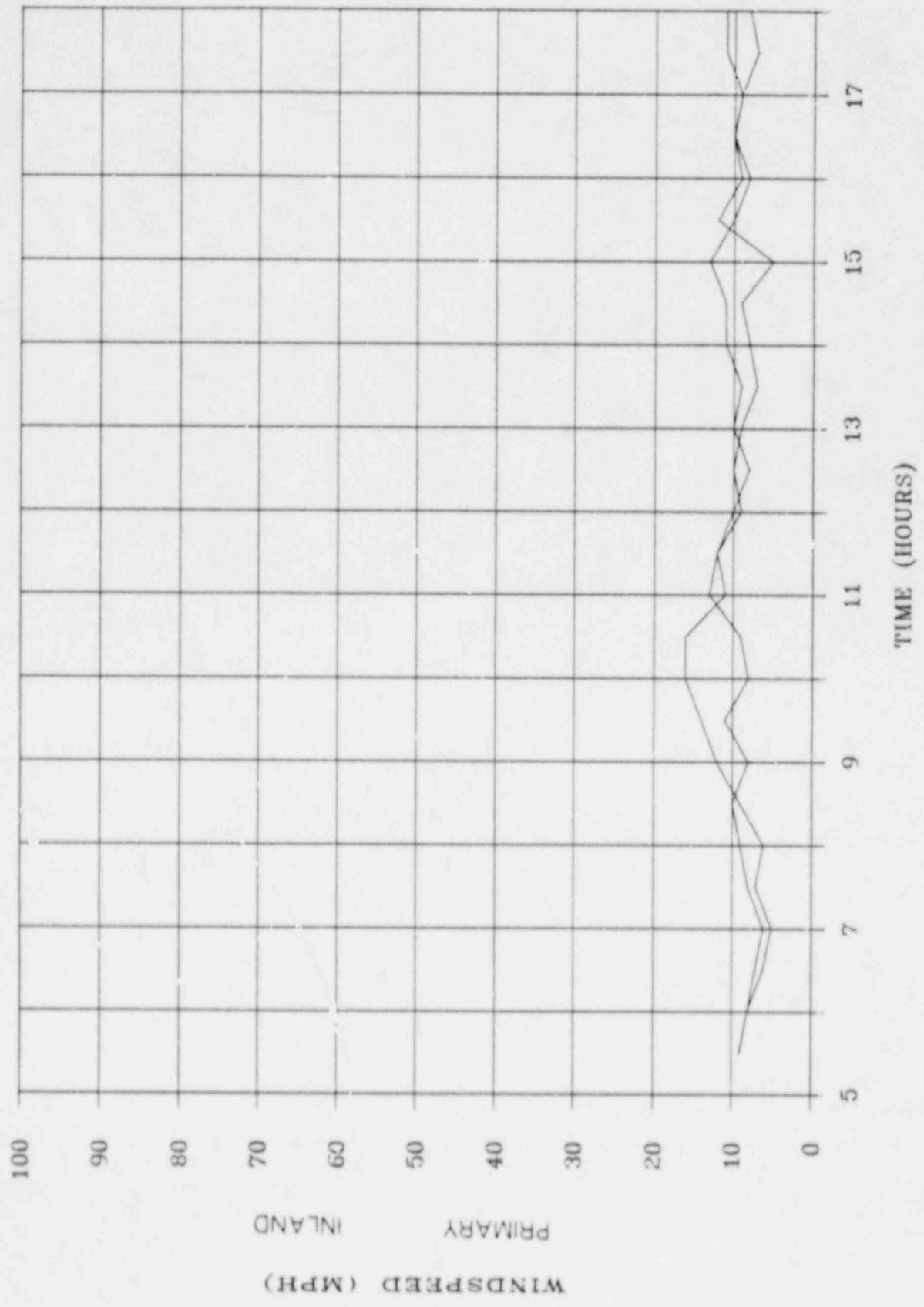


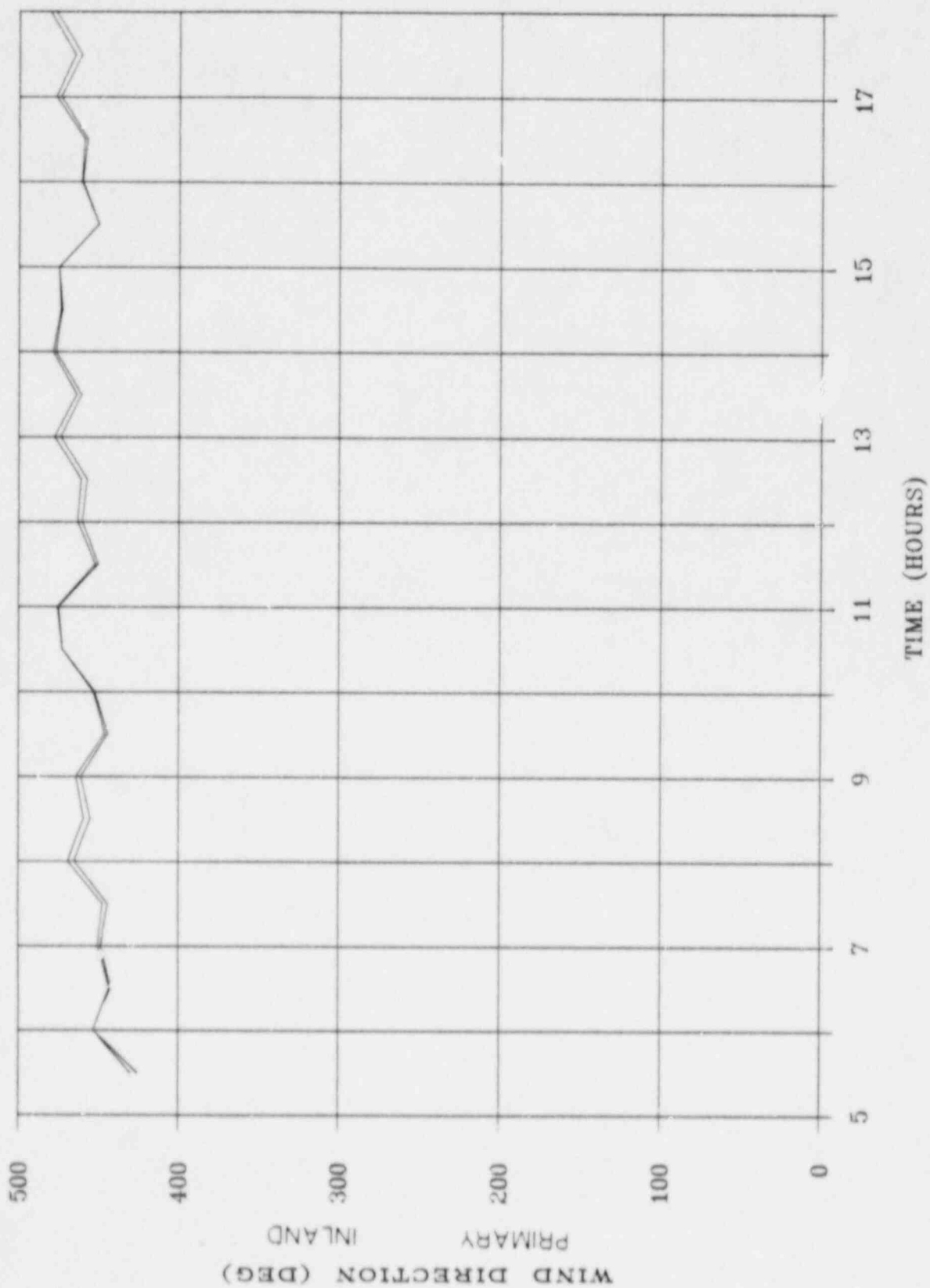












9.3 Radiological Monitoring System

9.3.1 Simulator Data (IBM-PC)

9.3.2 Analogue

CONTROLLER NOTE: GRAPHS ARE ARRANGED BY MONITOR IN NUMERIC ORDER

CUE# = 1 TIME = 5 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 2 TIME = 5 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 3 TIME = 5 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 4

TIME = 6 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 5

TIME = 6 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 6

TIME = 6 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 7 TIME = 6 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 8 TIME = 6 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 9 TIME = 6 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 10

TIME = 7 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 11

TIME = 7 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 12

TIME = 7 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 13 TIME = 7 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 14 TIME = 7 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 15 TIME = 7 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 16

TIME = 8 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 17

TIME = 8 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 18

TIME = 8 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 19

TIME = 8 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 20

TIME = 8 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 21

TIME = 8 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 22 TIME = 9 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 23 TIME = 9 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 24 TIME = 9 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 25

TIME = 9 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 26

TIME = 9 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 27

TIME = 9 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 28 TIME = 10 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = .0014
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS:

CUE# = 29 TIME = 10 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-212 1-211

CUE# = 30 TIME = 10 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000002
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-211 1-212 214

CUE# = 31 TIME = 10 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = 9.000001E-06
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212 214

CUE# = 32 TIME = 10 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .000004
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212 214

CUE# = 33 TIME = 10 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 34 TIME = 11 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 35 TIME = 11 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 36 TIME = 11 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 37 TIME = 11 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 38 TIME = 11 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 39 TIME = 11 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 40 TIME = 12 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 41 TIME = 12 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 42 TIME = 12 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 43 TIME = 12 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 44 TIME = 12 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 45 TIME = 12 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 46 TIME = 13 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 47 TIME = 13 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 48 TIME = 13 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 49 TIME = 13 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .00000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 50 TIME = 13 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .00000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 51 TIME = 13 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .00000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 52 TIME = 14 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 53 TIME = 14 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-104 1-107 1-211 1-212

CUE# = 54 TIME = 14 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 55 TIME = 14 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 56 TIME = 14 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 57 TIME = 14 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 58 TIME = 15 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 59 TIME = 15 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 60 TIME = 15 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 61 TIME = 15 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 62 TIME = 15 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 63 TIME = 15 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 64 TIME = 16 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 65 TIME = 16 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 66 TIME = 16 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 67

TIME = 16 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 68

TIME = 16 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 69

TIME = 16 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 70 TIME = 17 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 71 TIME = 17 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 72 TIME = 17 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 73 TIME = 17 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 74 TIME = 17 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 75 TIME = 17 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 76 TIME = 18 : 0

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 77 TIME = 18 : 10

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 78 TIME = 18 : 20

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 79 TIME = 18 : 30

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 80 TIME = 18 : 40

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

CUE# = 81 TIME = 18 : 50

RELEASE MONITOR READINGS (uCi/cc)

AUX. BUILDING VENT = .0000005
DRUMMING AREA VENT = 5E-08
U1 CONT. PURGE = 2.5
U2 CONT. PURGE = .00438
GAS STRIPPER BLDG = 3.25E-08
COMB. AIR EJECTOR = .0000295
STEAM LINE = .004

ALARMING MONITORS: 1-102 1-107 1-211 1-212

9.3.2

RMS MONITOR READINGS

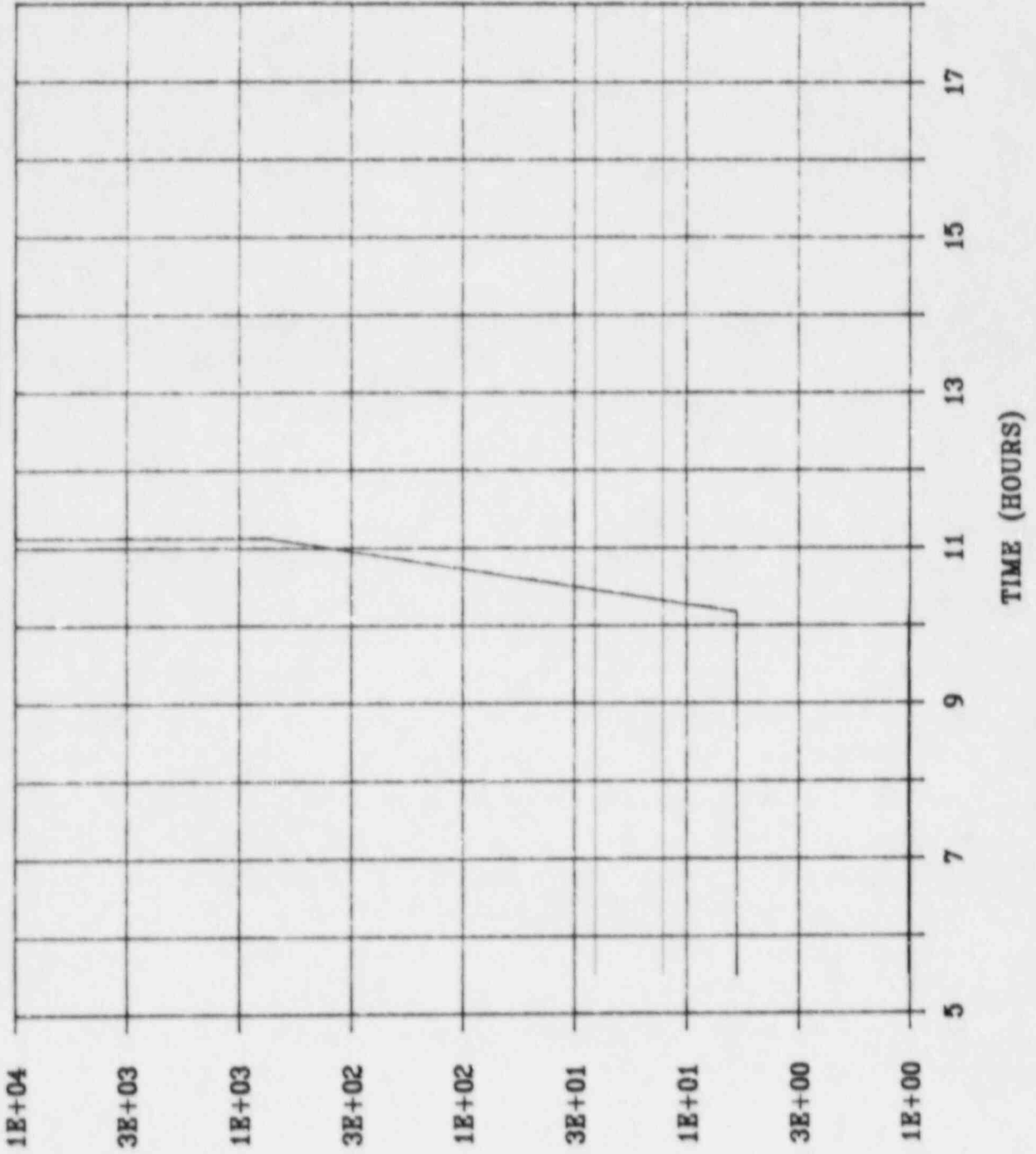
TREND HISTORY: STABLE

MONITOR	: READING	MONITOR	: READING
RE-101	: 6.03E-02	1RE-215	: 8.19E-06
RE-103	: 8.71E-02	1RE-216	: 2.00E-07
RE-105	: 7.39E-01	1RE-217	: 1.79E-06
*1RE-106	: 3.91E+00	RE-218	: 1.53E-05
RE-108	: 6.12E+00	1RE-219	: 7.62E-06
*1RE-109	: 9.97E+00	RE-220	: 5.00E-05
RE-110	: 2.42E+00	RE-221	: 4.17E-08
RE-111	: 1.39E+01	1RE-222	: 8.73E-03
RE-112	: 2.95E-01	RE-223	: 2.28E-06
RE-113	: 2.99E-00	RE-224	: 3.25E-08
RE-114	: 1.18E+00	RE-225	: 2.95E-05
RE-116	: 1.96E+01	RE-226	: 2.62E-02
RE-135	: 1.80E+01	RE-229	: 2.00E-07
1RE-136	: 1.82E+01	RE-230	: 9.50E-08
RE-140	: 1.20E+00	1RE-231	: 2.33E-03
		1RE-232	: 4.00E-03
		RE-234	: 1.07E-04
		RE-235	: 3.23E-07
		RE-237	: 3.50E+01
		RE-238	: 3.00E+00
		RE-241	: 2.50+01
		RE-242	: 1.20+02

* NOTE: IF A PASS SAMPLE IS TAKEN AFTER 1107 AND
CONTAINMENT IS UNISOLATED, THESE MONITORS
WILL GO INTO "HIGH ALARM" AND READ 40-50 MREM/HR.

