

ATTACHMENT

Consumers Power Company
Palisades Plant
Docket 50-255

1993 PALISADES EMERGENCY
EXERCISE SCENARIO

November 18, 1993

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PALEX-93

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SCOPE AND OBJECTIVES

PALEX-93 SCOPE AND OBJECTIVES

SCOPE

PALEX-93 is designed to meet exercise requirements specified in 10 CFR 50, Appendix E, Section IV.F. PALEX-93 is a utility only exercise and will not include the participation of local governments. State personnel will participate only to the extent of answering phones and supplying information on simulated offsite actions. The Joint Public Information Center will not be activated during the exercise.

OBJECTIVES

The following objectives will be demonstrated as dictated by the exercise scenario.

1. Assessment and Classification

- a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions.
- b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification.

2. Communications

- a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and locals and within one hour to the NRC using the Notification form.
- b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed.
- c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance.
- d. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.

3. Radiological Assessment and Control

- a. Collect, analyze, document and trend radiological survey data.
- b. Analyze plant radiological conditions and implement protective actions for site personnel in accordance with procedures.
- c. Prepare and brief personnel for activities required in high radiation areas.

- d. Monitor, track and document radiation exposure to maintenance, operations, and monitoring team personnel.
- e. Calculate dose projections based on sample results or monitor readings.
- f. Identify appropriate protective action recommendations.
- g. Perform environmental monitoring in accordance with procedures and as directed by the Controller.

4. Emergency Response Facilities

- a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.
- b. Staff and activate the Emergency Operations Facility within about an hour of the Site Area Emergency declaration.
- c. Update status boards at least every 30 minutes.
- d. Document field team activities in logs and on appropriate status boards.
- e. Track and prioritize status of key in plant jobs.

5. Direction and Control

- a. Command and control all Emergency Response Facilities in accordance with assigned functions.
- b. Coordinate maintenance activities.
- c. Take appropriate measures to secure emergency equipment, supplies, and support.
- d. Dispatch field teams in accordance with procedures.
- e. Direct and monitor field team actions.
- f. Transfer Command and control in accordance with the Site Emergency Plan.
- g. Perform accountability within approximately 30 minutes of the Alert classification.
- h. Control site access and site evacuation as directed.

- i. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.
- j. Effectively coordinate with State and local governments as appropriate.
- k. Demonstrate reentry and recovery in accordance with procedures.

6. Exercise Control

- a. Allow adequate free play for players to demonstrate their capabilities.
- b. Accurately assess performance of exercise players and controllers.

EXERCISE CONDUCT

EXERCISE CONDUCT

EXERCISE ORGANIZATION

The exercise organization is comprised of Controller/Evaluators, Players and Observers.

Controller/Evaluators observe player activities and judge the effectiveness of Player actions based on Evaluator Checklists provided in this section. Each CPCo Controller/Evaluator must submit a completed, signed Evaluator Checklist at the conclusion of the exercise. NRC evaluators will also be present for the exercise.

Selected Controller/Evaluators provide messages and exercise data to players and ensure that the exercise proceeds in accordance with the Sequence of Events. Controller/Evaluators are authorized to modify scenario data as judged appropriate. However, every attempt must be made to contact a Lead Controller or the Exercise Coordinator before doing so. If data is modified without approval, the Controller/Evaluator involved is required to notify his/her Lead Controller as soon as possible.

Controller/Evaluators are authorized to prompt players, but again should make every effort to discuss the situation with the Lead Controller before doing so. If a player must be prompted, it must be noted during the critique following the exercise.

Observers may be present at any location where exercise activities may occur. Observers are not allowed to converse with exercise players unless approved by the Controller/Evaluator in charge.

Players include all personnel responding to simulated emergency conditions.

CONTROLLER ORGANIZATION

The Exercise Coordinator is in charge of overall exercise conduct. Responsibilities include conducting preexercise Controller/Evaluator training sessions, the NRC Entrance, joint critiques, and the NRC Exit; approving major scenario deviations; resolving exercise questions; and terminating the exercise.

A Lead Controller is assigned to each Emergency Response Facility and is responsible for addressing Player inquiries, conducting a post exercise critique, and collecting completed Evaluator Checklists following the exercise.

Controller/Evaluators will refer all Player inquiries to the Lead Controller if possible. If the Lead Controller is not able to answer the question, it should be referred to the Exercise Coordinator.

EXERCISE DATA AND MESSAGES

Messages and data to drive Player actions are contained in Section 3, Exercise Data. Refer to the Table of Contents for headings.

It is each Controller/Evaluator's responsibility to be fully familiar with the scenario package and ensure that only appropriate information is provided to Players. Leading questions and hints are not allowed at any time. If confidential scenario information must be provided to a Player, it must be formally noted in the critique that the Player was prompted.

CRITIQUES

Following the conclusion of the exercise, each Lead Controller will conduct a critique in the Emergency Response Facility where he/she is assigned. Each Team Leader, Director, and Controller/Evaluator shall be asked for comments during the critique. NRC evaluators are expected to attend.

Following Facility Critiques, a Joint Critique will be conducted with each Lead Controller presenting findings. Players and NRC evaluators are welcome to attend.

Following the Joint Critique, the NRC will conduct an Exit Meeting. The NRC will verbally present its preliminary findings at this time. This is the only opportunity to comment on NRC observations before the formal exercise report is published. If anyone has a question, this is the time to ask.

EVALUATOR CHECKLISTS

The checklists provided in the following section are used in gauging effectiveness of Player response. Checklists are cross referenced to exercise objectives to ensure that Player and Controller/Evaluator actions have accomplished exercise objectives.

Each Controller/Evaluator shall submit a completed, signed, and dated checklist at the conclusion of the exercise. Problems shall be fully explained on the completed checklist.

CONTROL ROOM EVALUATOR CHECKLIST

1. ASSESSMENT AND CLASSIFICATION

OVERALL: MET NOT MET

- a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

2. COMMUNICATIONS

OVERALL: MET NOT MET

- a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and Locals and within one hour to the NRC using the Notification Form.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

3. RADIOLOGICAL ASSESSMENT AND CONTROL

OVERALL: MET NOT MET

- c. Prepare and brief personnel for activities required in high radiation areas.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

4. **EMERGENCY RESPONSE FACILITIES**

OVERALL: MET NOT MET

- a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Staff and activate the Emergency Operations Facility within about an hour of the Site Area Emergency declaration.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Track and prioritize status of key inplant jobs.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

5. DIRECTION AND CONTROL

OVERALL: MET NOT MET

- a. Command and control of Emergency Response Facilities in accordance with assigned functions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Coordinate maintenance activities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Take appropriate measures to secure emergency equipment, supplies, and support.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- f. Transfer Command and Control in accordance with the Site Emergency Plan.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- i. Effectively coordinate with state or local governments as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

6. EXERCISE CONTROL

OVERALL: MET NOT MET

- a. Allow adequate free play for players to demonstrate their capabilities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Accurately assess performance of exercise players and controllers.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Adequacy of scenario data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

Name: _____ Date: _____

TSC EVALUATOR CHECKLIST

1. ASSESSMENT AND CLASSIFICATION

OVERALL: MET NOT MET

- a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

2. COMMUNICATIONS

OVERALL: MET NOT MET

- a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and Locals within one hour to the NRC using the Notification Form.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

3. RADIOLOGICAL ASSESSMENT AND CONTROL

OVERALL: MET NOT MET

- a. Collect, analyze, document and trend radiological survey data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Analyze plant radiological conditions and implement protective actions for site personnel in accordance with procedures.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Calculate dose projections based on sample results or monitor readings.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- f. Identify appropriate protective action recommendations.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

4. EMERGENCY RESPONSE FACILITIES

OVERALL: MET NOT MET

- a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Update status boards at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Track and prioritize status of key inplant jobs.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

5. DIRECTION AND CONTROL

OVERALL: MET NOT MET

- a. Command and control of Emergency Response Facilities in accordance with assigned functions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Take appropriate measures to secure emergency equipment, supplies, and support.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Dispatch field teams in accordance with procedures.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Direct and monitor field team actions.

MET MET/PROBLEM NOT MET N/A

- f. Transfer Command and control in accordance with the Site Emergency Plan.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- g. Perform accountability within approximately 30 minutes of the Alert classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- i. Effectively coordinate with state and local governments as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

6. EXERCISE CONTROL

OVERALL: MET NOT MET

- a. Allow adequate free play for players to demonstrate their capabilities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Accurately assess performance of exercise players and controllers

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Adequacy of scenario data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

Name: _____

Date: _____

OSC EVALUATOR CHECKLIST

2. COMMUNICATIONS

OVERALL: MET NOT MET

- d. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

3. RADIOLOGICAL ASSESSMENT AND CONTROL

OVERALL: MET NOT MET

- a. Collect, analyze, document and trend radiological survey data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Prepare and brief personnel for activities required in high radiation areas.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Monitor, track and document radiation exposure to maintenance, operations, and monitoring team personnel.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

4. EMERGENCY RESPONSE FACILITIES

OVERALL: MET NOT MET

- a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Update status boards at least every 30 minutes

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Document field team activities in logs and on appropriate status boards.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Track and prioritize status of key inplant jobs.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

5. DIRECTION AND CONTROL

OVERALL: MET NOT MET

- a. Command and control all Emergency Response Facilities in accordance with assigned functions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

b. Coordinate maintenance activities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

c. Take appropriate measures to secure emergency equipment, supplies, and support.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

d. Dispatch field teams in accordance with procedures.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

e. Direct and monitor field team actions.

MET MET/PROBLEM NOT MET N/A EXPLANATION:

g. Perform accountability within approximately 30 minutes of the Alert classification.

MET MET/PROBLEM NOT MET N/A EXPLANATION:

- h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

6. EXERCISE CONTROL

OVERALL: MET NOT MET

- a. Allow adequate free play for players to demonstrate their capabilities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Accurately assess performance of exercise players and controllers.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Adequacy of scenario data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

Name: _____

Date: _____

RMT EVALUATOR CHECKLIST

2. COMMUNICATIONS

OVERALL: MET NOT MET

- d. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

3. RADIOLOGICAL ASSESSMENT AND CONTROL

OVERALL: MET NOT MET

- a. Collect radiological survey data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Monitor, track and document radiation exposure to monitoring team personnel.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- g. Perform environmental monitoring in accordance with procedures.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

5. DIRECTION AND CONTROL

OVERALL: MET NOT MET

- h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

6. EXERCISE CONTROL

OVERALL: MET NOT MET

- a. Allow adequate free play for players to demonstrate their capabilities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Accurately assess performance of exercise players and controllers.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Adequacy of scenario data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

EOF EVALUATOR CHECKLIST

1. ASSESSMENT AND CLASSIFICATION

OVERALL: MET NOT MET

- a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

2. COMMUNICATIONS

OVERALL: MET NOT MET

- a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and Locals and within one hour to the NRC using the Notification Form.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

3. RADIOLOGICAL ASSESSMENT AND CONTROL

OVERALL: MET NOT MET

- a. Collect, analyze, document and trend radiological survey data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Monitor, track and document radiation exposure to monitoring team personnel.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Calculate dose projections based on sample results or monitor readings.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

f. Identify appropriate protective action recommendations.