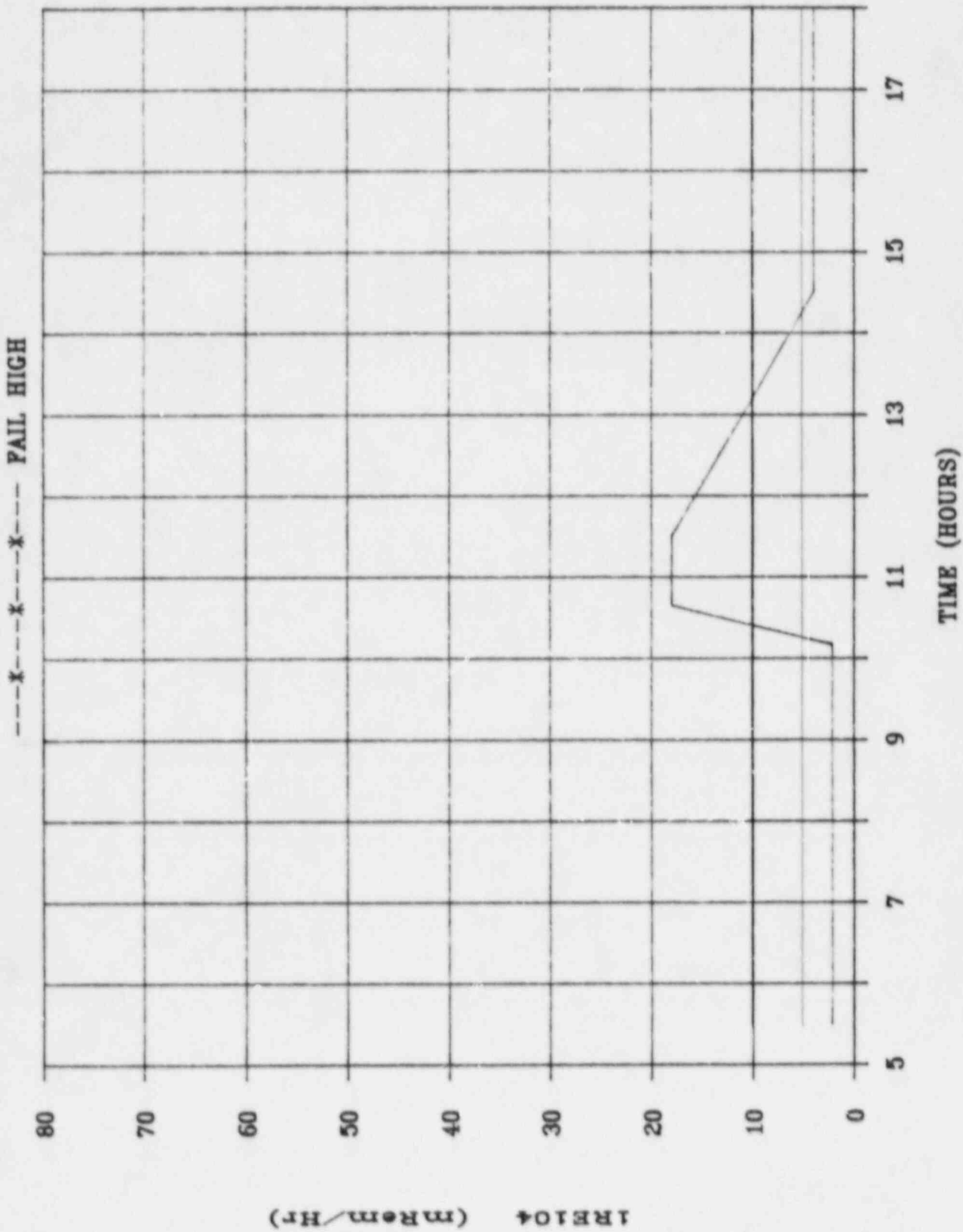
CONTAINMENT LOW RANGE

---x---x---x--- PAIL HIGH



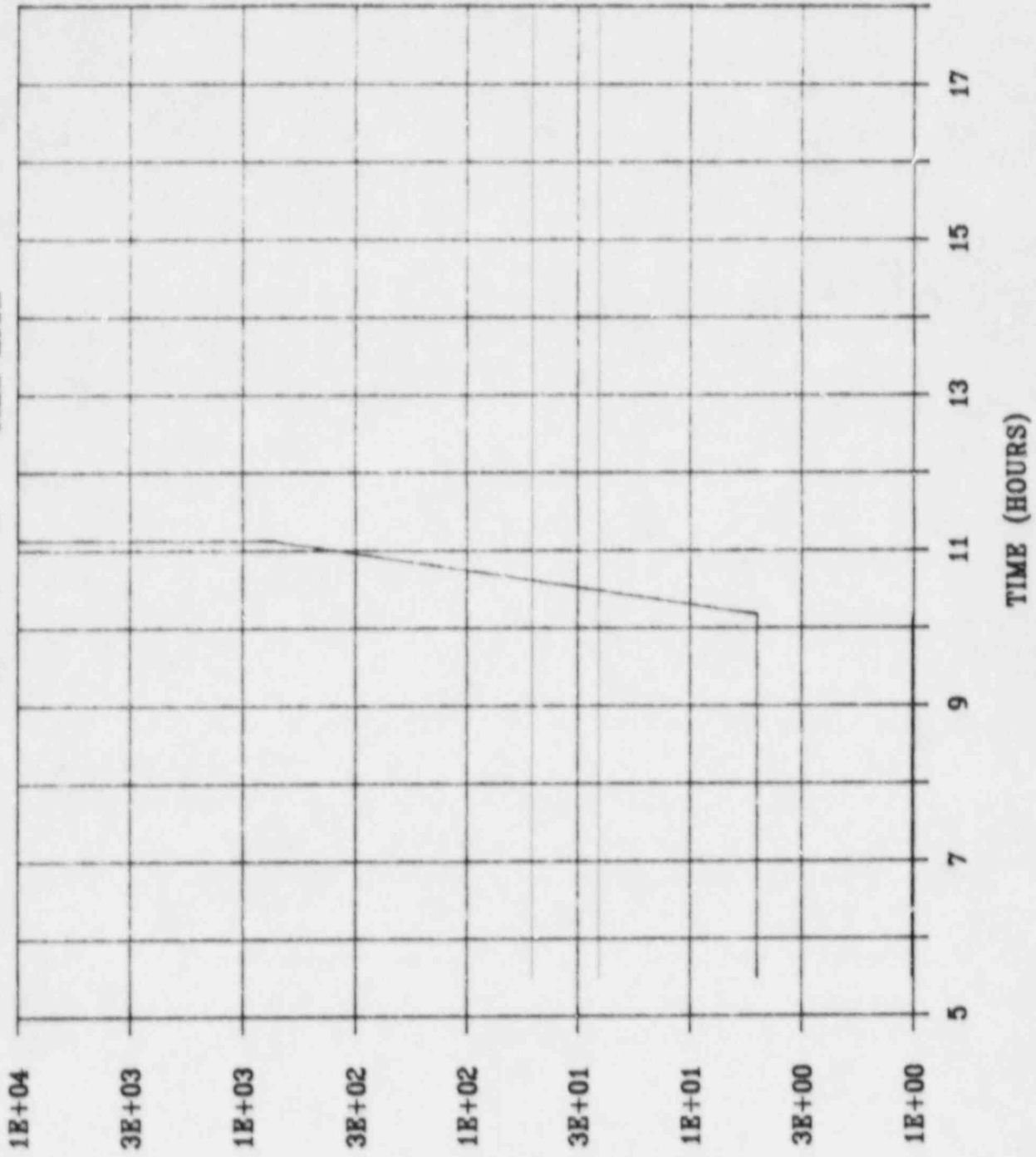
1RE102 (mRem/Hr)

CHARGING PUMP AREA LOW RANGE MONITOR



SEAL TABLE MONITOR

---x---x---x--- PAIL HIGH

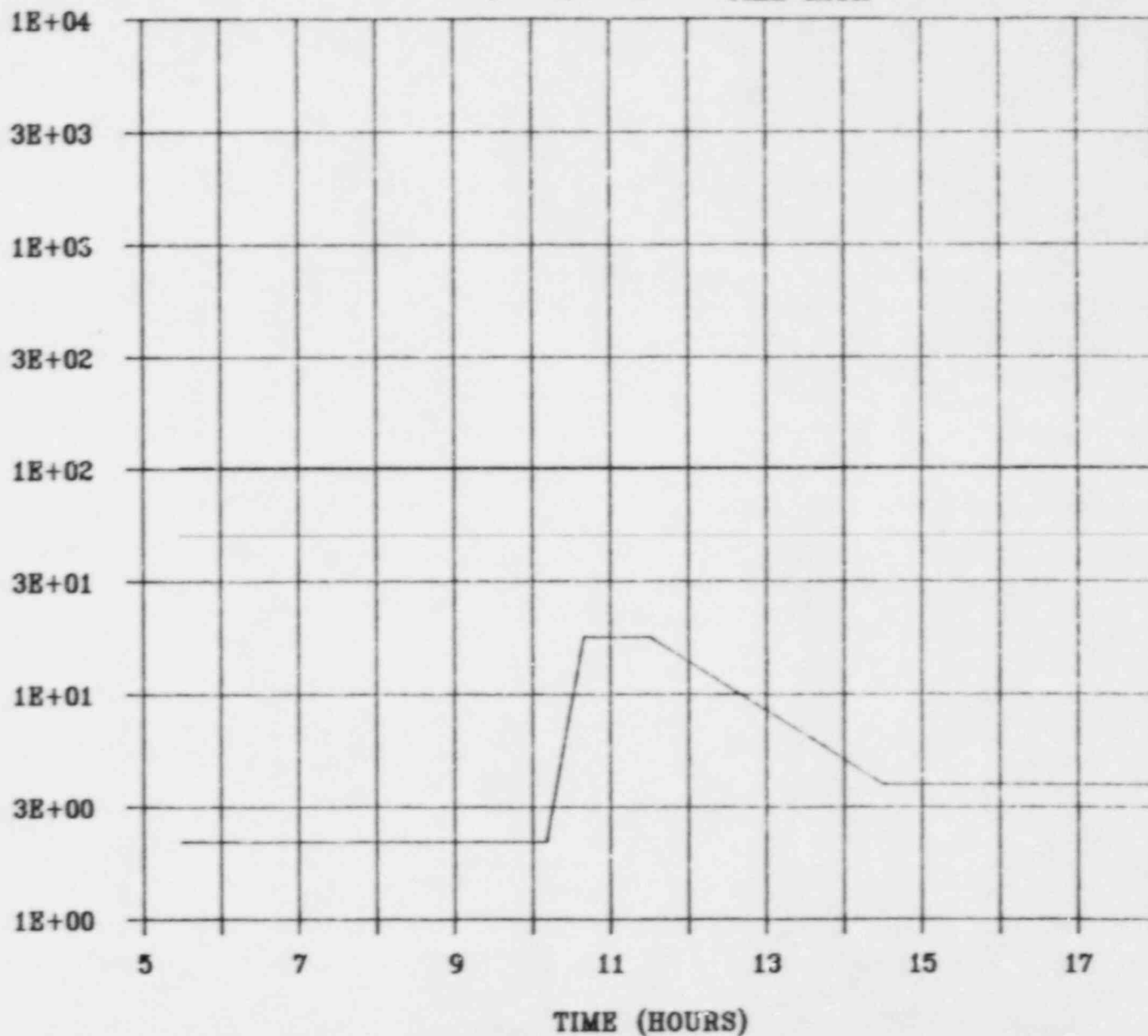


1RE107 (mRem/Hr)