MET	MET/PROBLEM	NOT MET	N/A
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EXPLANATION:

g. Perform environmental monitoring in accordance with procedures.

MET	MET/PROBLEM	NOT MET	N/A
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EXPLANATION:

4. **EMERGENCY RESPONSE FACILITIES**

OVERALL: MET NOT MET

- b. Staff and activate the Emergency Operations Facility within about an hour of the Site Area Emergency declaration.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Update status boards at least every 30 minutes.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- d. Document field team activities in logs and on appropriate status boards.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

5. DIRECTION AND CONTROL

OVERALL: MET NOT MET

- a. Command and control all Emergency Response Facilities in accordance with assigned functions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Take appropriate measures to secure emergency equipment, supplies, and support.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- e. Direct and monitor field team actions.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- f. Transfer Command and control in accordance with the Site Emergency Plan.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- i. Effectively coordinate with state and local governments as appropriate.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

6. EXERCISE CONTROL

OVERALL: MET NOT MET

- a. Allow adequate free play for players to demonstrate their capabilities.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- b. Accurately assess performance of exercise players and controllers.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

- c. Adequacy of scenario data.

MET MET/PROBLEM NOT MET N/A

EXPLANATION:

Name: _____

Date: _____

SEQUENCE OF EVENTS

SCENARIO SUMMARY:

PALEX-93 involves a fuel handling accident with personnel injuries. A release to the environment occurs.

The Control Room simulator will be used and run in real time mode, although its usefulness and the ability to simulate the postulated conditions in the Fuel Pool Area is extremely limited. Reactor plant conditions will remain relatively static throughout the exercise. Backup plant conditions data sheets have been prepared and will be used if needed.

SEQUENCE OF EVENTS:

-0030/0800

Initial conditions are provided to players:

The plant is in Cold Shutdown at the end of core life. Preparations for refueling are in progress. Fuel handling operations in the Spent Fuel Pool are in progress.

Equipment degraded/out of service:

**Safeguards Transformer 1-1
Spent Fuel Pool Cooling Pump P-51A**

Normal shutdown alarms are annunciated.

A severe storm warning has been issued and a tornado watch is in effect.

0000/0830

The exercise begins when a lightning strike disables Station Power Transformer 1-2. Shutdown Cooling is briefly lost, Spent Fuel Pool cooling is lost and the Spent Fuel Handling Machine, with a spent fuel bundle in the mast, is disabled.

0015/0845

A tornado destroys the Spent Fuel Handling Area and spreads debris along the north-south access road leading to Lake Michigan. Two operators are injured and rendered unconscious. The Fuel Pool begins to leak into the south Tilt Pit. An "ALERT" or higher should be declared.

0030/0900 **The damaged fuel bundle continues to uncover. Debris washes into gutters and catch basins leading to Lake Michigan.**

0045/0915 **Site Emergency Plan activation complete. Search and rescue operations commence.**

0100/0930 **Site Emergency Plan classification should be upgraded to "SITE AREA EMERGENCY" or higher.**

0130/1000 **Fuel Pool losses to Tilt Pit are overcome by Fire Water addition to Spent Fuel Pool and the damaged fuel bundle is re-submerged. The injured operators are located and evacuated.**

0223/1053 **The Fuel Pool is refilled. The injured operators are transported to South Haven Community Hospital. Contamination retention/capture efforts are underway on the site perimeter.**

0230/1100 **Fuel Pool cooling is restored, resulting in high radiation areas being created in the Spent Fuel Pool Heat Exchanger Room and adjacent areas of the Auxiliary Building.**

0300/1130 **The damaged fuel bundle is secured to the Spent Fuel Handling Machine.**

0400/1230 **Cleanup planning is completed. The Site Emergency Plan classification should be downgraded to "ALERT".**

0400+/1230+ **Recovery planning begins. Players not involved in recovery planning begin critiques.**

0630/1500 **Recovery planning is completed; the exercise is terminated.**

NARRATIVE SUMMARY

NARRATIVE SUMMARY:

0800 (-0030)

- A. The plant is in Cold Shutdown at the end of core life. Preparations for refueling are in progress. The reactor has been shutdown for 96 hours. The Primary Coolant System is pressurized to 250 psia; Primary Coolant Pumps P-50B and P-50C are in service for Primary Coolant System source term reduction.**
- B. The Equipment Hatch and both doors of the Personnel Lock are open. Work in Containment is in progress to support Reactor Vessel Head removal in approximately 6 days. The South Tilt Pit Gate is installed and the south Tilt Pit is empty; the Fuel Transfer Tube Flange is installed.**
- C. Fuel handling operations in the Spent Fuel Pool are in progress to accommodate a full core off-load in support of Reactor Vessel beltline inspections. One Control Operator and an Auxiliary Operator "lifeguard" are using the Spent Fuel Handling Machine to move various spent fuel bundles to different storage locations as directed by Reactor Engineering. At present, bundle L-015 is being moved from Spent Fuel Pool location O-13 to location I-15.**
- D. Equipment in a degraded mode:**
 - 1. Safeguards Transformer 1-1 is out of service to repair a recurrent nitrogen leak. MOD 24F1 is open and red tagged. 2400VAC busses are being fed from Station Power Transformer 1-2 via Main Transformer backfeed.**
 - 2. Spent Fuel Pool Cooling Pump P-51A is disassembled with rebuild in progress to support the upcoming core off-load. P-51B is in service for Spent Fuel Pool cooling.**
- E. Many normal shutdown alarms are annunciated.**
- F. See the following pages for Shutdown Safety Equipment Availability.**

PALISADES SHUTDOWN SAFETY EQUIPMENT AVAILABILITY

Effective Through Rev.
Operations Scheduler Date

☞ Special Instructions:

KEEP SDC RETURN TEMPERATURES COMFORTABLY ABOVE 70°F (SOP-1 AND GOP-14)

BOTH TRAINS OF SDC ARE OPERABLE. THE S/G'S ARE NOT NEEDED TO MEET GOP-14 REQUIREMENTS
Shiftily S/G level verification is not required to be logged in SHO-1 to meet GOP-14 requirements.

PCS Over-pressure Protection is being provided by both channels of LTOP

☞ Decay Heat Removal requirements:

Shutdown Cooling Train 'A' defined in GOP-14 Attach. 5 (D/G 1-2)

preferred in service train
OPERABLE

LPSI P-67A CCW PUMP P-52B SWS PUMP P-7A CCW HX E-54A SDC HX E-60A

LPSI INJ MO-3012 / FI-0311A MO-3014 / FI-0313A EK-1161/1162 LPSI Pump Press and trip Alarms

Shutdown Cooling Train 'B' defined in GOP-14 Attach. 5 (D/G 1-1)

OPERABLE

LPSI P-67B CCW PUMP P-52A SWS PUMP P-7B CCW HX E-54B SDC HX E-60B

LPSI INJ MO-3008 / FI-0307A MO-3010 / FI-0309A EK-1161/1162 LPSI Pump Press and trip Alarms

PCS Loop 1 ('A' S/G and P-50B)

AVAILABLE

PCS Loop 2 ('B' S/G and P-50C)

AVAILABLE

☞ CVCS Boric Acid Tech Spec 3.2 and GOP-14 Inventory Addition Pathways (Both required):

1. T-53 'A' level $\geq 118"$ (29.5%) and [B] 11,500 to 15,000 ppm, P-56A, MO-2140, P-55A AND B
(BOTH CHG PUMPS REQUIRED), through normal Charging CV-2111 and CV-2113 or CV-2115

2. SIRWT with level $\geq 50\%$ and [B] ≥ 1720 ppm, CV-3057 (SIRWT) to P-66A HPSI pump and
discharge through REDUNDANT HPSI header through MO-3064 (Path available within 30 minutes)

☞ PCS normal makeup Inventory Addition Pathway: SIRWT, P-55A or B, normal charging

☞ PCS Level Band: FULL AND SOLID to FULL AND SOLID

Max Level FULL AND SOLID
Min Level FULL AND SOLID

☞ PCS Level Indication Requirements: LIA-0102A AND LI-0103A when PCS $\geq 628'$ 6"

☞ PCS Temperature Band: 100°F to 80°F

Max Temp. 130°F
Min Temp. 70°F

☞ PCS Temperature Indication Requirements: CET's # 2 (H-2), # 16 (R-8) and TR-0351

☞ Electric Power Requirements: Diesel 1-2

C and D Buses on STATION PWR AND STARTUP power available

☞ SFP Exhaust Fan / Charcoal Filter:

V-8B AND VF-66 OPERABLE (not need with Equip Hatch Closed)

☞ Containment Closure Time Frame:

40 MINUTES

Based on Initial PCS Temperature Of 130 °F
Based on Minimum PCS Level Of Full and Solid

☞ Equipment Hatch Closure Responsibility:

MECHANICAL MAINTENANCE

Notify: SEE DUTY LIST Phone Ext. # 181

NOTE: Adherence to all of the equipment conditions specified will ensure that the risk of jeopardizing the safe shutdown condition of the plant is minimized. Additional equipment may also be available, these flow paths meet the requirements and support the schedule. This equipment should not be degraded without Operations Scheduling approval.

HEAVY LOAD PATHS (available within 30 minutes)

<u>Path 1</u>	Suction	Reactor Sump through CV- 3029
	Pump	HPSI P-66- A . TRAIN 2 REDUNDANT HPSI
	Discharge	REDUNDANT HPSI through MO-3064
<u>Path 2</u>	Suction	Reactor Sump through CV- 3029 and MO-3198
	Pump	LPSI P-67- A
	Discharge	Normal SDC through MO-3012 and MO-3014
<u>Path 3</u>	Suction	Reactor Sump through CV- 3029
	Pump	HPSI P-66- A
	Discharge	REDUNDANT HPSI Hot Leg Injection through MO-3082
<u>Path 4</u>	Suction	LPSI through MO-3015 and MO-3016
	Pump	LPSI P-67-A
	Discharge	Normal SDC, both Heat Exchangers, MO-3012 and MO-3014

INOPERABLE CONTAINMENT PENETRATIONS

For planned maintenance

REMEMBER THAT OPERATIONS PENETRATIONS MUST ALSO BE CONTROLLED BY THE SHIFT SUPERVISOR

MZ-42	PMW TO QUENCH TK	MAY BE OPEN TO SUPPLY PMW TO THE CONTAINMENT, CV-0155 CAN BE CLOSED TO ISOLATE IF NEEDED.
MZ-10	SERVICE AIR	MAY BE OPEN TO SUPPLY AIR TO THE CONTAINMENT AS REQUESTED. MV- CA-122 CAN BE CLOSED TO ISOLATE IF NEEDED.
MZ-50	EQUIPMENT HATCH	HATCH IS OPEN. MECHANICAL MAINTENANCE WILL BE STATIONED AT OR NEAR THE HATCH 24 HOURS A DAY WHEN OPEN. THEY NEED 20 MINUTES CLOSE THE HATCH AFTER NOTIFICATION. ≥40 MINUTE CONTAINMENT CLOSURE TIME ALLOWS OPERATORS 10 MINUTES TO RECOGNIZE LOSS OF SDC, 10 MINUTES TO NOTIFY MAINT. AND CLEAR TEMPORARY LINES, AND 20 MINUTES TO CLOSE THE HATCH.
MZ-19	PERSONNEL AIR LOCK	WE WILL BE ALLOWING THE DWO-13 TIME FRAME TO EXPIRE. THE DOOR INTERLOCK IS DEFEATED TO ALLOW BOTH DOORS TO BE OPEN TO ESTABLISH REFUELING VENTILATION LINE-UP. AT ALL TIMES EACH DOOR SHOULD BE CAPABLE OF BEING CLOSED. NO TEMPORARY LINES SHOULD RUN THROUGH THE DOORS.
CONTAINMENT PURGE		CONTAINMENT PURGE CARD HAS BEEN ISSUED. CONTAINMENT PURGE MAY BE PERFORMED AS NEEDED. ONCE THE PURGE CARD IS CLOSED OUT A NEW ONE IS NEEDED BEFORE RESUMING PURGE.

OPERATIONS SUPERINTENDENT WAIVERS OF GOP-14 REQUIREMENTS

NONE

N/A

OPS SUPERINTENDENT

PALISADES SHUTDOWN SAFETY RISK ASSESSMENT

Any "No" answers to the questions will have circumstances identified on the Shutdown Safety Equipment Availability Sheets. Having conditions not satisfied is expected. A review of the no answers, comments, and status sheets will provide a level of understanding to current risk level. A copy of this will be attached to the SS and the Outage Manager's Copy of the Equipment Availability Sheets.

Operations Scheduler

Date

Comments

Core Heat Removal

- | | | |
|-------------------------------------|-------------------------------------|--|
| ☐ | ☒ | PCS Temperature is less than 120°F? |
| ☐ | ☒ | Two Shutdown Cooling pumps are Operable? |
| ☐ | ☒ | Two Shutdown Cooling trains are Operable? |
| ☐ | ☒ | SDC Flow is ≥3,000 gallons per minute? |
| ☐ | ☒ | Two Core Exit Thermocouples are Operable? |
| ☒ | ☐ | Both SFP Cooling Pumps are available? |
| ☐ | ☒ | PCS makeup is available > "Boil Off rate"? |
| ☐ | ☒ | SDC Instrumentation is Operable? |
| ☐ | ☒ | All Fire Protection systems are Operable? |
| ☐ | ☒ | 2 Instrument Air compressors are Operable? |

P-55A AND P-55B needed until 6/14/93, after then only one pur

Reactivity Control

- | | | |
|-------------------------------------|-------------------------------------|---|
| ☐ | ☒ | At least two Pumped Boric Acid flow paths (diesel backed-up) to the PCS are Operable? |
| ☐ | ☒ | PCS [B] is > 3.5% CSD or Refueling boron concentration? |
| ☐ | ☒ | 2 Source Range Nuclear Instruments are Operable? |
| ☐ | ☒ | No Core alterations are in progress? |
| ☒ | ☐ | No Fuel moves in SFP are in progress? |
| ☐ | ☒ | No Control Rod Drive testing is in progress? |
| ☐ | ☒ | Primary Makeup Water to PCS is caution tagged closed? |

PCS ≥REFUELING [B] of 1.720 PPM

MV-CVC-2162 closed.

Electrical Availability

- | | | |
|-------------------------------------|-------------------------------------|---|
| ☐ | ☒ | At least one Diesel Generator is operable? |
| ☐ | ☒ | At least 2 Off-Site power sources are operable? |
| ☐ | ☒ | At least 3 Preferred AC buses are operable? |
| ☐ | ☒ | Both 1C and 1D buses are energized? |
| ☒ | ☐ | No Electrical special testing is planned? |
| ☐ | ☒ | Switchyard Power supply is stable? |
| ☒ | ☐ | All DC Buses are operable? |

ED-01 Battery Discharge test will be started when PCS <130°F

ED-01 Battery Discharge test will be started when PCS <130°F

PCS Inventory

- | | | |
|--------------------------|-------------------------------------|---|
| ☐ | ☒ | PCS full and intact or is elevation of lowest opening identified? |
| ☐ | ☒ | PCS level is above 628" 5" ? |
| ☐ | ☒ | PCS level is above 623" 0" (reduced inventory)? |
| ☐ | ☒ | PCS level above is 618" 0" (2.5" < hot/cold leg centerline)? |
| ☐ | ☒ | 2 Containment Sump level instruments are available? |
| ☐ | ☒ | Two PCS level instruments are operable? |
| ☐ | ☒ | All flow paths for heavy load requirements are available? |
| ☐ | ☒ | Elevation of lowest PCS opening is identified? |
| ☐ | ☒ | GOP-14 PCS Venting requirements are satisfied? |

Containment Integrity

- | | | |
|--------------------------|-------------------------------------|--|
| ☐ | ☒ | Containment Integrity is set or controlled LAW GOP-14? |
| ☐ | ☒ | Containment is open with ability to close within specified time? |
| ☐ | ☒ | 1-10 penetrations are open which can be closed within time limits? |
| ☐ | ☒ | Containment Closure personnel are identified and available? |
| ☐ | ☒ | No penetrations open which can not be closed within time limits? |
| ☐ | ☒ | SFP Charcoal Filters are available? |
| ☐ | ☒ | Air locks are closed or capable of being closed? |

40 minute Containment Closure Time for loss of SDC

At least one door closed (Equip Hatch, Hatch Covers, Roll-up Doc

If PCS is in Reduced Inventory

- | | | |
|------------|------------|---|
| <u>n/a</u> | <u>n/a</u> | Time spent in reduced inventory minimized? |
| <u>n/a</u> | <u>n/a</u> | Only scheduled testing and maintenance in progress? |
| <u>n/a</u> | <u>n/a</u> | No Electrical Power supply changes planned? |

PLEASE REVIEW THE EQUIPMENT STATUS SHEETS SHIFTLY AND BE AWARE OF CHANGING PLANT CONDITIONS. PLEASE SHARE ANY COMMENTS OR CONCERNS WITH STEVE. CONTROL ROOM AND SS HAVE THE ONLY OFFICIAL COPIES. THE DATES TO THE LEFT OF THE ENTRY DEPICT THE LATEST CHANGE TO THE ASSOCIATED ENTRY.

Keep Iodine removal fan/s in service as RadPro requests. Keep at least one VHX-3 or 4 fan on to recirc Cont. air

Work Order has disabled SIS on PCS Low Pressure SIS will still occur on High Cont Pressure and manual.

GOP-9.5.1 Ensure the Controlled Bleed-off Flow Control Valves are closed prior to depressurizing the PCS to prevent back flow from the VCT into the PCP seals.

SOP-1 7.1.5.e We closed and caution tagged PMW makeup to the PCS MV-CVC-2162 when cooling down before going on SDC. This ensures unwanted dilution on SDC does not occur. Maintain this closed.

All PCS drains should go to T-64'A' CWRT. We will top off SIRWT prior to cavity fill with this water early next week. We will also need to send 2 more feet of SFP water to the SIRWT over the next week.

While on SDC maintain SDC flow >2810 GPM. If we drop below this Tech Spec 3.10.1c and SOP 3 applies. We need 2 Charging pumps electrically connected for PCS makeup paths.

Do not vent any of the SIT's but the pressure can decay away, keep at least 50# in each bottle.

CV-1212 Service Air isolation is Temp Mod blocked open to minimize loss of breathing air in the Containment.

The acoustic monitors for the PORV's are removed to support Pressurizer dome insulation removal. We will be removing the damaged insulation in the shed before we remove the Pzr Manway and install new insulation at the end of the outage. While the PORV's are needed we must keep the downstream temp TE-0106 operable.

Please keep T-2 Cond Storage Tank level low work towards a preferred ~50% level, we will need this level to be low later this month to drain both S/G's to it for secondary side inspection and sludge lancing.

During I&C calibration of the data logger use the CFMS indication for CET indication. Note the designated incores have one decimal point for ease of identification.

- ☛ Starting Monday the Shift Manager will run the 0815 meetings during the outage, a shift contact is needed and will provide Ops status and report concerns back to the shifts.
- ☛ An 1830 outage management meeting is held in the Tech Support Center daily, please have an SE,SS,or OSS attend each night. Shift Manager will run the meeting
- ⑦ Our safety director needs to be notified (within 2 hrs) about any work groups injury on site which requires off site treatment.

G. Meteorological conditions are as follows:

- 1. It is hot and humid with moderate to strong winds from the southwest; the sky over the lake has turned black and heavy rainfall appears imminent. A severe storm warning has been received from Murray and Trettel predicting high winds and thunderstorms, effective from 0830 to 1100 today. A tornado watch is in effect.**
 - a. Wind speed: 18 mph**
 - b. Wind direction: 226°**
 - c. Stability: A**
 - d. Ambient temperature: 85°F**

H. Primary chemistry conditions:

- 1. pH: 4.87**
- 2. Boron: 1945 ppm**
- 3. Total beta gamma activity: 0.173 μ ci/ml**
- 4. Iodine dose equivalent: 7.52E-4 μ ci/ml**

0830-0845 (0000-0015)

- A. The exercise begins when a lightning strike disables Station Power Transformer 1-2. Bus 1D fails to fast transfer to Startup Transformer 1-2 due to a fault in the synch check circuit; all other 2400VAC and 4160VAC busses successfully transfer to startup power. Diesel Generator 1-2 cranks but does not start due to sediment blockage in the fuel supply line.**
- B. The inservice Shutdown Cooling Pump, P-67A, loses power and stops.**
- C. The Spent Fuel Handling Machine, with bundle L-015 in its mast, stops in transit to Spent Fuel Pool location I-5 at Spent Fuel Pool location L-10 (in front of the south Tilt Pit gate).**
- D. The inservice Spent Fuel Pool Cooling Pump, P-51B, loses power and stops.**

E. Expected actions:

- 1. Operators will respond to the loss of Shutdown Cooling Pump P-67A by invoking ONP-17, "Loss of Shutdown Cooling." The alternate Shutdown Cooling Pump, P-67B, will be started to restore Shutdown Cooling and Charging Pump P-55C will be started to restore Charging Flow and PCS pressure.**
- 2. Operators will respond to the loss of Bus 1D and the failure of Diesel Generator 1-2 to load by invoking ONP-2.1, "Loss of AC Power." Operators will manually energize Bus 1D from startup power to restore SFP cooling and the Spent Fuel Handling Machine.**
- 3. If the operators attempt to manually position the Spent Fuel Handling Machine, a hoist brake malfunction will impede their progress.**

0845-0900 (0015-0030)