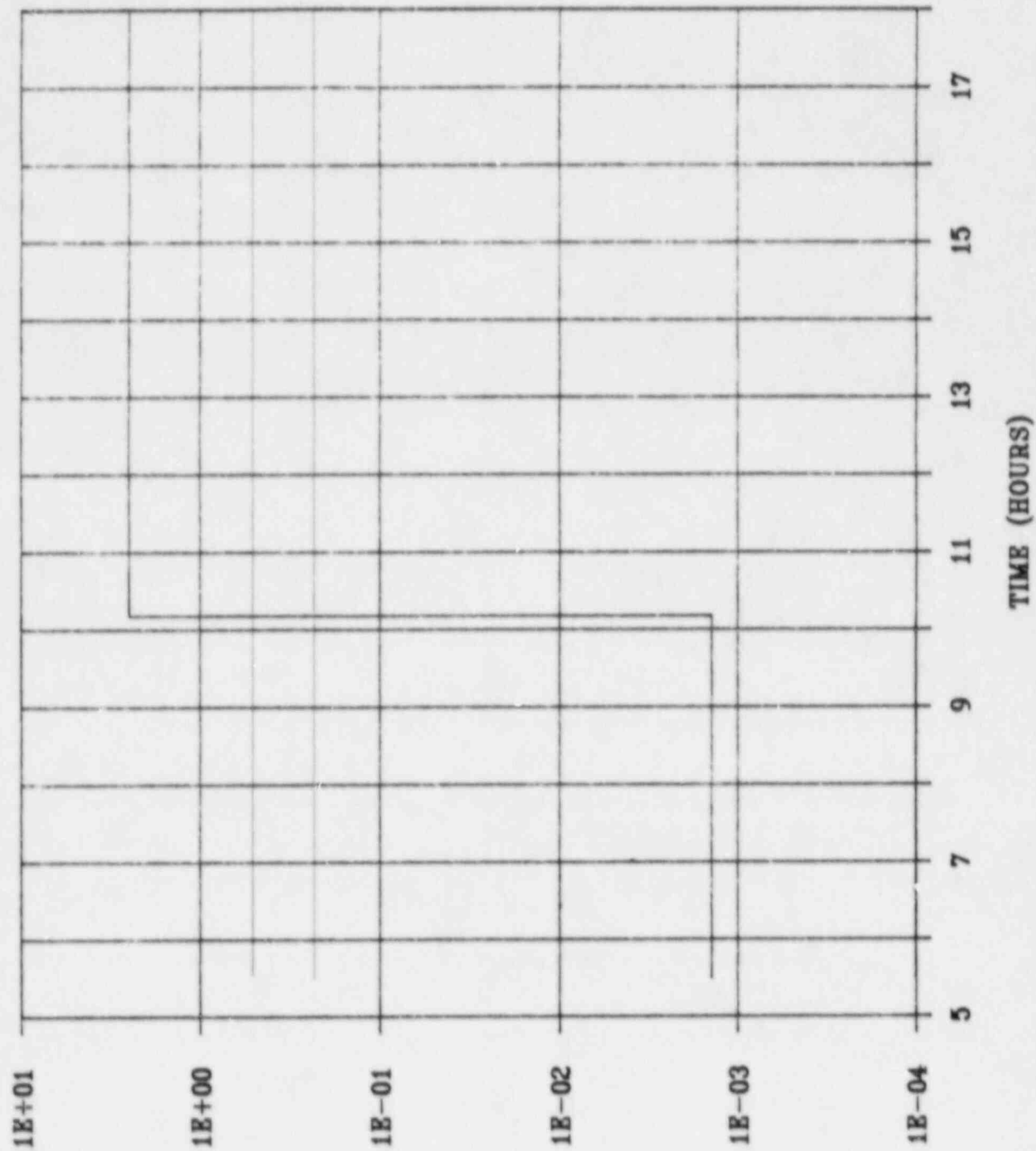
CHARGING PUMP AREA HIGH RANGE MONITOR

---x---x---x--- PAIL HIGH

1RE134 (mRem/Hr)

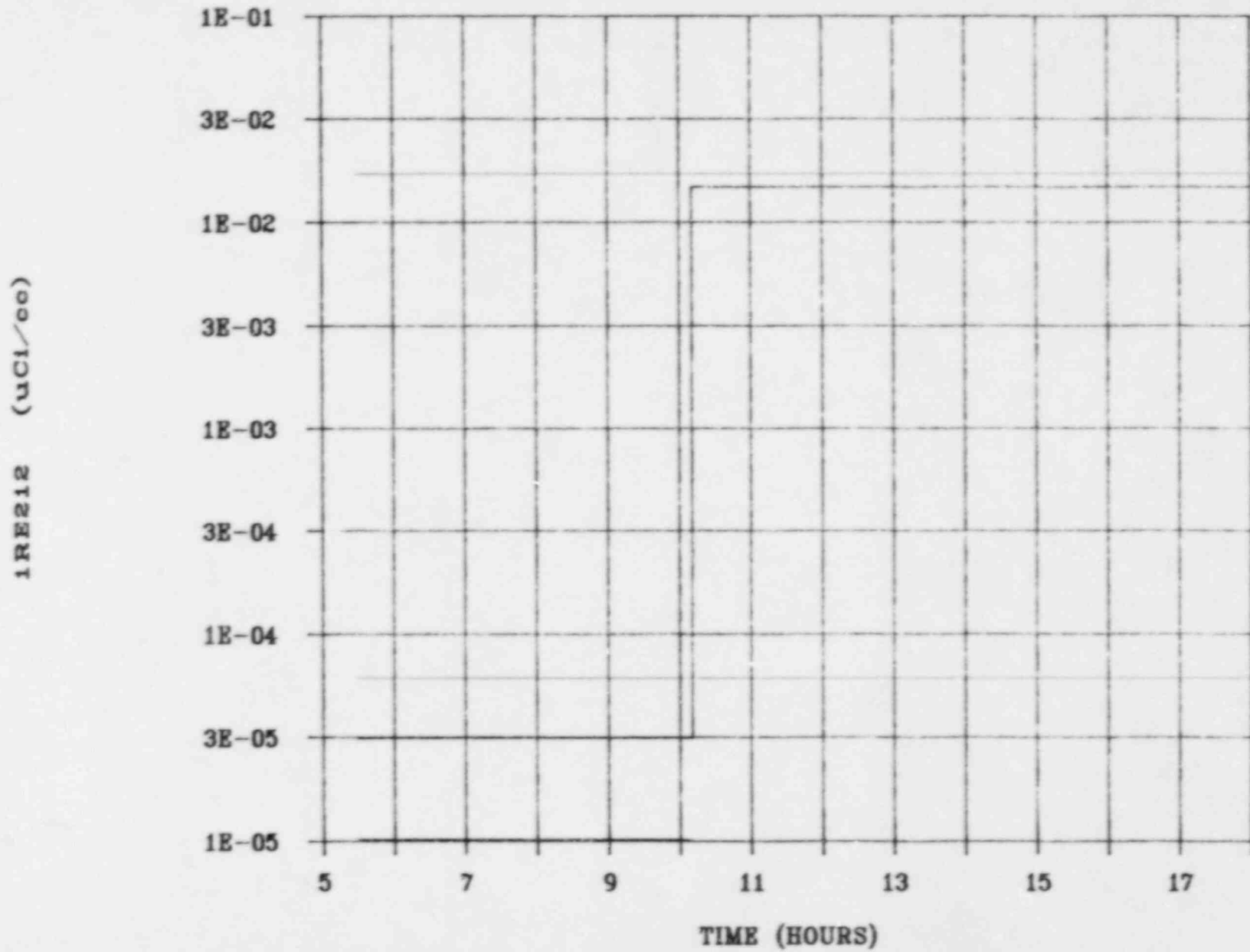


CONTAINMENT AIR PARTICULATE



1RES11 (uCi/oo)

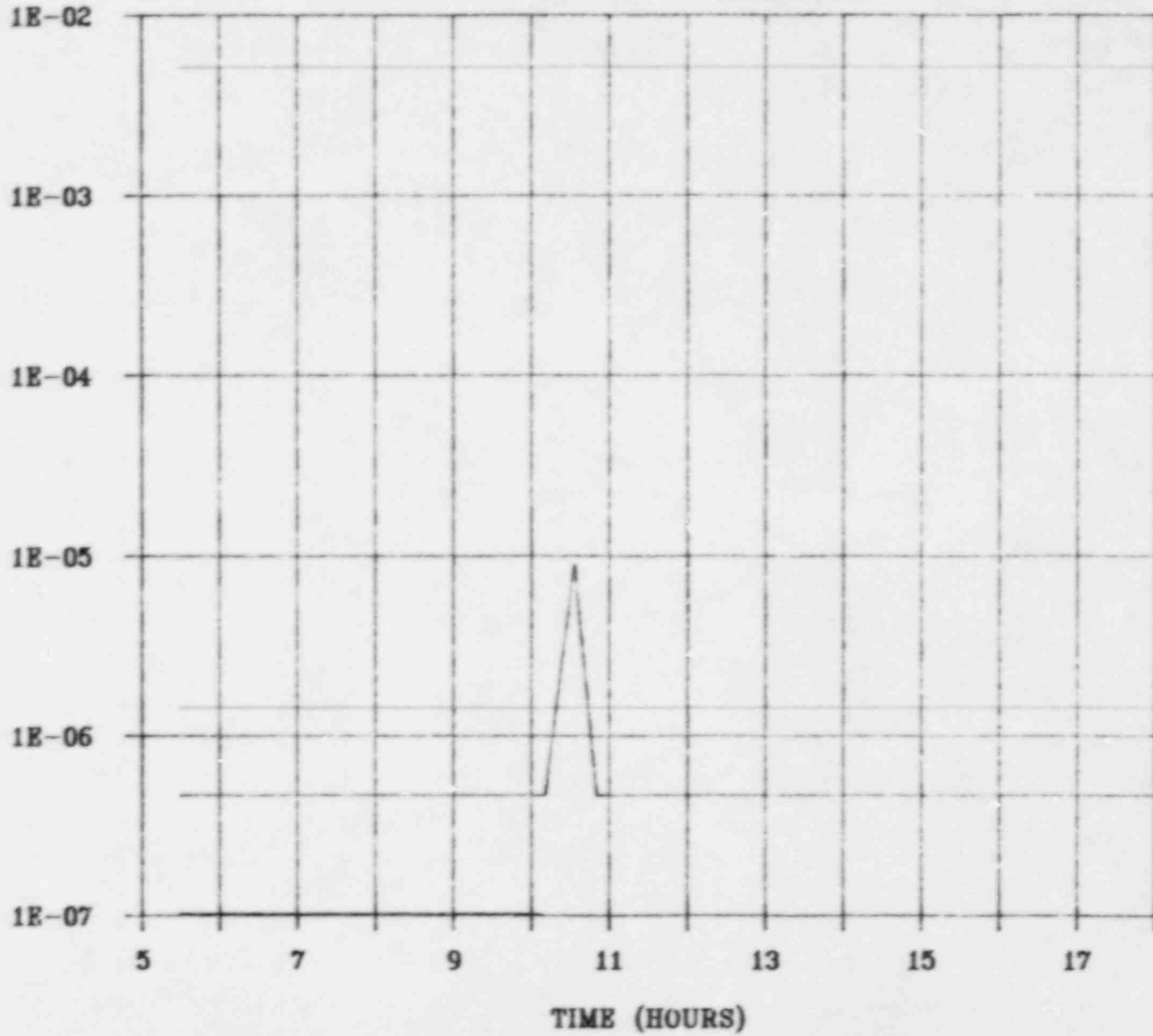
CONTAINMENT NOBLE GAS



AUXILIARY BUILDING VENT

---x---x---x--- FAIL HIGH

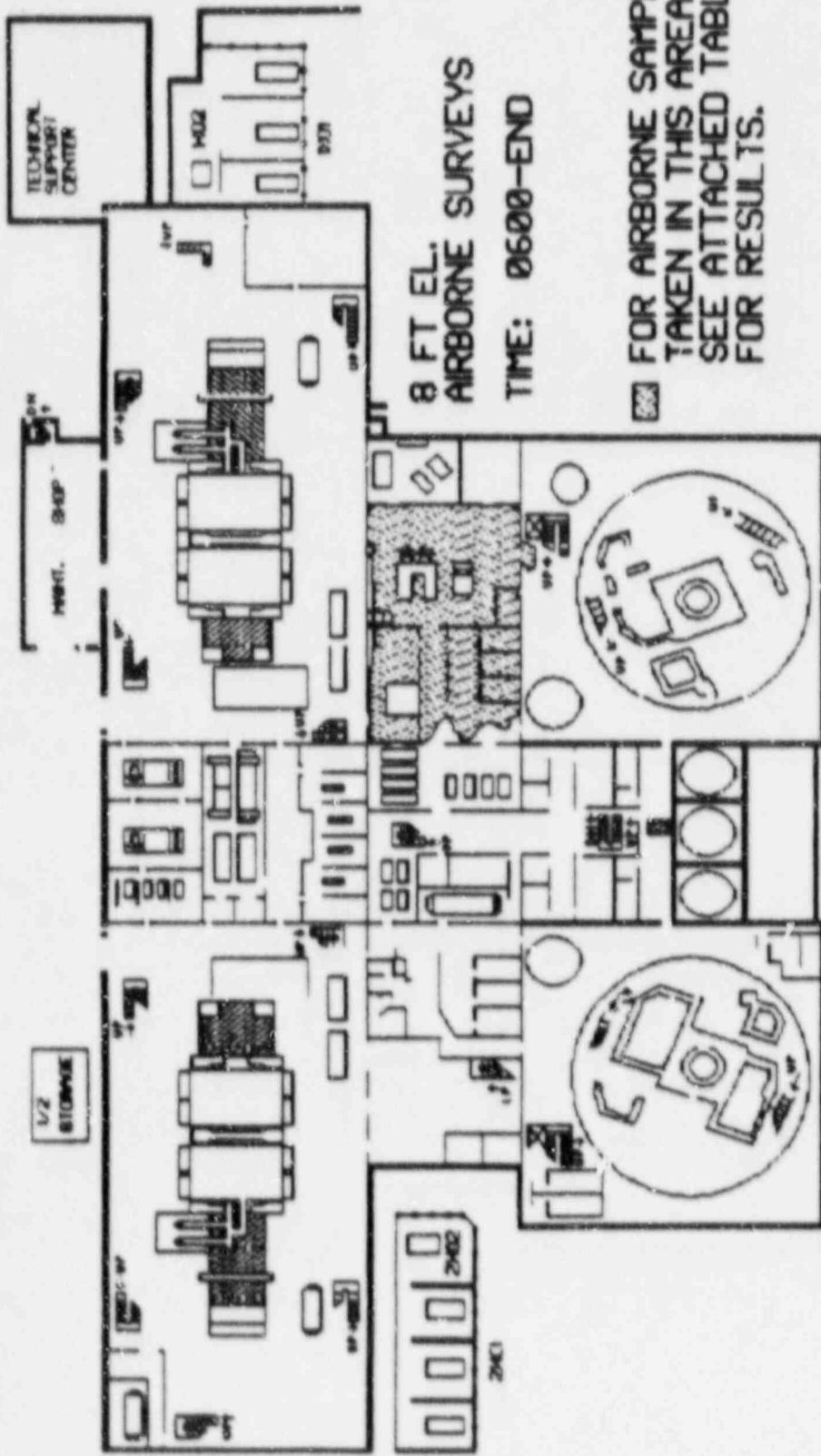
1RE214 (uCi/cc)



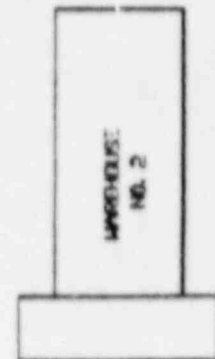
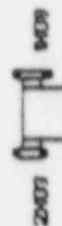
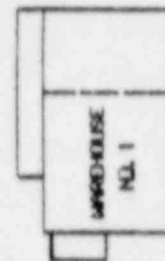
9.4 In-Plant Radiological Conditions (Maps & Data)

- 9.4.1 Airborne Surveys El. 8'
- 9.4.2 Contamination Surveys El. 8'
- 9.4.3 Radiation Surveys El. 8'
- 9.4.4 Containment Entry Surveys

9.4.1 AIRBORNE SURVEYS EL. 8'



ALL OTHER AREA SAMPLES
ARE "AS READ"

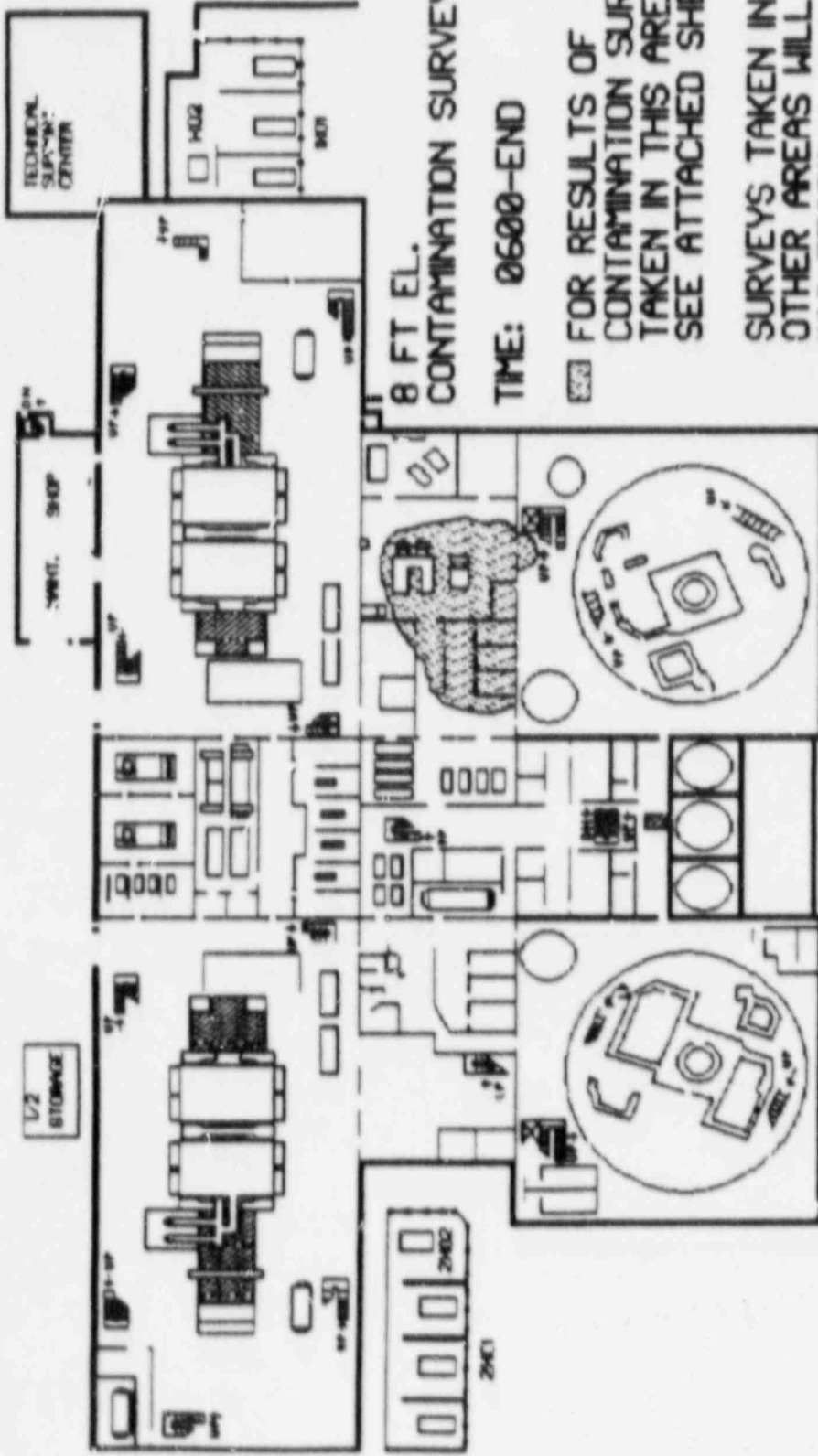


ISOTOPIC DATA

(Airborne Samples from Spill Area - El. 8')

<u>NUCLIDE</u>		<u>TIME</u>			
		<u>0600 - 1010</u>	<u>1010 - 1030</u>	<u>1030 - 1100</u>	<u>1100 - End</u>
I-131	As Read		1.00E-07	5.00E-09	1.00E-11
Co-57	As Read		7.75E-08	9.50E-09	1.30E-11
Co-58	As Read		5.00E-07	1.75E-08	5.00E-10
Co-60	As Read		1.00E-08	6.67E-10	1.33E-11
Cr-51	As Read		4.00E-08	7.70E-10	1.00E-11
Mn-54	As Read		2.00E-08	5.75E-10	9.00E-12
	<u>TOTAL</u>		<u>6.48E-07</u>	<u>2.90E-08</u>	<u>5.45E-10</u>
Xe-133	As Read		8.43E-07	5.00E-09	<MDA
Kr-85	As Read		6.36E-07	7.25E-10	<MDA
	<u>TOTAL</u>		<u>1.48E-06</u>	<u>5.73E-09</u>	<u><MDA</u>

9.4.2 CONTAMINATION SURVEYS EL. 8'

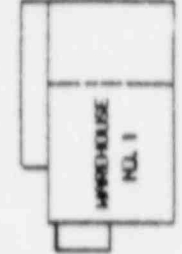


8 FT EL.
CONTAMINATION SURVEYS

TIME: 0600-END

FOR RESULTS OF
CONTAMINATION SURVEYS
TAKEN IN THIS AREA
SEE ATTACHED SHEET

SURVEYS TAKEN IN ALL
OTHER AREAS WILL BE
"AS READ"



CONTAMINATION SURVEYS

(From Spill & Area - El. 8')

Use the following information when providing results of smear surveys:

1. Smears must be taken on dry surfaces or be dried before counting - remain aware of the areas that would have been wetted by the spill.
2. Smears taken within the boundaries of the spill area will read between 2030 and 5150 cpm. Allow counting personnel to calculate the activity levels.
(10,000 - 30,000 dpm/100 cm² calculated)
3. If an isotopic analysis is requested for some smears, actual activities will not be quantifiable, but the isotopes present and their percentages will be as follows:

<u>NUCLIDE</u>	<u>% of ACTIVITY</u>
Co-57	12 %
Co-58	77 %
Cu-60	1.6%
Cr-51	6.2%
Mn-54	3.2%
	<hr/> 100.0%

4. If, in your opinion, an area is adequately decontaminated and resurveyed, activity levels on the smears will be "As Read."
5. With proper simulation, players may analyze a water sample from the spill. Isotopic data may be obtained from Section 9.6.4, "RWST Isotopic Data."
6. Provide only requested information and only when it is requested.

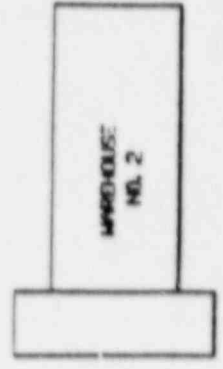
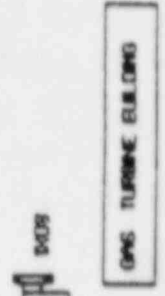
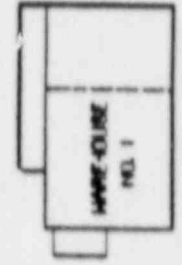
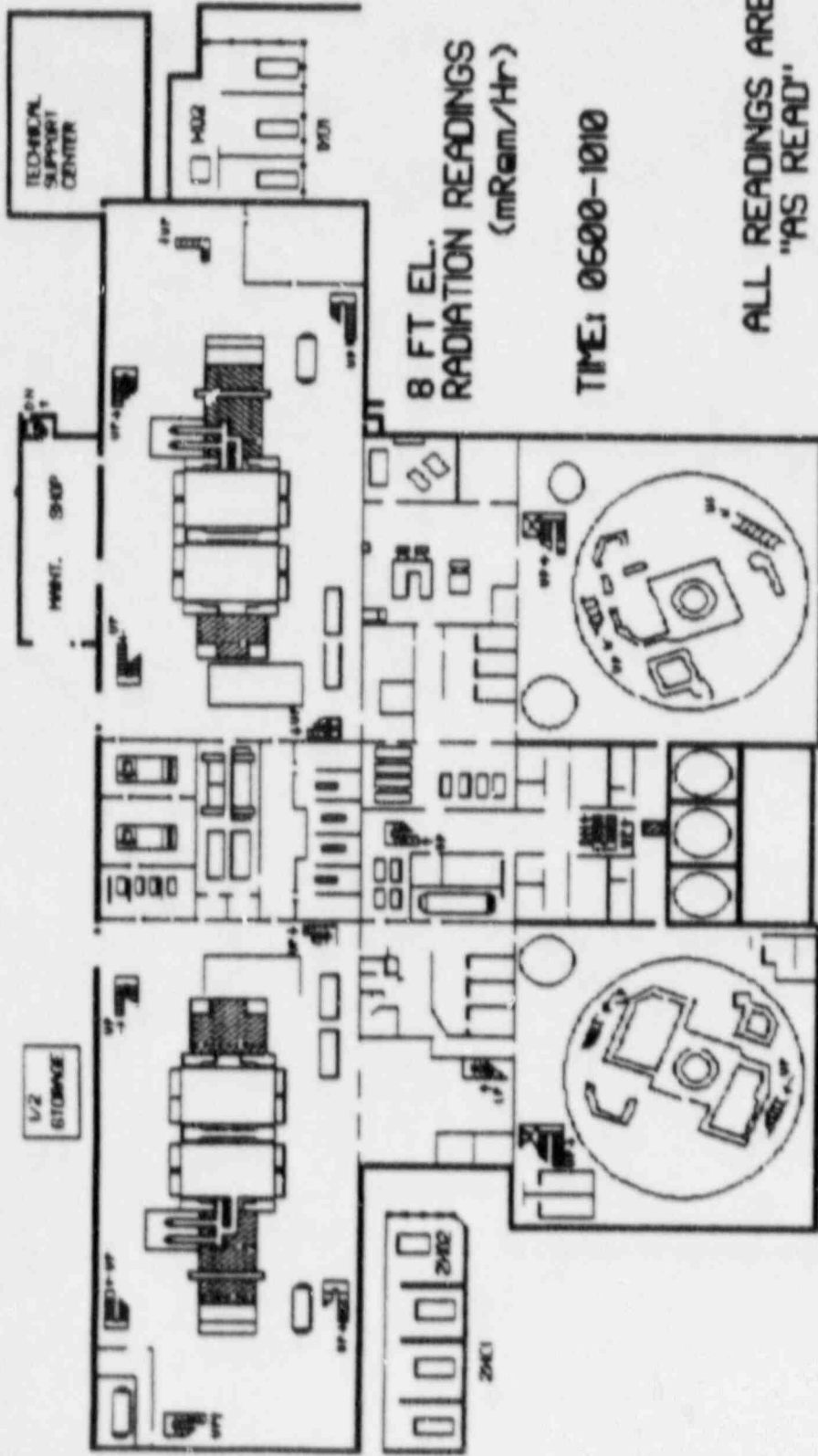
9.4.3 RADIATION SURVEYS EL. 8'

(In and Around Spill Area)

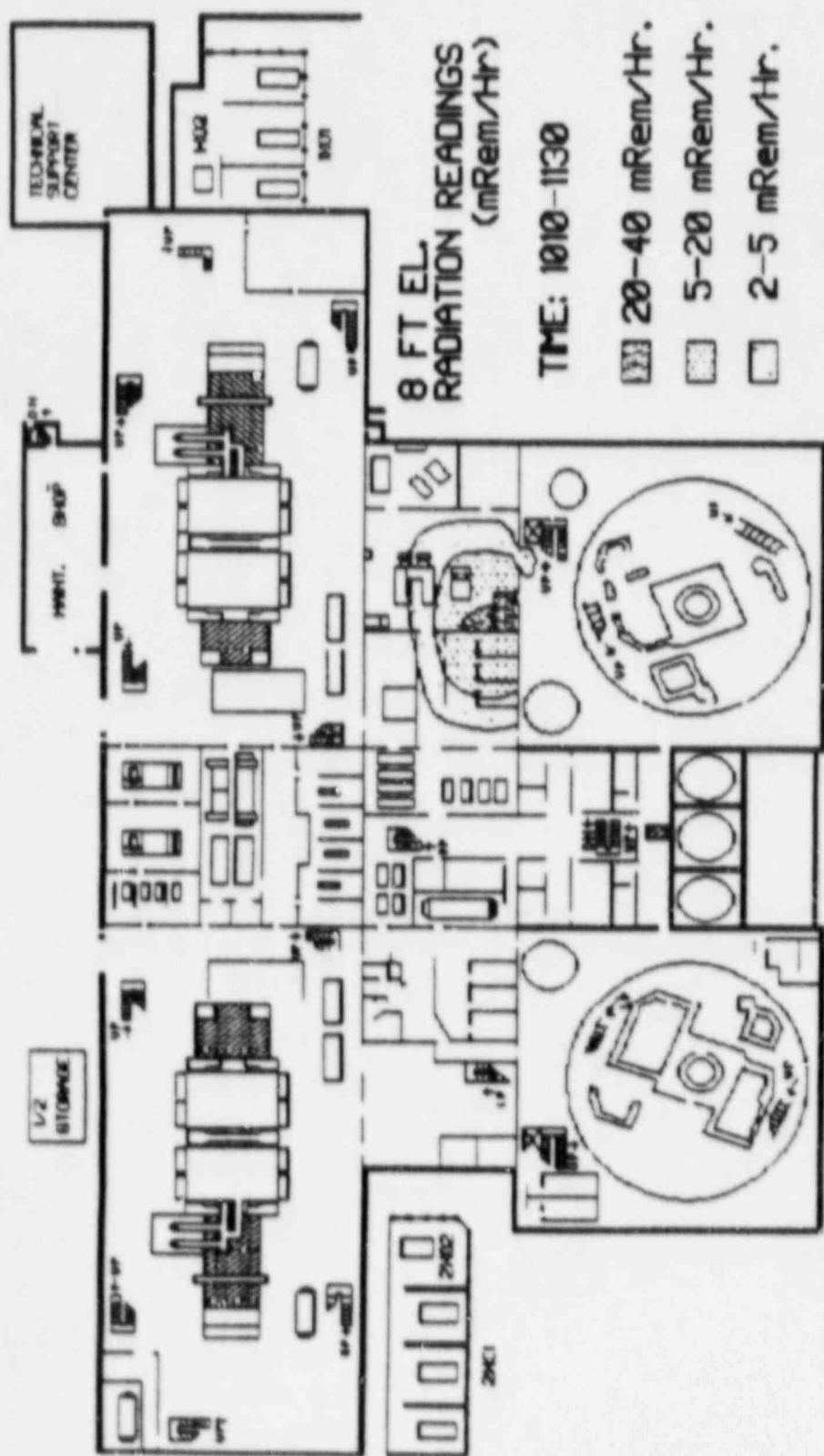
Use the following information, in conjunction with the in-plant radiation maps, when providing radiation readings:

1. Radiation levels in the affected (spill) area are due to the radioactivity in the liquid. As the liquid drains to the sump, general area radiation levels will slowly decrease.
2. If surveys are taken on the auxiliary building sump, waste holdup tank or their associated drain piping, contact radiation levels will be 20-30 mrem/hr higher than "As Read" values after the spill occurs.
3. If radiation surveys are taken near the walls of the containment after 1107, levels will be 5-10 mrem/hr higher than "As Read" values for the duration of the exercise.
4. If radiation levels inside containment are requested, consult Section 9.4.4, "Containment Entry Surveys."
5. Minimize simulation. Allow players to perform the surveys. Provide results when they are requested.