- A. A powerful tornado descends on the southwest corner of the Turbine Building and proceeds northeast. Portions of the Turbine Building roof are torn off; the aluminum Safety Injection and Refueling Water Tank explodes and its contents are carried skyward by the vortex.**
- B. The siding and roof of the Fuel Handling Building are ripped away as the operators inside dive for cover. A volume of 60,000 gallons of the contents of the Spent Fuel Pool (approximately 10 feet of level reduction) blasts upwards into the funnel cloud and is carried off, exposing approximately 2 feet of bundle L-015 in the mast of the Spent Fuel Handling Machine. Whirling debris and jagged pieces of metal lacerate the mast and hoist box, damaging several peripheral fuel pins which spill a portion of their contents; the mast and hoist box remain attached to the Spent Fuel Handling Machine by cables. The nitrogen-inflated seal around the south Tilt Pit gate succumbs to the heavy buffeting and tears; the remaining contents of the Spent Fuel Pool commences leaking into the empty south Tilt Pit and Transfer Tube at 400 gallons (~1 inch of Spent Fuel Pool level reduction) per minute.**
- C. The tornado destroys the Heating and Ventilation Equipment Room, still proceeding northeast, when inexplicably it drops its burden of roofing, siding, sheet metal, Safety Injection Refueling Water Tank and Spent Fuel Pool water, HVAC equipment, and miscellaneous debris on the north-south access road leading to Lake Michigan and ascends back to the overhanging cloud bank.**

- D. The entire episode has lasted approximately 10 seconds. In the demolished Spent Fuel Pool area, radiation monitors are off-scale high due to radiation fields of hundreds of Rem per hour caused by the exposed and damaged fuel bundle dangling from the Spent Fuel Handling Machine which continues to further uncover as the remaining contents of the Spent Fuel Pool leaks into the Tilt Pit. Outside, astonished workers in the Support Building and Security personnel view the debris strewn along the north-south access road.**
- E. The two operators at the Spent Fuel Pool are covered by debris in the ruined Heating and Ventilation Equipment Room, unconscious and heavily contaminated but alive. Their location shields them from most of the direct effects of the hanging fuel bundle.**
- F. Expected actions:**
- 1. The Shift Supervisor will assume the Site Emergency Director position and:**
 - a. An "ALERT" will be declared under "Natural Phenomenon - Tornado Striking Facility" unless it is immediately evident to players that major damage to spent fuel in the Fuel Handling Building has probably occurred. In this event, the declaration of a "SITE AREA EMERGENCY" would be appropriate.**
 - b. Directs a public address announcement on the situation and sounding of the emergency siren.**
 - c. Delegates actions and notifications identified in EI-1 and marked on EI-2.1, Attachment 1, including emergency staff augmentation; personnel accountability; activation of the Operations Support Center and Technical Support Center; dose assessment; and activation of the Emergency Response Data System (ERDS).**
 - d. Directs completion of the emergency notification forms of EI-3 and NOD Form 3160.**
 - e. Commences 15 minute notifications per EI-3.**
 - 2. The Control Room will implement ONP 11.2, "Fuel Handling Accident" and dispatch operators, security personnel and Health Physics to survey the damage and ascertain the status of the two operators known to have been in the Fuel Pool area.**

0900-0930 (0030-0100)

- A. Activation of the Site Emergency Plan continues.
- B. Personnel previously dispatched report on the damage observed to the Spent Fuel Pool and surrounding area, the high radiation fields in the Spent Fuel Pool area and the contamination and debris present on the north-south access road. Observers at the Spent Fuel Pool receive high radiation doses during their initial assessment and decide that the intense radiation field created by the hanging fuel bundle prevents entry into the area. The two operators are not located.
- C. Heavy rain following passage of the tornado caused the smaller and lighter debris on the access road to be carried by the stormwater towards curbside catch basins and the storm sewer outfall/trash rack near the corner of the perimeter fence. Use of real-time meteorological data begins at 0900 (0030). The squall line that the thunderstorms and tornado were associated with extends from Grand Rapids to Kalamazoo to Elkhart, Indiana by 0930 (0100) and is moving rapidly east.
- D. The remaining contents of the Spent Fuel Pool continue to leak to the south Tilt Pit at ~400 gallons per minute. Over one foot more of bundle L-015 has now been exposed, and Fuel Pool radiation levels have increased exponentially.
- E. Expected actions:
 - 1. Complete staffing of the Operations Support Center and Technical Support Center and turn over responsibility.
 - 2. Complete site accountability and commence search and rescue operations for the missing operators.
 - 3. Upgrade the Site Emergency Classification to "SITE AREA EMERGENCY" based on "Major Damage to Irradiated Fuel in the Fuel Handling Building" and commence evacuation of unnecessary personnel. A classification of "GENERAL EMERGENCY" due to loss of fission product barriers is also acceptable.
 - 4. Operators will respond to the continued loss of Fuel Pool inventory by manually valving in Fire Water makeup in the Spent Fuel Pool Heat Exchanger Room to provide makeup, cooling and shielding. Radiation levels in that room, although higher than normal, are not excessive since the operable Spent Fuel Pool Cooling Pump, P-51B, if recovered following the initiating loss of power event, will have tripped due to the low water level in the Fuel Pool.

5. Men and materials will be designated to dike outfall points to Lake Michigan to prevent the un-monitored releases.

0930-1053 (0100-0223)

- A. Spent Fuel Pool level recovers at approximately 2 inches per minute from the addition of Fire Water and radiation levels decrease accordingly, although leakage into the south Tilt Pit continues unabated. Approximately 40,000 gallons will be required to fill the south Tilt Pit and Transfer Tube, and approximately 60,000 gallons will be required to recover Spent Fuel Pool level.
- B. Expected actions:
 1. Search and rescue teams, authorized to receive emergency lifesaving radiation exposure amounts, will enter the Spent Fuel Pool area and rescue the two unconscious operators. The operators will be transported, heavily contaminated, to South Haven Community Hospital for the treatment of head wounds and internal injuries.
 2. Rainwater containing debris may be dammed and/or filtered prior to reaching Lake Michigan; massive amounts of sand and drying agents may be required to absorb the liquid and prevent the contamination from going airborne.
 3. The damaged Spent Fuel Handling Machine mast and hoist box containing the remains of bundle L-015 will be re-submerged and Fuel Pool level will be recovered, with intermittent makeup necessary until Fuel Pool and Tilt Pit levels are equalized.
 4. As Spent Fuel Pool radiation levels decrease, strategies will be formulated to:
 - a. Capture the damaged Spent Fuel Handling Machine mast and hoist box containing bundle L-015 to prevent their falling into the Fuel Pool.
 - b. Increase Spent Fuel Pool boron concentration from recycled boric acid to compensate for the dilution caused by the addition of Fire Water.
 - c. Restore Spent Fuel Pool cooling in an orderly fashion.

1053-1130 (0223-0300)

- A. Plant personnel accompanying the injured operators to South Haven Community Hospital report that their conditions are serious but not life threatening; decontamination efforts are ongoing.**
- B. The extent of exterior contamination has been determined; it is also apparent that, despite all efforts, at least some of the runoff has reached Lake Michigan.**
- C. Operators have restored Spent Fuel Pool cooling, creating high radiation areas in the Spent Fuel Pool Heat Exchanger Room and adjacent areas of the Auxiliary Building. Efforts are ongoing to capture the damaged Spent Fuel Handling Machine equipment and fuel bundle and increase Spent Fuel Pool boron concentration.**
- D. Expected actions:**
 - 1. The contaminated area will be quarantined and posted. Local officials will be apprised of the immediate danger to water supplies and beach activities.**
 - 2. Plant and Emergency Operations Facility personnel will commence planning for a full scale cleanup of the area, including repairs to the Spent Fuel Handling Machine and safe storage of bundle L-015, repairs to and enclosure of the Fuel Pool and south Tilt Pit, earth excavation, storage and disposal, waterborne contamination control and long term monitoring.**
 - 3. Repairs to the alternate Spent Fuel Pool Cooling Pump, P-51A, now located in a high radiation area, will be expedited to provide a backup means of Fuel Pool cooling should the inservice pump fail.**

1130-1230 (0300-0400)

- A. The Spent Fuel Handling Machine mast and hoist box containing bundle L-015 have been secured to the Spent Fuel Handling Machine by additional cabling. Recycled boric acid has been added to the Spent Fuel Pool.**
- B. Curious boaters and onlookers begin to gather on the beach and near the shoreline.**

C. Expected actions:

- 1. Cleanup planning will be completed, including contacting vendors and determining expected arrival times. Earthmoving and capture activities will commence.**
- 2. Effective crowd control practices will keep onlookers at a safe distance.**
- 3. The Site Emergency Plan classification will be downgraded to an "ALERT".**

1230+ (0400+)

The exercise will be terminated for plant personnel when long term cleanup and monitoring planning have been successfully demonstrated and recovery planning has begun.

MEDICAL SPECIFICS

PALEX '93

MEDICAL PORTION

<u>Palex Time</u>	<u>Medical Time</u>	
0015	0000	Two operators are injured by tornado damaging SFP Auxiliary Building. Both are rendered unconscious.
0045	0030	Search and rescue initiated
* 0130	0115	Injured operators are located and evacuated
* 0223	0208	Operators transported to SHCH

- * This timeline should be shortened significantly. I would expect that once the victims are discovered they would be leaving site no longer than 30 minutes from time of discovery. (This would be very slow).

MEDICAL DRILL

Goal: The goal of the 1993 PALEX/Medical Drill is to adequately demonstrate Palisades ability to respond to a contaminated injured person utilizing site, off-site (ambulance) and hospital resources.

- Objectives:
1. Recognize the need for and initiate search and rescue (and possible medical treatment) within 30 minutes of the initiating incident in accordance with EI-12.3, "Search and Rescue Team Responsibilities".
 2. Demonstrate proper response of site personnel during an Alert or Higher Classification to a Medical Emergency (Operations, Health Physics and EMT's) in accordance with EI-14, "Medical Care/Treatment of Contaminated, Injured Personnel".
 3. Demonstrate proper request, response and necessary interfacing of off-site agency assistance (ambulance) needed during a radiological emergency in accordance with EI-14, "Medical Care/Treatment of Contaminated, Injured Personnel".
 4. Demonstrate proper notification to hospital personnel of contaminated injury in accordance with EI-2.1, "Emergency Actions/Notifications/Responsibilities", EI-3, "Communications and Notifications", EI-14, "Medical Care/Treatment of Contaminated, Injured Personnel".
 5. Demonstrate proper interfacing necessary to treat a contaminated injury between hospital and Site (Health Physics) personnel in accordance with EI-14, "Medical Care/Treatment of Contaminated, Injured Personnel".

6. Search and Rescue personnel demonstrate proper techniques of locating, identifying, surveying and treating missing individuals in accordance with EI-12.3, "Search and Rescue Team Responsibilities".
7. Search and Rescue personnel demonstrate proper communication necessary to request additional resources (EMTs, Hps, etc.) for both on-site and off-site (ambulances) assistance.
8. Medical personnel (both on-site and off-site) demonstrate necessary communication skills to effectively and efficiently manage the medical emergencies following these principals:
 - A. Medical care of personnel comes First.
 - B. Minimize additional harm to the injured and rescuers from the radiological hazards (and other hazards) present.
 - C. Minimize the spread of contamination following the ALARA concept.