9.4.3 RADIATION SURVEYS EL. 8'






9.4.3 RADIATION SURVEYS EL. 8'

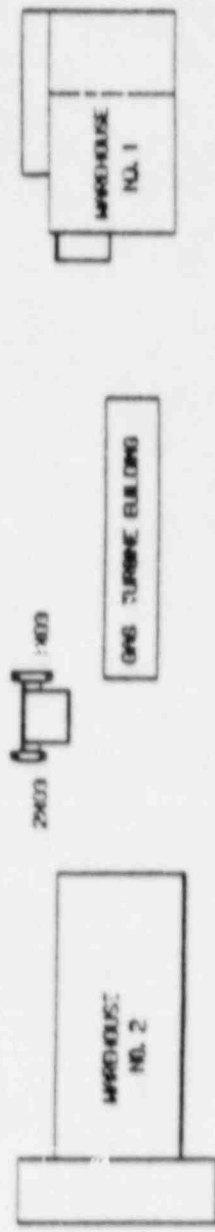


8 FT EL.
RADIATION READINGS
(mRem/Hr)

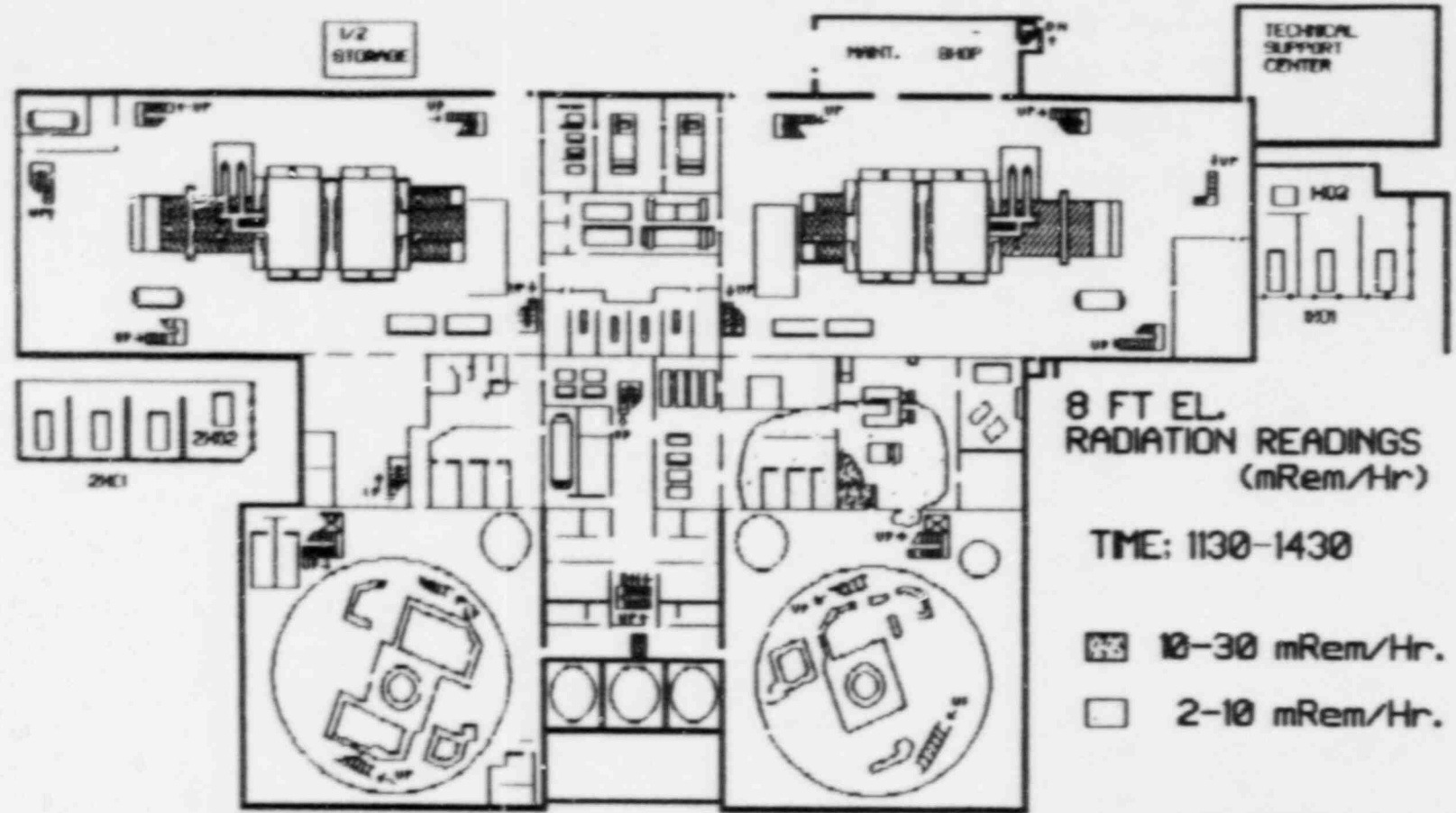
TIME: 1010-1130

-  20-40 mRem/Hr.
-  5-20 mRem/Hr.
-  2-5 mRem/Hr.

ALL OTHER READINGS
ARE "AS READ"





9.4.3 RADIATION SURVEYS EL. 8'

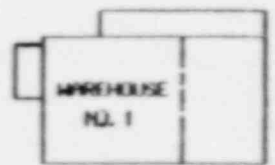
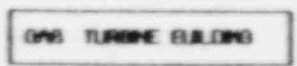
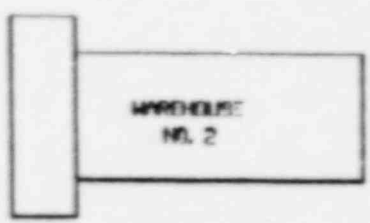


8 FT EL.
RADIATION READINGS
(mRem/Hr)

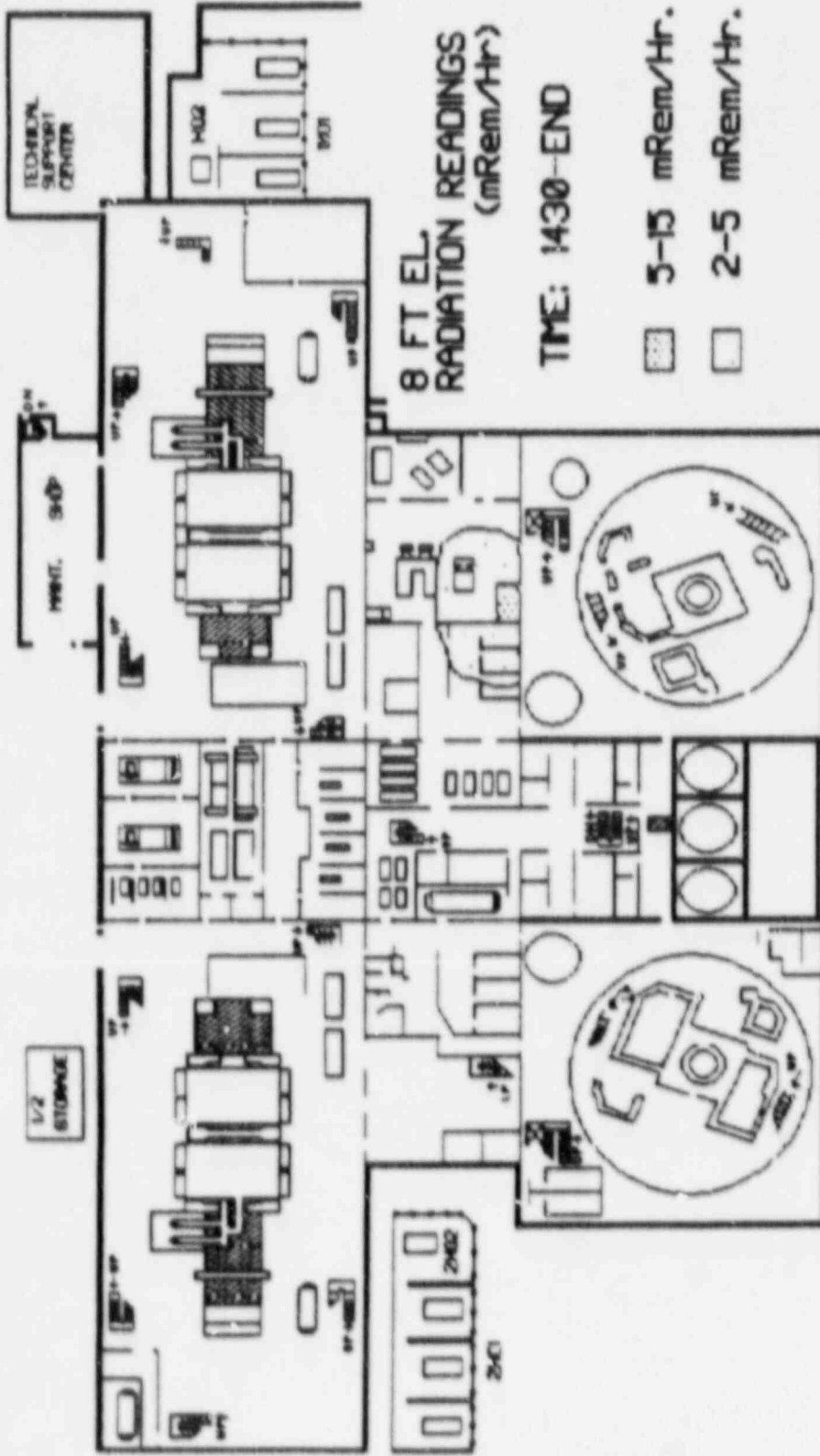
TIME: 1130-1430

-  10-30 mRem/Hr.
-  2-10 mRem/Hr.

ALL OTHER READINGS
ARE "AS READ"



9.4.3 RADIATION SURVEYS EL. 8'

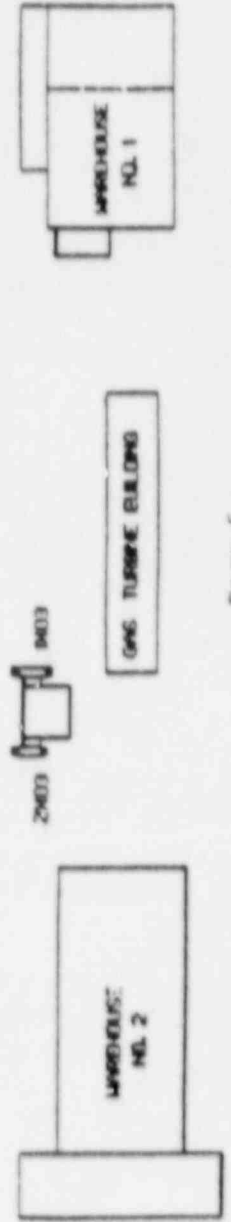


8 FT EL.
RADIATION READINGS
(mRem/Hr.)

TIME: 1430-END

- 3-15 mRem/Hr.
- 2-5 mRem/Hr.

ALL OTHER READINGS
ARE "AS READ"



9.4.4 CONTAINMENT ENTRY SURVEYS

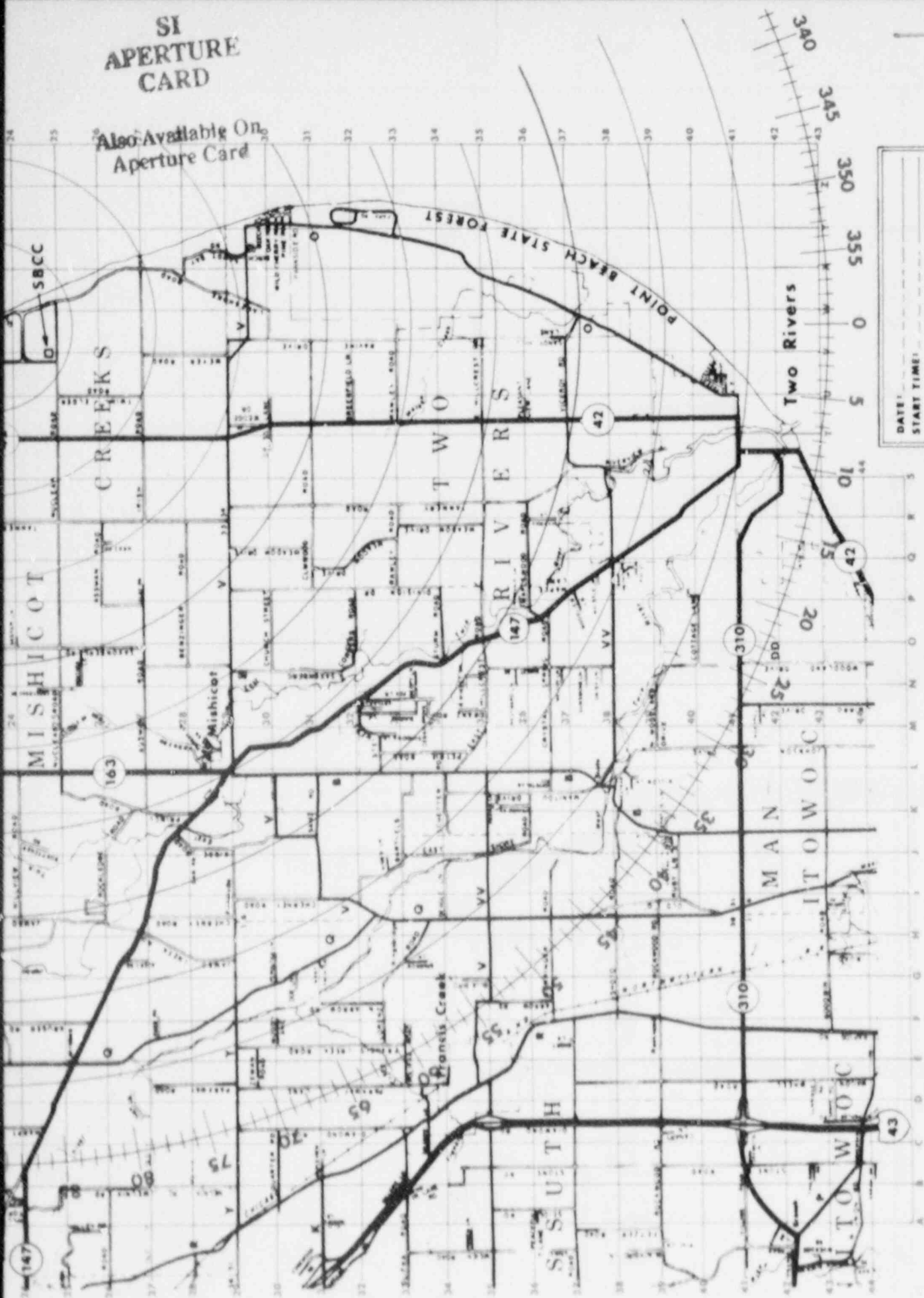
Keep in mind the following when providing information to players conducting a containment entry:

1. Allow players to perform all the steps necessary to conduct a containment entry, up to the point of opening the hatch. DO NOT ALLOW THE AIRLOCK PRESSURE TO BE CHANGED OR THE HATCH TO BE OPENED. The remainder of the entry will be simulated.
2. Allow the players to talk through the containment entry and what they would be looking for. (It is assumed that the entry team would be investigating the problems with the PORV block valve.)
3. Prior to 1010, radiation and contamination survey information can be provided from the survey maps in this section. All air sample information can be obtained from Section 9.6.5, "Containment Atmosphere," for the desired time.
4. Although unlikely, it is possible that a team could be (simulated) inside containment after the 1010 and/or 1107 events. Use the following information if this does occur.
 - a. Between 1010 and 1107, radiation levels will increase from ~10 mrem/hr to 750 mrem/hr in general areas.
 - b. At 1107, radiation levels in containment will rapidly increase to ~800 rem/hr in general areas.
 - c. Contamination levels, after 1010, will increase to read 30,000 - 50,000 dpm/100 cm² in general areas.
 - d. Consult Section 9.6.5, "Containment Atmosphere," for airborne concentrations at the desired time.

9.5 Emergency Plan Exercise Environmental Survey Maps

SI APERTURE CARD

Also Available On
Aperture Card



DATE
START TIME
STOP TIME
INSTRUMENT USED
INSTRUMENT SERIAL NO.
INITIALS



ATTACHMENT TO:
EPIP - 01
EPIP - 02

8810040432 - 01



15 16 17 18 19 20 21

KEWAUNEE
NUCLEAR PLANT

WOOD

BB

SCHLIES RD.

NEMO RD.

ROAD

RD

LEHRMAN RD.

Two Creeks

CREEK ROAD

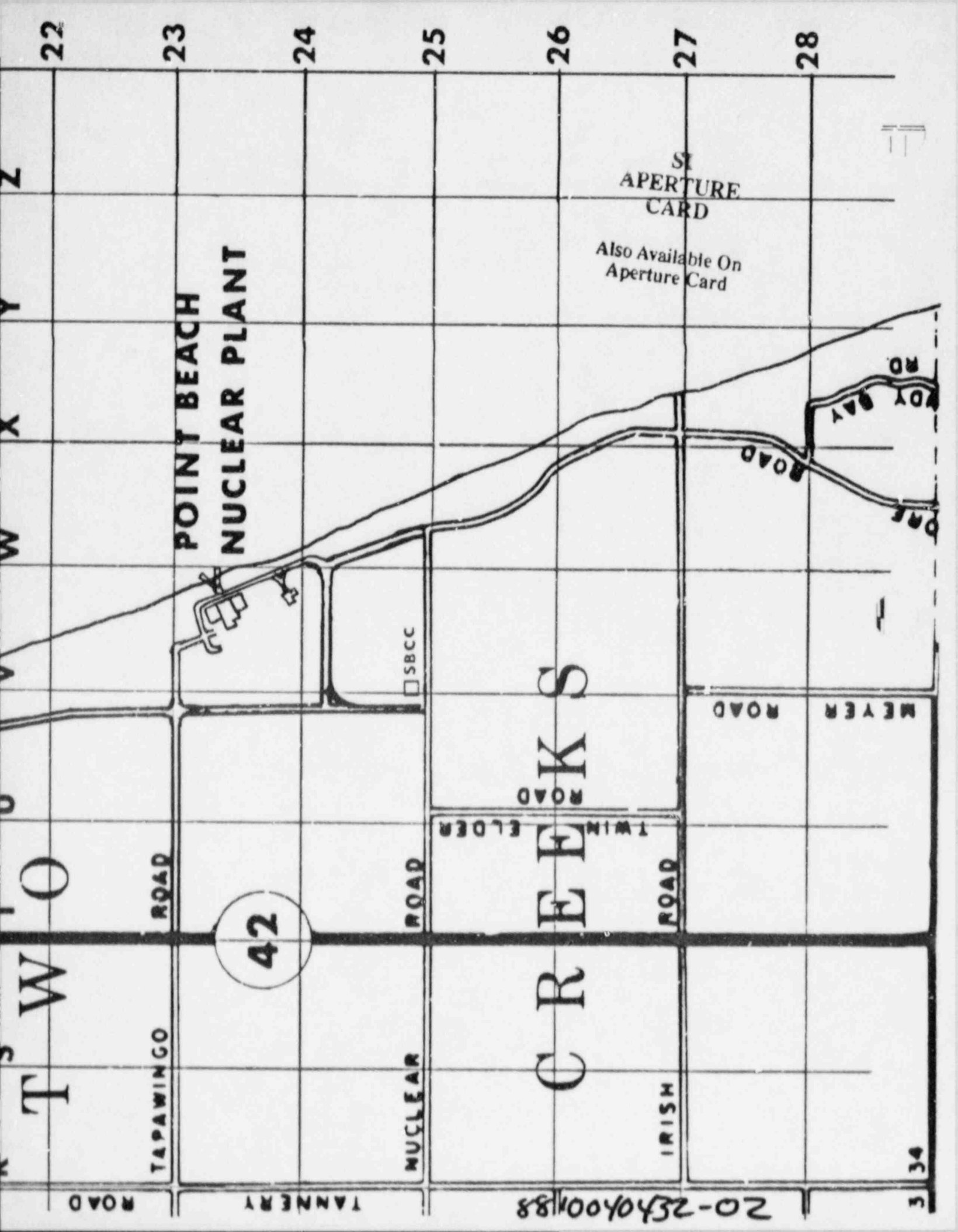
JOHANNES RD.

LAKESHORE ROAD

2

ROAD

3



22 23 24 25 26 27 28

Z
Y
X
W
V
U
O
S
T
K

POINT BEACH
NUCLEAR PLANT

SI
APERTURE
CARD

Also Available On
Aperture Card

SBCC

CREEKS

42

TAPAWINGO
ROAD

NUCLEAR
ROAD

IRISH
ROAD

TWIN ELDEN
ROAD

MEYER
ROAD

ROY BAY
ROAD
ONE

TANNERY
ROAD

20-25400188

5 34

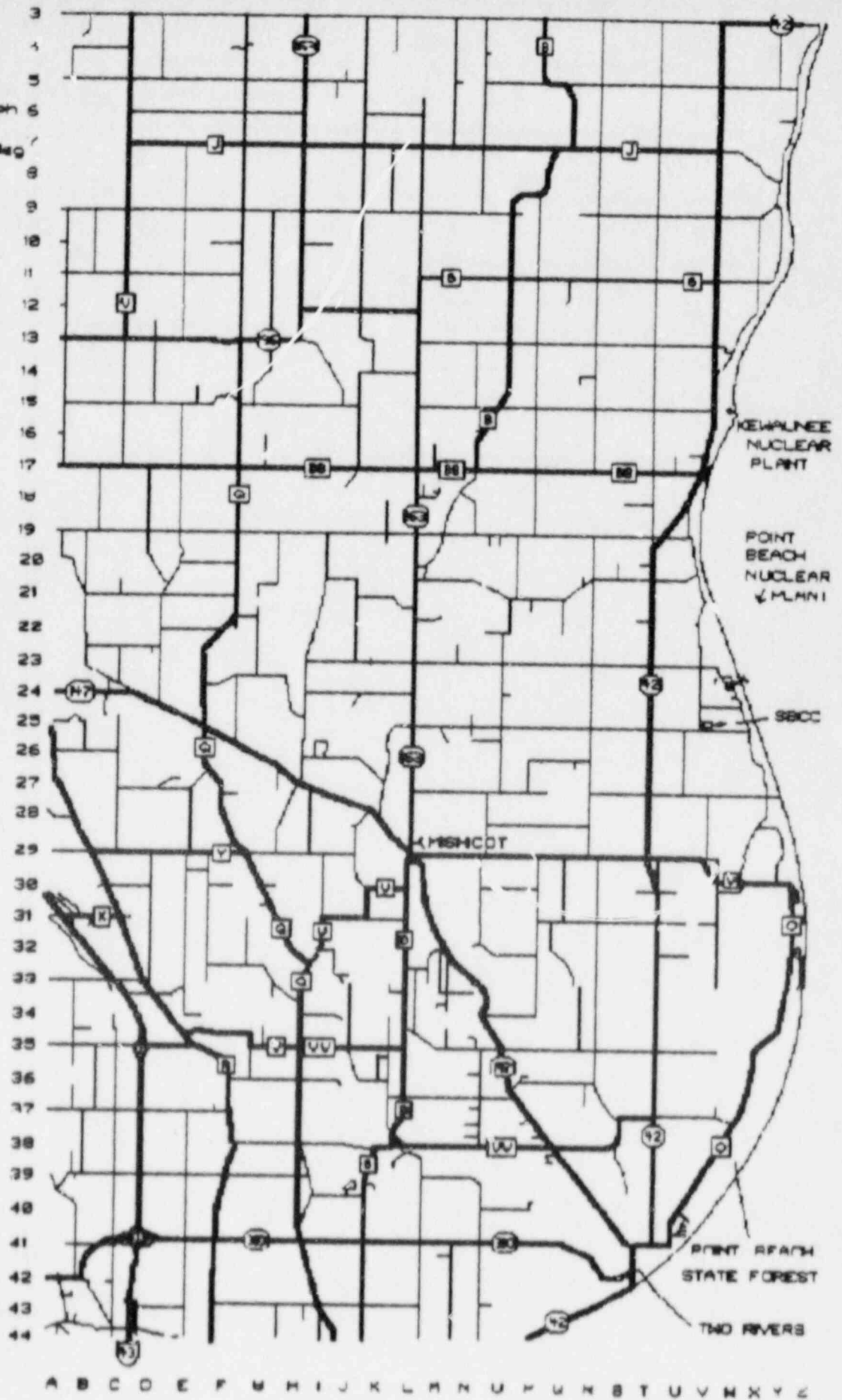
TIME : 0530-1800

WIND SPEED : 6-13 mph

WIND DIR. : 378-437 deg



SCALE IN MILES



9.6 Chemistry Sample Results

- 9.6.1 Primary
- 9.6.2 Primary - PASS
- 9.6.3 Secondary
- 9.6.4 RWST
- 9.6.5 Containment Atmosphere
- 9.6.6 Containment Atmosphere - PASS

9.6.1 REACTOR COOLANT ISOTOPIC DATA

	<u>0600-1107</u>	<u>1107-end</u>
	$\mu\text{Ci/cc}$	$\mu\text{Ci/cc}$
<u>Nuclide</u>		
I-131	4.45E-03	6.55E+02
I-132	7.86E-02	1.05E+02
I-133	5.34E-02	4.44E+02
I-134	1.24E-01	5.00E-01
I-135	1.04E-01	2.75E+02
<u>I-131 Equiv</u>	3.25E-02	8.02E+02
<u>% Defect</u>	6.53E-4	N/A
Kr-85m	1.05E-02	1.743E+00
Kr-87	2.08E-02	1.66E+00
Kr-88	2.56E-02	3.68E+00
Xe-131m	<MDA	4.08E-01
Xe-133	4.01E-03	8.13E+01
Xe-133m	<MDA	7.76E+00
Xe-135	4.24E-02	4.14E-00
Xe-138	1.05E-01	5.00E-01
Ar-41	1.92E-01	1.00E-01
Ag-110m	<MDA	<MDA
Ba-139	2.36E-02	5.00E-02
Ba-140	2.78E-04	8.50E-04
Ce-139	<MDA	<MDA
Ce-141	<MDA	<MDA
Co-58	5.81E-03	5.25E-03
Co-60	4.11E-04	4.00E-04
Cs-134	1.79E-05	1.25E-04
Cs-137	9.80E-05	2.25E-04
Cs-138	1.63E-01	2.00E-01

9.6.1 REACTOR COOLANT ISOTOPIC DATA (Cont'd.)

Ru-103	1.05E-04	1.50E-04
Ru-106	<MDA	<MDA
Mn-54	5.67E-05	5.00E-05
Nb-95	2.94E-04	2.75E-04
Nb-97	2.79E-04	3.00E-04
Te-132	2.61E-04	5.00E-04
Zr-95	3.21E-04	3.00E-04
Sb-122	4.97E-04	6.50E-04
Sb-124	1.24E-04	1.55E-04

9.6.2 Pass Results

Attached is form EPIP-30, "Reactor Coolant Post-Accident Sampling Analysis Report." It will be used to supply data to Chemistry technicians analyzing the PASS sample during the drill.

The technicians should use EPIP 7.3.2, "Post-Accident Sampling and Analysis of Potentially High Level Radioactive Coolant" to process the sample. The assigned controller will follow the sampling evolution and offer the desired results as required.

9.6.2 Primary Coolant: Post-Accident Sample System

POINT BEACH NUCLEAR PLANT

REACTOR COOLANT POST-ACCIDENT SAMPLING ANALYSIS REPORT

1.0 ANALYSIS OF GASEOUS SAMPLE

1.1 Hydrogen Analysis

1.1.1	Scale used on gas partitioner	<u>Per "player"</u>
1.1.2	Millivolt reading on chart recorder	<u>N/A</u>
1.1.3	% hydrogen from calibration curve	<u>.191%</u>
1.1.4	Volume of sample bomb in ml	<u>17.8</u>
1.1.5	Atmospheric pressure (mm/Hg)	<u>760</u>
1.1.6	cc/Kg hydrogen in coolant* (STP)	<u> </u>

$$\begin{aligned}
 *cc/Kg \text{ H}_2 \text{ (STP)} &= \frac{(1.1.3)}{100} \times \frac{280}{(1.1.4)} \times \frac{(1.1.5)}{760} \times 1000 \\
 &= 3.68 \frac{(1.1.3) \times (1.1.5)}{(1.1.4)}
 \end{aligned}$$

1.2 Radioactive Noble Gases

1.2.1	Decay time in minutes	<u>Per "player"</u>
1.2.2	Sample count time in seconds	<u>Per "player"</u>
1.2.3	Detector	<u>Per "player"</u>
1.2.4	Geometry	<u>Per "player"</u>
1.2.5	Common multiplier*	<u>33505</u>
1.2.6	Volume of sidearm flask	<u>1065 ml</u>

$$\begin{aligned}
 *CM &= \frac{280}{(1.1.4)} \times \frac{(1.2.6)}{0.5} \\
 &= 560 \times \frac{(1.2.6)}{(1.1.4)}
 \end{aligned}$$

(1) See Section 5.2.2 of EPIP 7.3.2.