SCENARIO

Tornado strikes Auxiliary Building (SFP) during fuel moves. One Control Operator and one Auxiliary Operator (Lifeguard) are injured. Additionally, contamination is spread throughout the SFP area via SFP water.

- Victim #1:** Laceration to forehead with bleeding, unconscious, bruising to the ribs with 1-2 rib fractures. Victim regains consciousness, complains of severe chest pains due to the fractured ribs. Victim will be soaked with SFP water and rain coming in through opening in roof. Victim will be shocky, but will stabilize out after oxygen, IV and packaging.
- Victim #2:** Multiple extremity fractures. Initially victim will be unconscious. Victim will have fractures to an upper arm and multiple fractures of one lower leg. Victim will be shocky, but will stabilize out after oxygen, splinting, IV and packaging. Victim will be soaked in SFP water and rain coming in through opening in roof.
- Victim #1:**
- Injuries:** Laceration to forehead with bleeding, simulate with moulage. 1-2 rib fractures, simulate with moulage (deep bruising in area of fracture). Unconscious for first 15 minutes.
- Dress:** Full set of Anti-Cs, with scrubs and modesty clothing (shorts and T-shirt).
- Contamination Levels:** Varying levels of contamination will exist over their entire body with localized hot particles (Coleman Lantern Mantels).

Vitals: Initially: Unconscious-Responds (purposefully) to painful stimuli
Airway-Intact with GAG reflex
Breathing-Spontaneously shallow at 24 per min.
Pulse-Present basically weak at 140 per min.
B/P-70/50

•Subsequent vitals will change only based on treatment applied.

RESPONSE/VITALS

Victim #1

TREATMENT APPLIED

Pressure bandage-Forehead
Stabilize head/neck
Oxygen applied minimal 8 liters/min.

LEVEL OF CONSCIOUSNESS

Conscious: Responds slowly to verbal commands
Respirations: 20/shallow
Pulse: 140/min weak
B/P: 70/50
Lung Sounds: Slightly diminished in area of bruising

Fully immobilized on back board without elevating lower extremities (Trendelenburg position)

No significant change

Fully immobilized on back board with elevation of lower extremities (Trendelenburg position)

Conscious: Responds slowly to verbal commands
Respirations: 20/min weak
Pulse: 120/min weak
B/P: 80/60
Lung Sounds: No change

IV started by ambulance EMTs
Normal saline wide open (>100cc/min)

Conscious: No change
Respirations: No change
Pulse: 100/min
B/P: 90/60
Lung Sounds: No change

2nd. IV started or M.A.S.T. applied & inflated with 1st. IV

Conscious: No change
Respirations: No change
Pulse: 90/min
B/P: 100/80
Lung Sounds: No change

Variations

Legs elevated prior to immobilizing on back board

Same as fully immobilized on back board with lower extremities elevated

M.A.S.T. applied and inflated prior to IV

Same as First IV

PROCEDURE PERFORMED

Initially

RESULTS

Background SFP Area readings >300 ccpm Open Window RO-2/RO-2A reveals 1-2 particles 1000 mrem/hr.

Remove Clothing

Background SFP Area readings >300 ccpm D.W. RO-2 No detectable particles
→Access Control/Ambulance
10,000-100,000 ccpm by frisking over entire body, 1-2 particles detectable up to 5 mrem/hr.

Tape Lift Particles

→Particles removed

Washing/Rinsing

→Hospital-Contamination levels decrease with rinsing. 2-3 rinsings/hair washing remove all detectable contamination.

Collection container 5,000 ccpm up to, but no higher than 2 mrem/hr.

Victim #2

Injuries:

Unconscious; Closed upper arm fracture simulated by moulage (bruising of area) pain, tenderness and inability to move arm; Multiple fractures of one leg-Femur (closed) and Tibia/Fibula (open). Some bleeding from Tibia/Fibula fracture.

Dress:

Scrubs with modesty clothing (T-shirt/shorts).

Contamination Levels:

Varying levels of contamination will exist over entire body with localized hot particles (Coleman Lantern Mantels).

Vitals:

Initially: Unconscious-But responds purposefully to painful stimuli
Airway-Intact with GAG reflex
Breathing-Spontaneously at 22 per min.
Pulse-Weak-Radially at 120 per min.
B/P-80/60

•Subsequent vitals will change only with treatment applied.

Victim #2

TREATMENT APPLIED

Pressure bandage-Leg Wound
Stabilize head/neck

All fractures splinted
Back Boarded
Oxygen applied at least
8 liter/min.

M.A.S.T. applied or 1st.
IV started or Treudenlenburg
position

2nd. IV or 1st and M.A.S.T.
or M.A.S.T. and Treudenlenburg
position

PROCEDURE PERFORMED

Initially

Remove Clothing

Tape Lift Particles

LEVEL OF CONSCIOUSNESS

Conscious: Responds slowly to
verbal commands
Respirations: 20/min
Pulse: 120/min
B/P: 80/60
Lung Sounds: Clear Bilaterally

Conscious: No change
Respirations: 18/min
Pulse: 120/min, no change
B/P: 80/60, no change

Conscious: No change
Respirations: No change
Pulse: 100/min
B/P: 90/60, no change

Conscious: No change
Respirations: No change
Pulse: 90/min
B/P: 100/60

RESULTS

Background SFP Area readings >300
ccpm Open Window RO-2/RO-2A
reveals 1-2 particles 1000
mrem/hr.

Background SFP Area readings >300
ccpm D.W. RO-2 No detectable
particles
→Access Control/Ambulance
10,000-100,000 ccpm by frisking
over entire body, 1-2 particles
detectable up to 5 mrem/hr.

→Particles removed

Washing/Rinsing

→Hospital-Contamination levels decrease with rinsing. 2-3 rinsings/hair washing remove all detectable contamination.

Collection container 5,000 ccpm up to, but no higher than 2 mrem/hr.

EXPECTED ACTIONS/RESULTS

1. Control Room initiates Search & Rescue through OSC for SFP Area due to loss of communication with operators.
- Key- 2. All Site EMT's if paged by Control Room, respond to OSC for direction.
3. When victims found, they are properly identified, assessed for injuries, area surveyed (Radiologically) Control Room/OSC notified and additional resources requested as needed.
4. Hospital is notified of Contaminated Injured Personnel with recommendation to set-up to receive contaminated injured.
5. Ambulances are requested properly through Van Buren County (911) multiple ambulances requested.
6. Ambulance personnel informed of contamination and instructed to don appropriate protective clothing.
7. Transfer of patients performed smoothly and efficiently.
8. Core of patients medical status taken presentence over decontamination.
9. Techniques demonstrated by all personnel to maintain the spread of contamination ALARA (control is not lost).

MAINTENANCE ACTIVITIES

PALEX-93

MAINTENANCE ACTIVITIES

Equipment: P-5/A

Alternate Power? NO

Location of Equipment: SFP HX. RM. 590' ELEV.

Extent of Troubleshooting: NONE, CONTINUE REBUILD OF PUMP

Parameters for Testing/Troubleshooting: NONE

Estimated Time of Repair: WON'T BE REPAIRED DURING SCENARIO
N/A Scenario Time: _____

Tools Needed: STANDARD TOOLS FOR REPAIR OF GOULDS 3196 XLT PUMP

Equipment/Replacement Parts: STANDARD GOULDS PUMP REPAIR PARTS

From Stock: IMPELLER, MECH SEAL, OIL SEALS, GASKETS, O-RINGS

Procure: _____

Anti-Cs Needed: YES

Simulation: Clothing: YES

Equipment/Parts: YES

Tools: YES

Equipment Status Indication: _____
(For Drill/Exercise)

Necessary Controller Information: _____
(Message Sheet needed? Yes No)

PALEX-93

MAINTENANCE ACTIVITIES

Equipment: H-14 SPENT FUEL HANDLING MACHINE

Alternate Power? NO

Location of Equipment: 649' SFP AREA

Extent of Troubleshooting: DETERMINE HOW TO CAPTURE & RESTRAIN
A FUEL ASSEMBLY FROM FALLING FURTHER INTO SPENT FUEL POOL STORAGE
Parameters for Testing/Troubleshooting: AREA

Estimated Time of Repair: 45 MIN Scenario Time: _____

Tools Needed: SLINGS, SPECIAL TOOLS, ETC.

Equipment/Replacement Parts: NONE

From Stock: _____

Procure: _____

Anti-Cs Needed: YES

Simulation: Clothing: YES

Equipment/Parts: YES

Tools: YES

Equipment Status Indication: _____
(For Drill/Exercise)

Necessary Controller Information: _____
(Message Sheet needed? Yes No)

MESSAGE SHEETS

Scenario: PALEX-93

Time: 0800

Message No: 1

Scenario Time: -0030

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: All Plant Personnel

Simulated Plant Conditions:

See attached Initial Conditions and Data Sheets

Message:

The Control Room has announced the following message: "Attention all personnel. The emergency exercise will commence shortly. All announcements related to the drill will be preceded by and followed by the statement 'This is a drill'."

FOR CONTROLLER USE ONLY

Controller Notes:

1. All controllers will provide Initial Conditions, Alarm and Data Sheets to the players they are responsible for upon activation of the Emergency Plan.
2. Control Room Controller will act as off-going SS and give turnover to players.
3. Answer questions as appropriate.
4. Control Room Data Sheets/Alarm Sheets are not to be provided to Control Room players unless a simulator malfunction occurs which jeopardizes the scenario time line.

Action expected:

Players should familiarize themselves with data provided.

INITIAL CONDITIONS

0800 (-0030)

- A. The plant is in Cold Shutdown at the end of core life. Preparations for refueling are in progress. The reactor has been shutdown for 96 hours. The PCS is pressurized to 250 psia; PCs P-50B and P-50C are in service for PCS source term reduction.
- B. The Equipment Hatch and both doors of the Personnel Lock are open. Work in Containment is in progress to Support Reactor Vessel head removal in approximately 6 days. The south Tilt Pit Gate is installed and the south Tilt Pit is empty; the Fuel Transfer Tube flange is installed.
- C. Fuel handling operations in the Spent Fuel Pool are in progress to accomodate a full core offload in support of Reactor Vessel beltline inspections. One Control Operator and an Auxiliary Operator "lifeguard" are using the Spent Fuel Handling Machine to move various spent fuel bundles to different storage locations as directed by Reactor Engineering. At present, bundle L-015 is being moved from SFP location O-13 to location I-15.
- D. Equipment in a degraded mode:
 - 1. Safeguards Transformer 1-1 is out of service to repair a recurrant nitrogen leak. MOD 24F1 is open and red tagged. 2400VAC Busses are being fed from Station Power Transformer 1-2 via Main Transformer backfeed.
 - 2. Spent Fuel Pool Cooling Pump P-51A is dissassembled with rebuild in progress to support the upcoming core offload. P-51B is in service for SFP cooling.
- E. Many normal shutdown alarms are annunciated.
- F. See the following pages for Shutdown Safety Equipment Availability.