1.2.7 MCA Results

<u>Isotope</u>	<u>Concentration (μCi/cc)</u>
Xe-133	8.13E+01
Kr-85m	1.74E+00
Kr-88	3.68E+00
Xe-133m	7.76E+00
Xe-135	4.14E+00
Xe-138	5.00E-01
Kr-87	1.66E+00
Ar-41	1.00E-01
Kr-85	<LLD
Xe-131m	4.08E-01

NOTE: THE FOLLOWING ARE NOT REQUIRED. HOWEVER, IF TIME PERMITS, ANALYSIS OF AS MANY AS POSSIBLE WILL HELP IN THE COMPLETION OF EPIP 1.7, "CORE DAMAGE ESTIMATION PROCEDURE."

Cs-134	1.25E-04
Cs-137	2.25E-04
Tc-132	5.00E-04
Ba-140	8.50E-04
La-140	<LLD
La-142	<LLD

2.0 ANALYSIS OF LIQUID SAMPLE

2.1 Boron and pH

2.1.1	Volume of sample	<u>Per "player"</u>	ml
2.1.2	pH of sample	<u>As Read</u>	
2.1.3	Normality of NaOH	<u>.1N</u>	
2.1.4	Volume of NaOH used	<u>9.3</u>	ml
2.1.5	Concentration of boron*	<u> </u>	ppm

If boration occurs
final ppm is desired
concentration

$$*ppm \text{ Boron} = \frac{(2.1.3)}{(2.1.1)} \times (2.1.4) \times 10810$$

2.2 Chloride

Chloride concentration <0.05 PF

2.3 Iodine Analysis

2.3.1 Decay time Per "player" min

2.3.2 Sample count time Per "player" sec

2.3.3 Detector Per "player"

2.3.4 Geometry Per "player"

2.3.5 Common multiplier* Per "player"

$$*CM = \frac{1075}{V_s} \times F$$

V_s = Volume of sample (first dilution)

F = Any additional dilution factors (2 or more dilutions)

(1) See Section 5.4.3 of EPIP 7.3.2.

2.3.6 MCA Results

<u>Isotope</u>	<u>Concentration (μCi/cc)</u>
I-130	<u><LLD</u>
I-131	<u>6.55E+02</u>
I-132	<u>1.05E+02</u>
I-133	<u>4.44E+02</u>
I-134	<u>5.00E-01</u>
I-135	<u>2.75E+02</u>
Total	<u>1.48E+03</u>

3.0 ROUTING AND APPROVAL

	<u>Date</u>	<u>Initials</u>
3.1 Calculations completed by	_____	_____
3.2. Analysis completed by	_____	_____
3.3 Chemistry director	_____	_____
3.4 Health Physics director	_____	_____
3.5 Technical support manager	_____	_____

9.6.3 Secondary Coolant Isotopic Data - Both S/Gs ($\mu\text{Ci/cc}$)

<u>Nuclide</u>	<u>Initial</u>	<u>After GAP Release</u>
I-131	1.0E-08	1.5E-03
I-132	1.1E-07	2.4E-04
I-133	2.2E-07	1.8E-03
I-134	1.0E-08	4.0E-08
I-135	1.0E-08	2.6E-05
Xe-135	1.0E-08	2.0E-04
Xe-133m	1.0E-08	1.0E-06

9.6.4 RWST Isotopic Data

<u>Nuclide</u>	<u>μCi/cc</u>
I-131	7.07E-05
Co-57	1.25E-05
Co-58	6.26E-03
Co-60	6.17E-04
Cr-51	4.44E-04
Mn-54	1.77E-05
Nb-95	3.44E-05
Nb-97	2.19E-05
Ce-141	1.19E-05
Ru-103	2.87E-05
Sb-124	6.36E-04
Sb-125	1.78E-04

9.6.5 Containment Atmosphere Isotopic Data

Nuclide	RCS Leakage ↓			GAP Release ↓	
	0600-1010	1010-1030	1030-1050	1050-1107	1107-End
I-131	5.81E-11	8.81E-06	1.76E-05	2.67E-05	5.5E+00
I-132	<MDA	1.58E-04	3.17E-04	4.80E-04	8.90E-01
I-133	5.65E-11	1.06E-04	2.11E-04	3.20E-04	3.80E+00
I-134	<MDA	2.45E-04	4.91E-04	7.44E-04	1.00E-03
I-135	<MDA	2.06E-04	4.12E-04	6.24E-04	1.92E+00
Kr-85m	<MDA	2.08E-05	4.16E-05	6.30E-05	7.40E-02
Kr-87	<MDA	4.13E-05	8.26E-05	1.25E-04	7.10E-02
Kr-88	<MDA	5.08E-05	1.02E-04	1.54E-04	1.60E-01
Xe-131m	<MDA	<MDA	<MDA	<MDA	1.70E-02
Xe-133	8.83E-06	1.00E-05	1.7E-05	2.41E-05	3.50E+00
Xe-133m	<MDA	<MDA	<MDA	<MDA	3.30E-01
Xe-135	5.62E-07	8.38E-05	1.67E-04	2.54E-04	1.80E-01
Xe-138	<MDA	2.08E-04	4.16E-04	6.30E-04	5.00E-03
Ar-41	5.90E-06	3.79E-05	7.59E-05	1.15E-04	1.00E-03
Ag-110m	<MDA	<MDA	<MDA	<MDA	<MDA
Ba-139	<MDA	4.68E-05	9.57E-05	1.42E-04	1.00E-04
Ba-140	<MDA	5.51E-07	1.10E-06	1.67E-06	1.25E-06
Ce-139	<MDA	<MDA	<MDA	<MDA	<MDA
Ce-141	<MDA	<MDA	<MDA	<MDA	<MDA
Co-58	1.39E-11	1.15E-05	2.30E-05	3.49E-05	3.30E-05
Co-60	<MDA	8.05E-07	1.61E-06	2.44E-06	2.40E-06
Cs-134	<MDA	3.50E-08	7.00E-08	1.07E-07	5.50E-06
Cs-137	<MDA	1.94E-07	3.88E-07	5.88E-07	1.00E-07
Cs-138	<MDA	3.22E-04	6.44E-04	9.78E-04	9.25E-4

9.6.5 Containment Atmosphere Isotopic Data (Cont'd.)

<u>Nuclide</u>	RCS Leakage ↓			GAP Release ↓	
	0600-1010	1010-1030	1030-1050	1050-1107	1107-End
Ru-103	<MDA	2.07E-07	4.14E-07	6.30E-07	6.10E-07
Ru-106	<MDA	<MDA	<MDA	<MDA	<MDA
Mn-54	<MDA	1.12E-07	2.24E-07	3.40E-07	3.00E-07
Nb-95	<MDA	5.80E-07	1.12E-06	1.76E-06	1.50E-06
Nb-97	<MDA	5.51E-07	1.10E-06	1.67E-06	1.67E-06
Te-132	<MDA	5.18E-07	1.03E-06	1.57E-06	1.25E-06
Zr-95	<MDA	6.33E-07	1.27E-06	1.92E-06	1.80E-06
Sb-122	<MDA	9.83E-07	1.97E-06	2.98E-06	2.75E-06
Sb-124	<MDA	2.45E-07	4.91E-07	7.44E-07	7.60E-07

POINT BEACH NUCLEAR PLANT

9.6.6 Containment Atmosphere - Post-Accident Sampling Analysis Report

1.0 HYDROGEN ANALYSIS

1.1	Scale used on gas partitioner	<u>X1</u>
1.2	Millivolt reading on chart recorder	<u>0</u>
1.3	% hydrogen from calibration curve	<u><0.1%</u>

2.0 RADIOACTIVE NOBLE GAS ANALYSIS

2.1	Decay time in minutes	<u>As Read</u>
2.2	Sample count time in seconds	<u>As Read</u>
2.3	Detector	<u>#5</u>
2.4	Geometry	<u>11</u>
2.5	Number of dilutions: (D)	<u>1</u>
2.6	Common multiplier*	<u>1182</u>

$$*CM = (D)^1 \times \frac{1075}{1.0} \times (\text{Pressure-Temperature Correction})^{1.10}$$

(1) See Section 5.3.3 of EPIP 7.3.3. One or more dilutions may be necessary.

2.7 Pressure-Temperature Correction:

$$= \frac{3.5 \quad 70}{(P_c + 14.7)(T_L + 459)} = 1.10 \quad \underline{\underline{1.10}}$$

$$\frac{P_L (T_c + 459)}{14.7 \quad 135^\circ}$$

Where P_c = Pressure in containment (psig) 3.5

T_c = Temperature in containment ($^\circ F$) 135

P_L = Pressure in lab (psi) where 14.7

$$P_L = 14.7 \times \frac{P \text{ (mm Hg)}}{760 \text{ (mm Hg)}}$$

T_L = Temperature in laboratory ($^\circ F$) 70 $^\circ$

2.8 Results of MCA

<u>Isotope</u>	<u>Concentration ($\mu\text{Ci/cc}$)</u>
Ye-133	<u>3.50E+00</u>
Kr-85m	<u>7.40E-02</u>
Kr-88	<u>1.60E-01</u>
Xe-133m	<u>3.30E-01</u>
Xe-135	<u>1.80E-01</u>
Xe-138	<u>5.00E-03</u>
Kr-87	<u>7.10E-02</u>
Ar-41	<u>1.00E-03</u>
Kr-85	<u><LLD</u>
Xe-131m	<u>1.70E-02</u>

NOTE: THE FOLLOWING ARE NOT REQUIRED. HOWEVER, IF TIME PERMITS, ANALYSIS OF AS MANY AS POSSIBLE WILL HELP IN THE COMPLETION OF EPIP 1.7, "CORE DAMAGE ESTIMATION PROCEDURE."

Cs-134	<u>5.50E-06</u>
Cs-137	<u>1.00E-07</u>
Te-132	<u>1.25E-06</u>
Ba-140	<u>1.25E-06</u>
La-140	<u><LLD</u>
La-142	<u><LLD</u>

3.0 RADIOACTIVE IODINE ANALYSIS

3.1	Decay time in minutes	<u>As Read</u>
3.2	Sample count time in seconds	<u>As Read</u>
3.3	Detector	<u>#5</u>
3.4	Geometry	<u>5</u>
3.5	Pressure-temperature correction (Same as Section 2.7)	<u>1.10</u>

3.6 Results of MCA

<u>Isotope</u>	<u>Concentration ($\mu\text{Ci/cc}$)</u>
I-130	<LLD
I-131	5.5E+00
I-132	8.90E-01
I-133	3.80E+00
I-134	1.00E-03
I-135	1.92E+00

4.0 ROUTING AND APPROVAL

	<u>Date</u>	<u>Initials</u>
4.1 Calculations completed by	_____	_____
4.2. Analysis completed by	_____	_____
4.3 Chemistry director	_____	_____
4.4 Health Physics director	_____	_____
4.5 Technical support manager	_____	_____

10.0 SAMPLE OFF-SITE DOSE PROJECTION

10.1 RMS

10.2 MAD

Dose projections for this scenario were performed using two different models: the real time Radiation Monitoring System (RMS) Program and the XT resident "Emergency Meteorology and Dose Assessment Program (MAD).

Sample projections follow for these cases:

<u>Case No.</u>	<u>Time</u>	<u>Event</u>	<u>Dose Projection Model</u>
1	1010	Auxiliary building release	RMS
2	1107	Design basis leak, GAP activity from one assembly	MAD

(DRILL)
ENTER DATA SOURCE
PLANT MONITORS (ENTER P) OR FIELD READINGS (ENTER F)
?P

THIS IS WHAT YOU ENTERED:
1. AUXILIARY BUILDING VENT = 1E-05 μ I/CC
2. DRUMMING AREA VENT = 3.3E-06 μ CI/CC
3. UNIT 1 CONTAINMENT PURGE = 0 μ CI/CC
4. UNIT 2 CONTAINMENT PURGE = 0 μ CI/CC
5. GAS STRIPPER BUILDING = 2.6E-08 μ CI/CC
6. COMBINED AIR EJECTOR = 2E-05 μ CI/CC
7. STEAM LINE VENT = 0 μ CI/CC

NO VALVES ARE OPEN

ARE THESE THE CORRECT READINGS? (Y OR N)Y
(DRILL)
ACCIDENT TYPE ? ENTER THE CORRECT LINE NUMBER
1. LOSS OF COOLANT ACCIDENT
2. GAP ACTIVITY ACCIDENT
3. FUEL HANDLING ACCIDENT
4. STEAM GENERATOR ACCIDENT
5. ACCIDENT TYPE UNKNOWN
6. NO ACCIDENT HAS OCCURRED
?2

CHECK IF EVENT SHOULD BE CLASSIFIED AS A
SITE EMERGENCY

(DRILL)

PROJECTIONS ARE FOR SITE BOUNDARY

DATA SOURCE: PLANT

TYPE OF ACCIDENT

WHOLE BODY DOSE
RATE (REM/HR)THYROID DOSE RATE
(REM/HR)-----
GAP ACTIVITY ACCIDENT-----
2.31549E-06-----
4.63098E-06

IF THE PROJECTED OFF-SITE DOSES MEET ANY OF THE FOLLOWING CRITERIA,
THE EVENT IS TO BE CLASSIFIED AS A SITE EMERGENCY

1. > .050 R/HR WHOLE BODY FOR 1/2 HOUR
2. > .250 R/HR TO THE THYROID FOR 1/2 HOUR
3. > .500 R/HR WHOLE BODY FOR 2 MINUTES
4. > 2.50 R/HR TO THE THYROID FOR 2 MINUTES

(DRILL)
ENTER THE RELEASE DURATION IN HOURS (IF UNKNOWN ENTER 8)
78

(DRILL)

R.E.T.S. EVALUATION

TOTAL RELEASE RATE = 3.31068E-04 CI/SEC

RELEASE DURATION = 8 HOURS

ESTIMATED TOTAL ACTIVITY = 9.53477 CI

ESTIMATED TOTAL IODINE = 3.77184E-04 CI

CONCENTRATION IS .17 % OF THE MAXIMUM PERMISSIBLE CONCENTRATION
AT THE SITE BOUNDARY.

R.E.T.S. HAVE NOT BEEN EXCEEDED

```

*****
*****
**          **          *****          **
**          **          *****          **
** MM      MM      AAAAAA      DDDDDDD      **
** MM      MM      AAAAAAA      DDDDDDD      **
** MM      MM      AA      AA      DD      DD      **
** MM      MM      AAAAAAA      DD      DD      **
** MM      MM      AAAAAAA      DD      DD      **
** MM      MM      AA      AA      DD      DD      **
** MM      MM      AA      AA      DDDDDDD      **
** MM      MM      AA      AA      DDDDDDD      **
**          **          *****          **
*****
*****

```

EMERGENCY METEOROLOGY AND DOSE ASSESSMENT PROGRAM

WRITTEN BY: E. J. LIFFE
WISCONSIN ELECTRIC POWER COMPANY - POINT BEACH NUCLEAR PLANT
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REVISED: 8-01-86 IDMPG REVISION: 11-14-85

PRESS ENTER TO CONTINUE

NEW OR RELOAD?NEW

ENTER TODAY'S DATE IN THE FOLLOWING FORMAT
XX-XX-XX
09-14-88

TODAY'S DATE IS 09-14-88

COMPASS SECTOR ORIENTATION TABLE:

-----WIND-----				-----RECEPTOR-----			
NO	ALPHA	COMPASS	DIREC	DIREC	COMPASS	ALPHA	NO
1	A	N	0.0	180.0	S	J	9
2	B	NNE	22.5	202.5	SSW	K	10
3	C	NE	45.0	225.0	SW	L	11
4	D	ENE	67.5	247.5	WSW	M	12
5	E	E	90.0	270.0	W	N	13
6	F	ESE	112.5	292.5	WNW	P	14
7	G	SE	135.0	315.0	NW	Q	15
8	H	SSE	157.5	337.5	NNW	R	16
9	J	S	180.0	0.0	N	A	1
10	K	SSW	202.5	22.5	NNE	B	2
11	L	SW	225.0	45.0	NE	C	3
12	M	WSW	247.5	67.5	ENE	D	4
13	N	W	270.0	90.0	E	E	5
14	P	WNW	292.5	112.5	ESE	F	6
15	Q	NW	315.0	135.0	SE	G	7
16	R	NNW	337.5	157.5	SSE	H	8

DO YOU WANT DIRECTIONAL A WIND Y OR N? N
 ENTER TIME OF SHUTDOWN USING 2400 HOUR CLOCK:
 744
 1107

IS THIS CORRECT (Y OR N)? Y
 INDICATE "OK" OR "REPEAT" OK

ENTER CASE #: 1
 ENTER STABILITY CLASS (A-G): F

ENTER WINDSPEED (MPH), DIRECTION (DEGREES), START TIME, AND DAY NUMBER:
 XXX.X XX XXXX XX
 9.0 074 1107 1

YOU'VE ENTERED:
 WINDSPEED: 9.0 MPH
 WIND DIRECTION: 74 DEGREES
 START TIME: 1107
 DAY NUMBER: 1

IS THIS CORRECT (Y OR N)? Y

CASE: 1

TIME = 1107 WIND SPEED = 9.0
 DIR = 74 STABILITY = F

DISTANCE (MILES)	X/O (SEC/M**3)	ISOPLETH LABEL	X/O (SEC/M**3)
1	5.97E-05	A	2.49E-05
	2.49E-05	B	2.49E-06
	1.47E-05	C	2.49E-07
	1.02E-05	D	2.49E-08
	7.75E-06	E	2.49E-09
	6.19E-06	F	2.49E-10
	5.00E-06	G	2.49E-11
	4.00E-06	H	2.49E-12
	3.20E-06	I	2.49E-13
	2.56E-06	J	2.49E-14
	2.05E-06	K	2.49E-15
	1.64E-06	L	2.49E-16

SECTOR DIRECTION	DIFFUSION FACTOR (X 10) DISTANCE (MILES)				
	2	3	5	10	
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	2.40E-05	2.49E-06	2.49E-06	2.49E-06	2.40E-06
WSW	2.97E-05	2.42E-05	1.47E-05	7.75E-06	7.41E-06
W	2.49E-06	2.49E-06	2.49E-06	2.49E-06	2.49E-06
WSW					
SW					
SSW					

ESTIMATED PLUME ARRIVAL TIMES: 1140 (5 MILES)
1213 (10 MILES)

IS HOT DATA OK? ANSWER 'OK' OR 'REPEAT' OK

ENTER SOURCE TERM TYPE: LOCA, GAP, SEEN, SHA, OR USER:GAP

DO YOU HAVE ANY NOBLE GAS DATA? ENTER Y OR N:N

DO YOU HAVE ANY IODINE DATA? ENTER Y OR N:N

WAS CONTAINMENT SPRAY USED? Y OR N:N

HOW MANY FUEL ASSEMBLIES WERE AFFECTED (1-121) ?
XXX.X

1

YOU ENTERED:

NUMBER OF DAMAGED FUEL ASSEMBLIES: 1.0

IS THIS CORRECT (Y OR N)? Y

DO YOU WANT A DOSE PROJECTION FOR THE MOST RECENT CASE? Y OR N:

ENTER THE NUMBER OF HOURS DURATION FOR THE MOST RECENT CASE:
XXX.X

0

YOU ENTERED:

HOURS OF DURATION: 0.0

IS THIS CORRECT (Y OR N)? Y

CASE: 1 ELAPSED TIME = 1.5 HOURS

BASIS FOR WHOLE BODY DOSE CALCULATIONS: ESTIMATED
BASIS FOR THYROID DOSE CALCULATIONS: ESTIMATED

MAXIMUM SITE BOUNDARY DOSE RATES FOR ADVERSE METEOROLOGY:

WHOLE BODY: 0.001 REM/HR
THYROID: 0.006 REM/HR

MAXIMUM SITE BOUNDARY DOSE RATES FOR ACTUAL METEOROLOGY:

WHOLE BODY: 2.39E-04 REM/HR
THYROID: 1.38E-03 REM/HR

***** THE FOLLOWING DOSE DATA IS BASED ON ACTUAL METEOROLOGY: *****

SECTOR DIRECTION	WHOLE BODY DOSE RATES (REM/HR) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	7.94E-05	9.94E-06	9.94E-06	9.94E-06	9.94E-06
WSW	2.39E-04	9.94E-06	5.87E-05	3.10E-05	1.36E-05
W	9.94E-05	9.94E-06	7.94E-06	9.94E-06	9.94E-06
WNW					
NW					
NNW					

SECTOR DIRECTION	THYROID DOSE RATES (REM/HR) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	5.73E-04	5.73E-05	5.73E-05	5.73E-05	5.73E-05
WSW	1.38E-03	5.65E-04	3.39E-04	1.79E-04	7.86E-05
W	5.73E-04	5.73E-05	5.73E-05	5.73E-05	5.73E-05
WNW					
NW					
NNW					

INTEGRATED DOSES FOR THIS CASE:

CASE DURATION = 8.0 HOURS

SECTOR DIRECTION	WHOLE BODY DOSES FOR THIS CASE (REM) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	7.95E-04	7.95E-05	7.95E-05	7.95E-05	7.95E-05
WSW	1.91E-03	7.84E-04	4.70E-04	2.48E-04	1.09E-04
W	7.95E-04	7.95E-05	7.95E-05	7.95E-05	7.95E-05
WNW					
NW					
NNW					

SECTOR DIRECTION	THYROID DOSES FOR THIS CASE (REM) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	4.59E-03	4.59E-04	4.59E-04	4.59E-04	4.59E-04
WSW	1.10E-02	4.52E-03	2.71E-03	1.43E-03	6.28E-04
W	4.59E-03	4.59E-04	4.59E-04	4.59E-04	4.59E-04
WNW					
NW					
NNW					

IS DOSE DATA OK? ANSWER 'OK' OR 'REPEAT':OK

USE DOSPRINT OPTION TO PRINT DOSE SUMS IF DESIRED.

NEXT CASE, EDIT, METPRINT, DOSPRINT, TREND, CHART, HELP, OR STOP?TREND
COMMAND NOT RECOGNIZED. TRY AGAIN.

***** TREND SUMMARY *****

*** TIME OF SHUTDOWN: 740 HOURS

*** CASE SUMMARY:

CASE NO:	START TIME:	DAY NO:	ELAPSED TIME:	CASE LENGTH	SRCE TYPE	CONTAIN SPRAY:	NOBLE GAS BASIS:	IODINE BASIS:
1	1107	1	3.45	8.00	GAP	OFF	ESTIMATED	ESTIMATED

*** METEOROLOGY SUMMARY:

CASE NO:	STAB CLASS	WIND SPEED	WIND DIR	MAXIMUM X/D AT ONE MILE	WORST SECTOR
1	F	9.0	74	5.97E-05	WSW

*** DOSE AND RELEASE SUMMARY:

CASE NO:	MAX DOSE AT 1 MILE R/HR WB	WB R/HR THY	WB TREND	THY TREND	EQUIVALENT PLANT RELEASES CI/SEC NG	CI/SEC I	NG TREND	I TREND
1	2.39E-04	1.38E-03	NA	NA	1.19E-01	1.70E-05	NA	NA

NEXT CASE, EDIT, METPRINT, DOSPRINT, TREND, CHART, HELP, OR STOP?STOP

ENTER TIME RELEASE WAS TERMINATED AND DAY NUMBER:

XXXX XX

1700 1

YOU ENTERED:

RELEASE TERMINATED AT: 1700

ON DAY NUMBER: 1

IS THIS CORRECT (Y OR N)? Y

INTEGRATED DOSES FOR THE FINAL CASE:

CASE DURATION = 5.9 HOURS

SECTOR DIRECTION	WHOLE BODY DOSES FOR THIS CASE (REM) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	5.85E-04	5.85E-05	5.85E-05	5.85E-05	5.85E-05
WSW	1.40E-03	5.77E-04	3.46E-04	1.82E-04	8.01E-05
W	5.85E-04	5.85E-05	5.85E-05	5.85E-05	5.85E-05
WNW					
NW					
NNW					

SECTOR DIRECTION	THYROID DOSES FOR THIS CASE (REM) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	3.37E-03	3.37E-04	3.37E-04	3.37E-04	3.37E-04
WSW	8.10E-03	3.33E-03	1.99E-03	1.05E-03	4.62E-04
W	3.37E-03	3.37E-04	3.37E-04	3.37E-04	3.37E-04
WNW					
NW					
NNW					

TOTAL DOSES INCLUDING THE FINAL CASE:

TOTAL TIME = 9.3 HOURS

SECTOR DIRECTION	TOTAL WHOLE BODY DOSES (REM) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	5.85E-04	5.85E-05	5.85E-05	5.85E-05	5.85E-05
WSW	1.40E-03	5.77E-04	3.48E-04	1.82E-04	8.01E-05
W	5.85E-04	5.85E-05	5.85E-05	5.85E-05	5.85E-05
WNW					
NW					
NNW					

SECTOR DIRECTION	TOTAL THYROID DOSES (REM) DISTANCE (MILES):				
	1	2	3	5	10
N					
NNE					
NE					
ENE					
E					
ESE					
SE					
SSE					
S					
SSW					
SW	3.37E-03	3.37E-04	3.37E-04	3.37E-04	3.37E-04
WSW	8.10E-03	3.33E-03	1.99E-03	1.05E-03	4.62E-04
W	3.37E-03	3.37E-04	3.37E-04	3.37E-04	3.37E-04
WNW					
NW					
NNW					

*** TREND SUMMARY ***

*** TIME OF SHUTDOWN: 740 HOURS

*** CASE SUMMARY:

CASE NO:	START TIME:	DAY NO:	ELAPSED TIME:	CASE LENGTH	SRCE TYPE	CONTAIN SPRAY:	NOBLE GAS BASIS:	IODINE BASIS:
1	1307	1	3.45	5.88	GAP	OFF	ESTIMATED	ESTIMATED

*** METEOROLOGY SUMMARY:

CASE NO:	STAB CLASS	WIND SPEED	WIND DIR	MAXIMUM X/O AT ONE MILE	WORST SECTOR
1	F	9.0	74	5.97E-05	WSW

*** DOSE AND RELEASE SUMMARY:

CASE NO:	MAX DOSE AT 1 MILE R/HR WB	WB R/HR THY	WB TREND	THY TREND	EQUIVALENT PLANT RELEASES CI/SEC NG	CI/SEC I	NG TREND	I TREND
1	2.39E-04	1.38E-03	NA	NA	1.19E-01	1.70E-05	NA	NA

*** PLUME EXIT TIMES:

TIME TO EXIT 5-MILE SECTOR: 0.56 HRS
CLOCK TIME AT 5-MILE EXIT: 1733 HOURS

TIME TO EXIT 10-MILE SECTOR: 1.11 HRS
CLOCK TIME AT 10-MILE EXIT: 1806 HOURS

***** THE FOLLOWING POPULATION DOSE DATA ASSUMES NO EVACUATION OCCURRED *****

***** POPULATION DOSES FOR THE ENTIRE ACCIDENT ARE AS FOLLOWS:

WHOLE BODY DOSE: 5.702E-01 PERSON-REM
THYROID DOSE: 3.290E+00 PERSON-REM

***** MAXIMUM DOSE TO ANY INDIVIDUAL:

WHOLE BODY DOSE: 0.001 REM AT 1 MILES IN THE WSW SECTOR
THYROID DOSE: 0.008 REM AT 1 MILES IN THE WSW SECTOR

***** AVERAGE DOSES IN AFFECTED SECTORS:

WHOLE BODY DOSE: 1.255E-04 REM
THYROID DOSE: 7.242E-04 REM
TOTAL AFFECTED POPULATION: 4543

***** AVERAGE DOSES OVER ENTIRE EPZ:

WHOLE BODY DOSE: 2.512E-05 REM
THYROID DOSE: 1.450E-04 REM
TOTAL EPZ POPULATION: 22696

MAD TERMINATED: DATA SAVED IN CRASHFIL

TO RESTART MAD TURN MASTER SWITCH OFF, THEN BACK ON

IF IT IS NECESSARY TO RELOCATE THE COMPUTER SYSTEM
THE READ-WRITE HEADS FOR THE HARD DISK MUST BE LOCKED.
TO LOCK THE HEADS TYPE "LOCK" AND CHOOSE ITEM NUMBER 3.

NOTE: IF THE COMPUTER SYSTEM IS TO BE PLACED IN STORAGE LOCK THE THE READ-WRITE

PowerMenu System v2.0sw

EXERCISE PHONE LIST

POINT BEACH NUCLEAR PLANT
EMERGENCY PLAN EXERCISE

SEPTEMBER 14, 1988

11.0 EMERGENCY PLAN EXERCISE TELEPHONE DIRECTORY

11.1	<u>Exercise Controllers</u>	<u>Extension</u>	<u>Phone</u>
11.1.1	TSC (main controller)	398	
11.1.2	Drill Control Room	374	
11.1.3	EOF/SBCC	279	
11.1.4	JPIC		793-1497
11.1.5	Manitowoc EOC		683-4226
11.1.6	Kewaunee EOC	108	1-487-5257
11.1.7	Wisconsin DEG - EOC		1-608-267-7316

11.2 Drill Control Room

Duty shift superintendent	Drill Ringdown CR-TSC
	446
	447

11.3 <u>Technical Support Center</u>	Drill Ringdown TSC-CR
--------------------------------------	--------------------------

11.4 <u>System Control Supervisor</u>	1-544-7007
---------------------------------------	------------

11.5 All Other Onsite and Offsite Locations

Use the numbers which appear in the EPIP call lists