PALISADES SHUTDOWN SAFETY EQUIPMENT AVAILABILITY

Effective Through Operations Scheduler Date

☞ Special Instructions:

KEEP SDC RETURN TEMPERATURES COMFORTABLY ABOVE 70°F (SOP-1 AND GOP-14)

BOTH TRAINS OF SDC ARE OPERABLE. THE S/G'S ARE NOT NEEDED TO MEET GOP-14 REQUIREMENTS
Shiftly S/G level verification is not required to be logged in SHO-1 to meet GOP-14 requirements.

PCS Over-pressure Protection is being provided by both channels of LTOP

☞ Decay Heat Removal requirements:

preferred in service train

Shutdown Cooling Train 'A' defined in GOP-14 Attach. 5 (D/G 1-2)

OPERABLE

LPSI P-67A CCW PUMP P-52B SWS PUMP P-7A CCW HX E-54A SDC HX E-60A

LPSI INJ MO-3012 / FI-0311A MO-3014 / FI-0313A EK-1161/1162 LPSI Pump Press and trip Alarms

Shutdown Cooling Train 'B' defined in GOP-14 Attach. 5 (D/G 1-1)

OPERABLE

LPSI P-67B CCW PUMP P-52A SWS PUMP P-7B CCW HX E-54B SDC HX E-60B

LPSI INJ MO-3008 / FI-0307A MO-3010 / FI-0309A EK-1161/1162 LPSI Pump Press and trip Alarms

PCS Loop 1 ('A' S/G and P-50B)

AVAILABLE

PCS Loop 2 ('B' S/G and P-50C)

AVAILABLE

☞ CVCS Boric Acid Tech Spec 3.2 and GOP-14 Inventory Addition Pathways (Both required)

1. T-53'A' level ≥118" (≥94.5%) and [B] 11,500 to 15,000 ppm, P-56A, MO-2140, P-55A AND B (BOTH CHG PUMPS REQUIRED), through normal Charging CV-2111 and CV-2113 or CV-2115

2. SIRWT with level ≥50% and [B] ≥1720 ppm. CV-3057 (SIRWT) to P-66A HPSI pump and discharge through REDUNDANT HPSI header through MO-3064 (Path available within 30 minutes)

☞ PCS normal makeup Inventory Addition Pathway: SIRWT, P-55A or B, normal charging

☞ PCS Level Band: FULL AND SOLID to FULL AND SOLID

Max Level FULL AND SOLID

Min Level FULL AND SOLID

☞ PCS Level Indication Requirements: LIA-0102A AND LI-0103A when PCS ≥628' 6"

☞ PCS Temperature Band: 100°F to 80°F

Max Temp. 130°F

Min Temp. 70°F

☞ PCS Temperature Indication Requirements: CET's # 2 (H-2), # 16 (R-8) and TR-0351

☞ Electric Power Requirements: Diesel 1-2

C and D Buses on STATION PWR AND STARTUP power available

☞ SFP Exhaust Fan / Charcoal Filter: V-8B AND VF-66 OPERABLE (not need with Equip Hatch Closed)

☞ Containment Closure Time Frame:
Based on 3 days after reactor shutdown

40 MINUTES Based on Initial PCS Temperature Of 130 °F
Based on Minimum PCS Level Of Full and Solid

☞ Equipment Hatch Closure Responsibility: MECHANICAL MAINTENANCE

Notify: SEE DUTY LIST Phone Ext. # 181

NOTE: Adherence to all of the equipment conditions specified will ensure that the risk of jeopardizing the safe shutdown condition of the plant is minimized. Additional equipment may also be available, these flow paths meet the requirements and support the schedule. This equipment should not be degraded without Operations Scheduling approval.

HEAVY LOAD PATHS (available within 30 minutes)

<u>Path 1</u>	Suction	Reactor Sump through CV- 3029
	Pump	HPSI P-66- A TRAIN 2 REDUNDANT HPSI
	Discharge	REDUNDANT HPSI through MO-3064
<u>Path 2</u>	Suction	Reactor Sump through CV- 3029 and MO-3198
	Pump	LPSI P-67- A
	Discharge	Normal SDC through MO-3012 and MO-3014
<u>Path 3</u>	Suction	Reactor Sump through CV- 3029
	Pump	HPSI P-66- A
	Discharge	REDUNDANT HPSI Hot Leg Injection through MO-3082
<u>Path 4</u>	Suction	LPSI through MO-3015 and MO-3016
	Pump	LPSI P-67-A
	Discharge	Normal SDC, both Heat Exchangers, MO-3012 and MO-3014

INOPERABLE CONTAINMENT PENETRATIONS

For planned maintenance

REMEMBER THAT OPERATIONS PENETRATIONS MUST ALSO BE CONTROLLED BY THE SHIFT SUPERVISOR

MZ-42	PMW TO QUENCH TK	MAY BE OPEN TO SUPPLY PMW TO THE CONTAINMENT, CV-0155 CAN BE CLOSED TO ISOLATE IF NEEDED.
MZ-10	SERVICE AIR	MAY BE OPEN TO SUPPLY AIR TO THE CONTAINMENT AS REQUESTED, MV- CA-122 CAN BE CLOSED TO ISOLATE IF NEEDED.
MZ-50	EQUIPMENT HATCH	HATCH IS OPEN. MECHANICAL MAINTENANCE WILL BE STATIONED AT THE HATCH NEAR THE HATCH 24 HOURS A DAY WHEN OPEN. THEY NEED 20 MINUTES TO CLOSE THE HATCH AFTER NOTIFICATION. 240 MINUTE CONTAINMENT CLOSURE TIME ALLOWS OPERATORS 10 MINUTES TO RECOGNIZE LOSS OF SDC, 10 MINUTES TO NOTIFY MAINT. AND CLEAR TEMPORARY LINES, AND 20 MINUTES TO CLOSE THE HATCH.
MZ-19	PERSONNEL AIR LOCK	WE WILL BE ALLOWING THE DWO-13 TIME FRAME TO EXPIRE. THE DOOR INTERLOCK IS DEFEATED TO ALLOW BOTH DOORS TO BE OPEN TO ESTABLISH REFUELING VENTILATION LINE-UP. AT ALL TIMES EACH DOOR SHOULD BE CAPABLE OF BEING CLOSED. NO TEMPORARY LINES SHOULD RUN THROUGH THE DOORS.
	CONTAINMENT PURGE	CONTAINMENT PURGE CARD HAS BEEN ISSUED. CONTAINMENT PURGE MAY BE PERFORMED AS NEEDED. ONCE THE PURGE CARD IS CLOSED OUT A NEW ONE IS NEEDED BEFORE RESUMING PURGE.

OPERATIONS SUPERINTENDENT WAIVERS OF GOP-14 REQUIREMENTS

NONE

N/A

OPS SUPERINTENDENT

PALISADES SHUTDOWN SAFETY RISK ASSESSMENT

Any "No" answers to the questions will have circumstances identified on the Shutdown Safety Equipment Availability Sheets. Having conditions not satisfied is expected. A review of the no answers, comments, and status sheets will provide a level of understanding to the current risk level. A copy of this will be attached to the SS and the Outage Manager's Copy of the Equipment Availability Sheets.

Operations Scheduler

Date

Comments

Core Heat Removal

- | | |
|----|-----|
| No | Yes |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |
| — | ✓ |

PCS Temperature is less than 120°F?

Two Shutdown Cooling pumps are Operable?

Two Shutdown Cooling trains are Operable?

SDC Flow is ≥3,000 gallons per minute?

Two Core Exit Thermocouples are Operable?

Both SFP Cooling Pumps are available?

PCS makeup is available > "Boil Off rate"?

SDC Instrumentation is Operable?

All Fire Protection systems are Operable?

2 Instrument Air compressors are Operable?

Reactivity Control

At least two Pumped Boric Acid flow paths (diesel backed-up) to the PCS are Operable?

PCS [B] is > 3.5% CSD or Refueling boron concentration?

2 Source Range Nuclear Instruments are Operable?

No Core alterations are in progress?

No Fuel moves in SFP are in progress?

No Control Rod Drive testing is in progress?

Primary Makeup Water to PCS is caution tagged closed?

Electrical Availability

At least one Diesel Generator is operable?

At least 2 Off-Site power sources are operable?

At least 3 Preferred AC buses are operable?

Both 1C and 1D buses are energized?

No Electrical special testing is planned?

Switchyard Power supply is stable?

All DC Buses are operable?

PCS Inventory

PCS full and intact or is elevation of lowest opening identified?

PCS level is above 628' 5" ?

PCS level is above 623' 0" (reduced inventory)?

PCS level above is 618' 0" (2.5' < hot/cold leg centerline)?

2 Containment Sump level instruments are available?

Two PCS level instruments are operable?

All flow paths for heavy load requirements are available?

Elevation of lowest PCS opening is identified?

GOP-14 PCS Venting requirements are satisfied?

Containment Integrity

Containment Integrity is set or controlled LAW GOP-14?

Containment is open with ability to close within specified time?

1-10 penetrations are open which can be closed within time limits?

Containment Closure personnel are identified and available?

No penetrations open which can not be closed within time limits?

SFP Charcoal Filters are available?

Air locks are closed or capable of being closed?

If PCS is in Reduced Inventory

n/a n/a Time spent in reduced inventory minimized?

n/a n/a Only scheduled testing and maintenance in progress?

n/a n/a No Electrical Power supply changes planned?

P-55A AND P-55B needed until 6/14/93. after then only one pur

PCS ≥REFUELING [B] of 1,720 PPM

MV-CVC-2162 closed.

ED-01 Battery Discharge test will be started when PCS <130°F

ED-01 Battery Discharge test will be started when PCS <130°F

40 minute Containment Closure Time for loss of SDC

At least one door closed (Equip Hatch, Hatch Covers, Roll-up Doc

PLEASE REVIEW THE EQUIPMENT STATUS SHEETS SHIFTLY AND BE AWARE OF CHANGING PLANT CONDITIONS. PLEASE SHARE ANY COMMENTS OR CONCERNS WITH STEVE. CONTROL ROOM AND SS HAVE THE ONLY OFFICIAL COPIES. THE DATES TO THE LEFT OF THE ENTRY DEPICT THE LATEST CHANGE TO THE ASSOCIATED ENTRY.

Keep Iodine removal fan/s in service as RadPro requests. Keep at least one VHX-3 or 4 fan on to recirc Cont air.

Work Order has disabled SIS on PCS Low Pressure SIS will still occur on High Cont Pressure and manual.

GOP-9.5.1 Ensure the Controlled Bleed-off Flow Control Valves are closed prior to depressurizing the PCS to prevent back flow from the VCT into the PCP seals.

SOP-1 7.1.5.e We closed and caution tagged PMW makeup to the PCS MV-CVC-2162 when cooling down before going on SDC. This ensures unwanted dilution on SDC does not occur. Maintain this closed.

All PCS drains should go to T-64'A' CWRT. We will top off SIRWT prior to cavity fill with this water early next week. We will also need to send 2 more feet of SFP water to the SIRWT over the next week.

While on SDC maintain SDC flow >2810 GPM. If we drop below this Tech Spec 3.10.1c and SOP 3 applies. We need 2 Charging pumps electrically connected for PCS makeup paths.

Do not vent any of the SIT's but the pressure can decay away, keep at least 50# in each bottle.

CV-1212 Service Air isolation is Temp Mod blocked open to minimize loss of breathing air in the Containment.

The acoustic monitors for the PORV's are removed to support Pressurizer dome insulation removal. We will be removing the damaged insulation in the shed before we remove the Pzr Manway and install new insulation at the end of the outage. While the PORV's are needed we must keep the downstream temp TE-0106 operable.

During I&C calibration of the data logger use the CFMS indication for CET indication. Note the designated incores have one decimal point for ease of identification.

- ☛ Starting Monday the Shift Manager will run the 0815 meetings during the outage, a shift contact is needed and will provide Ops status and report concerns back to the shifts.
- ☛ An 1830 outage management meeting is held in the Tech Support Center daily, please have an SE,SS,or OSS attend each night. Shift Manager will run the meeting
- ☐ Our safety director needs to be notified (within 2 hrs) about any work groups injury on site which requires off site treatment.

G. Meteorological conditions are as follows:

- 1. It is hot and humid with moderate to strong winds from the southwest; the sky over the lake has turned black and heavy rainfall appears imminent. A severe storm warning has been received from Murray and Trettel predicting high winds and thunderstorms, effective from 0830 to 1100 today. A tornado watch is in effect.**
 - a. Wind speed: 18 mph**
 - b. Wind direction: 226°**
 - c. Stability: A**
 - d. Ambient temperature: 85°F**

H. Primary chemistry conditions:

- 1. pH: 4.87**
- 2. Boron: 1945 ppm**
- 3. Total beta gamma activity: 0.173 uci/ml**
- 4. Iodine dose equivalent: 7.52E-4 uci/ml**

Date OCTOBER 26, 1993Message # 1(Page 1)Time 0800
Time JumpScenario Time -0030
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>76.</u>	B <u>75.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>ON</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
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C-03

CCW Cooler Outlet Temp	A <u>54.</u> F	B <u>55.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>ON</u>	P-67B <u>OFF</u>	

Safety Injection Suction Supply

Train A
CV-3057 (SIRW) CLOSED CV-3029 (SIRW) CLOSED

Train B
CV-3031 (SIRW) CLOSED CV-3030 (Sump) CLOSED

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>85.</u> F	Flow <u>46.</u> gpm
Letdown Line Temp	<u>84.</u> F	Line Temp <u>99.</u> F
Letdown Flow	<u>47.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>90.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
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Shutdown Cooling System

SDCS from PCS (R) <u>115</u> F	SDCS to PCS (R) <u>70.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
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Primary Coolant System

Pressurizer Pressure (R)	<u>244.</u> psia				
PCS Tave (R) Loop 1 (TR-0111)	<u>115</u> Loop 2 (TR-0121)	<u>115</u>			
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B <u>100</u> %	LIA-0102A	<u>97</u> %	
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16 <u>0.</u>			
PRV PRV-1042B	<u>CLOSED</u>	PRV-1043B <u>CLOSED</u>	Block Valve MOV-1042A	<u>OPEN</u>	MOV-1043A <u>OPEN</u>
PCPs P-50A	<u>OFF</u>	P-50B <u>ON</u>	P-50C	<u>ON</u>	P-50D <u>OFF</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03	<u>.82E-08</u>	NI-04 <u>.80E-08</u>
NI-05	<u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07	<u>.12E-07</u>	NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u> P-8B <u>OFF</u> P-8C <u>OFF</u>	AFW Pump Amps P-8A <u>0.</u>	P-8C <u>0.</u> psi
AFW Pump P-8B Steam Pressure <u>0.</u> psig	AFW Disch Press P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u> MOV-0510 <u>CLOSED</u>	MSIV's CV-0501 <u>CLOSED</u> CV-0510 <u>CLOSED</u>	
MFP Suction Pressure <u>15.</u> psig	MFP Discharge Pressure A <u>15.</u> B <u>15.</u> psi	
Moisture Separator Drain Tank Level <u>26.</u> %	Condenser Hotwell Level <u>70.</u> %	
Atmospheric Dump Valves <u>CLOSED</u>	Condenser Vacuum <u>0.</u> in Hg.	
Heater Drain Pump Status P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum <u>14.2</u> in Hg.	
	Condensate Pump Status P-2A <u>OFF</u> P-2B <u>OFF</u>	

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>-3.</u>	Core Exit Thermocouple Temperature	<u>115.3</u> F
Control Rod Position GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u> GP7(B) <u>0.</u>			
Stuck Rods <u>NONE</u> # <u>0</u>			

C-13

T-81 Level <u>90.</u> %	T-939 Level <u>93.</u> %	Condensate Storage Tank Level T-2 <u>89.</u> %
Instrument Air Pressure <u>95.</u> psig		
Containment Building Pressure <u>-5.</u> psig		Dome Temperature <u>103</u> F Humidity <u>28.</u> %
S/G A Compartment		Temperature <u>101</u> F Humidity <u>30.</u> %
S/G B Compartment		Temperature <u>92.</u> F Humidity <u>30</u> %
SIRW Tank Level <u>98.</u> %		
WR Containment Pressure (R) <u>10</u> psia		Containment Water Level (R) <u>0.</u> %
Containment Sump Level <u>585</u> %		
SI Tank Level (%) A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig) A <u>150</u>	B <u>151</u>	C <u>151</u> D <u>152</u>

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels	T53A <u>100.</u> %	T53B <u>10.6</u> %
Reactor Vessel DP <u>16.9</u> psid		
PORV Discharge Temperature <u>111</u> F		
Pzr Safety Valve Discharge Temp (F) <u>126</u>	RV-1039 <u>126</u>	RV-1040 <u>141</u> RV-1041 <u>176</u>
PCP Current (Amps) P-50A <u>0.</u>	P-50B <u>668</u>	P-50C <u>678</u> P-50D <u>0.</u>
PCS Flow <u>34.</u> %	Pressure Level (cold) <u>96.7</u> %	
Loop Thot (F) Loop 1 <u>115</u>	Loop 2 <u>115</u>	
Loop Tcold (F) Loop 1 <u>114</u>	Loop 2 <u>115</u>	
Tcold Wide range Loop 1 <u>115</u>	Loop 2 <u>114</u>	
Subcooling Temp <u>283</u> F	Press <u>242</u> psi	
PCS Prssure WR <u>244.</u>	NR <u>244.</u> psia	
Level (WR) <u>90.</u> %	(NR) <u>90.</u> %	Steam Generator B (WR) <u>87.</u> % (NR) <u>87.</u> %
Press <u>1.</u> psia	Feed <u>0</u> PPH	Steam <u>13.</u> psia
Flow Steam <u>0</u> PPH	Note: Steam and Feed Flow X 1000000	Feed <u>0</u> PPH

C-11

AFW Flow to A S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
AFW Flow to B S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
Condenser Vacuum (R) <u>0.</u>		
PCP Seal Leakoff Flow P-50A <u>1.0</u> PPH	P-50B <u>1.0</u> PPH	P-50C <u>1.0</u> PPH P-50D <u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1 <u>0</u>	1-2 <u>0</u>
1-C BUS Voltage <u>2447</u>	Amps <u>365</u>	
1-D BUS Voltage <u>2455</u>	Amps <u>291</u>	

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 <u>.2E-01</u>	RIA-1806 <u>.2E-01</u>
	RIA-1807 <u>.2</u>	RIA-1808 <u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321 <u>.1E-01</u>	RIA-2322 <u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R <u>0.</u>	AI-2401L <u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324 <u>.3E+02</u>	RIA-2323 <u>.2E+02</u>
Stack Monitors	RIA-2325 <u>????</u> cpm	RIA-2326 <u>0</u> cpm RIA-2327 <u>0</u> mr/hr

MESSAGE No: 1

K-01

1	2	3	4	5	6	7	8	9	10	11	12
ON				ON			ON	ON			
2			ON				ON	ON			
3									ON	ON	
4	ON						ON		ON		
5	ON								ON		
							ON	ON	ON	ON	ON

K-02

[illegible]

MESSAGE No: 1

K-03

K-05

[illegible]

PALEX-93

TIME: 0800
SCENARIO TIME: -0030MESSAGE No: 1ANNUNCIATOR DISPLAYS

K-06A

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*

K-06B

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*

K-06C

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	ON	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	ON	*	*	ON	*	*	*
*	*	*	*	*	*	*	*

K-06D

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	*	ON	*	ON	*	ON	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*

TIME: 0800
SCENARIO TIME: -0030

MESSAGE No: 1

K-07

**	1	**	2	**	3	**	4	**	5	**	6	**	7	**	8	**	9	**	10	**	11	**	12	**
1	*		*		*		*		*		*		ON	*		*		* ON	*	ON	*		*	
	*		*		*		*		*		*		*		*		*		*		*		*	

2	*		*		*		*		*		*		ON	*		*		* ON	*		*		*	
	*		*		*		*		*		*		*		*		*		*		*		*	

3	*		*		* ON	*		*		*		* ON	*		*		* ON	*		* ON	*		* ON	*
	*		*		*		*		*		*		*		*		*		*		*		*	

4 ON	*		*		*		*		*		* ON	*		*		*		* ON	*		* ON	*		* ON
	*		*		*		*		*		*		*		*		*		*		*		*	

5	*		*		* ON	*		*		*		*		*		* ON	*		*		*		*	
	*		*		*		*		*		*		*		*		*		*		*		*	

	*		*		*		*		*		*		*		*		* ON	*		*		*		*
	*		*		*		*		*		*		*		*		*		*		*		*	

[illegible]

MESSAGE No: 1

K-11

	1	2	3	4	5	6	7	8	9	10	11	12	
*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

K-13

[illegible]

PALEX-93

TIME: 0800
SCENARIO TIME: -0030

MESSAGE No: 1

ANNUNCIATOR DISPLAYS

K-21

```

** 1 **** 2 **** 3 **** 4 **** 5 **
*      *      *      *      *      *
1      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      *      *      *      *
*      *      *      *      *      *
*****

```

K-22

```

** 1 **** 2 **** 3 **** 4 **** 5 **
*      *      *      *      *      *
1      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      * ON  * ON  *      *
*      *      *      *      *      *
*****

```

PALEX-93

TIME: 0800
SCENARIO TIME: -0030

MESSAGE No: 1

ANNUNCIATOR DISPLAYS

K-33

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	*** 10	***
*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

K-34

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	***
*	*	*	*	*	*	*
1	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
2	*	*	*	*	*	*
*	*	*	*	*	*	*

K-35

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	***
*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

Scenario: PALEX-93

Time: 0832

Message No: 2

Scenario Time: 0002

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Operators

Simulated Plant Conditions:
Loss of Bus 1D

Message:

See attached Data and Alarm Sheets. Bus 1D is deenergized; D/G 1-2 has tripped on overcrank.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

1. Operators will invoke ONP-17, "Loss of Shutdown Cooling" and start P-67B to restore Shutdown Cooling.
2. Operators will invoke ONP-2.1, "Loss of AC Power" to repower Bus 1D.

Date OCTOBER 26, 1993

Message # 2

(Page 1)

Time 0832
Time Jump

Scenario Time 0002
Scenario Time Jump

C-08

SW Sumps	P-7A	<u>OFF</u>	P-7B	<u>ON</u>	P-7C	<u>OFF</u>	SW Critical Hdr Press	A	<u>46.</u>	B	<u>46</u>	psig
CCW Pumps	P-52A	<u>ON</u>	P-52B	<u>OFF</u>	P-52C	<u>STBY</u>	FPC Pumps	P-51A	<u>OFF</u>			
Fire Pumps	P-9A	<u>OFF</u>	P-9B	<u>OFF</u>	P-41	<u>OFF</u>		P-51B	<u>OFF</u>			

Containment Cooler Recirc Fans

V1A OFF V2A OFF V3A OFF V4A ON V1B OFF V2B OFF V3B ON V4B ON

C-03

CCW Cooler Outlet Temp	A	<u>46.</u>	F	B	<u>46.</u>	F			
Containment Spray Pumps	P-54A	<u>OFF</u>		P-54B	<u>OFF</u>		P-54C	<u>OFF</u>	
HPSI Pumps	P-66A	<u>OFF</u>		P-66B	<u>OFF</u>		LPSI Pumps		
							P-67A	OFF	P-67B OFF

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) CLOSED	CV-3029 (SIRW) CLOSED	CV-3031 (SIRW) CLOSED	CV-3030 (Sump) CLOSED

C-02

CVCS

	<u>Letdown</u>		
Intermediate Press	Letdown Temp	<u>113</u>	F
Letdown Line Temp		<u>118</u>	F
Letdown Flow		<u>23.</u>	gpm

Flow	0.	gpm
Line Temp	99.	F
Pumps	P-55A OFF	P-55B OFF P-55C OFF

Volume Control Tank

Temp 85. F Pressure 38. psi Level 94. % PCP Control Bleedoff Pressure 150 psig

Shutdown Cooling System

SDCS from PCS (R) 94. F SDCS to PCS (R) 88. F

Quench Tank

Temp 102 F Pressure -2. psig Level 65. %

Primary Coolant System

Pressurizer Pressure (R)	<u>240.</u>	psia					
PCS Tave (R) Loop 1 (TR-0111)	<u>120</u>	Loop 2 (TR-0121)	<u>120</u>				
Pressurizer Level (R) LRC-0101A	<u>100</u>	%	LRC-0101B	<u>100</u>	%	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>		LCC 16	<u>0.</u>			
PORV PRV-1042B	<u>CLOSED</u>		PRV-1043B	<u>CLOSED</u>	Block Valve	MOV-1042A	<u>OPEN</u>
PCPs P-50A	<u>OFF</u>		P-50B	<u>ON</u>		MOV-1043A	<u>OPEN</u>
Reactor Power Level NI-01	<u>.18E+02</u>		NI-02	<u>.18E+02</u>		P-50C	<u>ON</u>
						NI-03	<u>.82E-08</u>
						NI-04	<u>.80E-08</u>
						NI-05	<u>.12E-07</u>
						NI-06	<u>.11E-07</u>
						NI-07	<u>.12E-07</u>
						NI-08	<u>.12E-07</u>

C-01

AFW System

AFW Pump	P-8A OFF	P-8B OFF	P-8C OFF		AFW Pump Amps	P-8A	0.	P-8C	0.
AFW Pump	P-8B Steam Pressure		0.	psig	AFW Disch Press	P-8A & P-8B	18.	P-8C	18.

Secondary System

MSIV Bypass	MOV-0501	<u>CLOSED</u>	MOV-0510	<u>CLOSED</u>	MSIV's	CV-0501	<u>CLOSED</u>	CV-0510	<u>CLOSED</u>
MFP Suction Pressure		<u>15.</u>	psig		MFP Discharge Pressure	A	<u>15.</u>	B	<u>15.</u>
Moisture Separator Drain Tank Level		<u>26.</u>	%		Condenser Hotwell Level		<u>70.</u>		%
Atmospheric Dump Valves		<u>CLOSED</u>			Condenser Vacuum		<u>.0</u>		in Hg.
Heater Drain Pump Status	P-10A	<u>OFF</u>	P-10B	<u>OFF</u>	Gland Seal Condenser Vacuum		<u>14.2</u>		in Hg.
					Condensate Pump Status	P-2A	<u>OFF</u>	P-2B	<u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW	<u>0.</u>	Net MW	<u>0.</u>	Core Exit Thermocouple Temperature					<u>119.9</u>						
Control Rod	<u>Position</u>	GP1	<u>0.</u>	GP2	<u>0.</u>	GP3	<u>0.</u>	GP4	<u>0.</u>	GP5(P)	<u>1.</u>	GP6(A)	<u>0.</u>	GP7(B)	<u>0.</u>
Stuck Rods	NONE	#	0												

C-13

T-81 Level	<u>90.</u> %	T-939 Level	<u>93.</u> %	Condensate Storage Tank Level T-2	<u>89.</u> %
Instrument Air Pressure	<u>103</u> psig			Dome Temperature	<u>103</u> F
Containment Building Pressure	<u>-5.</u> psig			Humidity	<u>29.</u> %
S/G A Compartment				Temperature	<u>102</u> F
S/G B Compartment				Humidity	<u>30.</u> %
SIRW Tank Level	<u>98.</u> %			Temperature	<u>93.</u> F
WR Containment Pressure (R)	<u>9.</u> psia			Humidity	<u>30.</u> %
Containment Sump Level	<u>585</u> %			Containment Water Level (R)	<u>0.</u> %
SI Tank Level (%)	A <u>40.</u>	B <u>39.</u>	C <u>39.</u>	D <u>39.</u>	
SI Tank Pressure (psig)	A <u>149</u>	B <u>149</u>	C <u>150</u>	D <u>151</u>	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	<u>100.</u> %	T53B	<u>10.6</u> %
Reactor Vessel DP			<u>16.6</u> psid		
PORV Discharge Temperature			<u>112</u> F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	<u>126</u>	RV-1040	<u>141</u>
PCP Current (Amps)	P-50A	P-50B	<u>667</u>	P-50C	<u>678</u>
PCS Flow	<u>35.</u> %	Pressure	<u>96.8</u> %	P-50D	<u>0.</u>
Loop Thot (F)	Loop 1 <u>120</u>	Loop 2	<u>120</u>		
Loop Tcold (F)	Loop 1 <u>120</u>	Loop 2	<u>119</u>		
Tcold Wide range	Loop 1 <u>119</u>	Loop 2	<u>120</u>		
Subcooling	Temp <u>277</u> F	Press	<u>238</u> psi		
PCS Prssure	WR <u>240.</u>	NR	<u>240.</u> psia		
Level	Steam Generator A			Steam Generator B	
Press	(WR) <u>90.</u> %	(NR) <u>90.</u> %		(WR) <u>87.</u> %	(NR) <u>87.</u> %
Flow	Steam <u>1.</u> psia	Feed <u>0</u> PPH		Steam <u>13.</u> psia	Feed <u>0</u> PPH
		Note: Steam and Feed Flow X 1000000			

C-11

AFW Flow to A S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
AFW Flow to B S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
Condenser Vacuum (R)		<u>0.</u>		
PCP Seal Leakoff Flow	P-50A	<u>1.0</u> PPH	P-50B	<u>1.0</u> PPH
			P-50C	<u>1.0</u> PPH
			P-50D	<u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1	<u>60.</u>	1-2	<u>0</u>
1-C BUS	Voltage	<u>2442</u>	Amps	<u>407</u>
1-D BUS	Voltage	<u>0.</u>	Amps	<u>0.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	<u>.2E-01</u>	RIA-1806	<u>.2E-01</u>
	RIA-1807	<u>.2</u>	RIA-1808	<u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321	<u>.1E-01</u>	RIA-2322	<u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R	<u>0.</u>	AI-2401L	<u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324	<u>.3E+02</u>	RIA-2323	<u>.2E+02</u>
Stack Monitors	RIA-2325	<u>???</u> cpm	RIA-2326	<u>0</u> cpm
			RIA-2327	<u>0</u> mr/hr

MESSAGE No: 2

K-01

	1	2	3	4	5	6	7	8	9	10	11	12
1	ON	*	*	*	ON	*	*	ON	ON	*	*	*
2	*	ON	*	ON	*	*	*	ON	ON	*	*	*
3	*	*	*	*	ON	*	*	*	*	ON	ON	*
4	*	ON	*	*	ON	*	*	ON	*	ON	*	*
5	*	ON	*	*	*	*	*	*	*	ON	*	*
6	*	*	*	*	*	*	*	ON	ON	ON	ON	ON

K-02

PALEX-93

TIME: 0832
SCENARIO TIME: 0002MESSAGE No: 2ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * * ON *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * ON * * ON * * ON * *

* * * * *

* * * * *

4 ON * * ON * * ON * * ON * *

* * * * *

* * * * *

5 ON * * * * ON * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 0832
SCENARIO TIME: 0002MESSAGE No: 2ANNUNCIATOR DISPLAYSK-06A

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *
1          *          * ON      *          *
*          *          *          *
*****
*          *          *          *
2          *          * ON      *          *
*          *          *          *
*****

```

K-06B

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *
1          * ON      * ON      *          *
*          *          *          *
*****
*          *          *          *
2          * ON      * ON      *          *
*          *          *          *
*****

```

K-06C

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *
1 ON      *          *          *          *
*          *          *          *
*****
*          *          *          *
2 ON      *          * ON      *          *
*          *          *          *
*****

```

K-06D

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *
1          * ON      * ON      * ON      *
*          *          *          *
*****
*          *          *          *
2          *          * ON      * ON      *
*          *          *          *
*****

```

PALEX-93

TIME: 0832
SCENARIO TIME: 0002

MESSAGE No: 2

ANNUNCIATOR DISPLAYS

K-07

1	2	3	4	5	6	7	8	9	10	11	12
*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	ON	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	ON	ON	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

4	ON	*	*	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	ON	*	ON	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

K-09

1	2	3	4	5	6	7	8	9	10	11	12
*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	ON	*	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	ON	*	ON	ON
*	*	*	*	*	*	*	*	*	*	*	*

4	ON	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

5	*	ON	*	*	*	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	*	*	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0832
SCENARIO TIME: 0002MESSAGE No: 2ANNUNCIATOR DISPLAYS

K-11

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	ON	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6 ON	*	ON	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-13

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	** 13	**
*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
2 ON	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
3 ON	*	*	*	*	*	ON	*	*	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0832
SCENARIO TIME: 0002MESSAGE No: 2ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 0832
SCENARIO TIME: 0002MESSAGE No: 2ANNUNCIATOR DISPLAYS

K-33

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	*** 10	***
*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*

K-34

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	***
*	*	*	*	*	*	*
1	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
2	*	*	*	*	*	*
*	*	*	*	*	*	*

K-35

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	***
*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
4	*	*	*	CN	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*

Scenario: PALEX-93

Time: 0833

Message No: 3

Scenario Time: 0003

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:
Loss of Buss 1D

Message:
Shutdown Cooling Pump P-67B is running with total Shutdown Cooling flow approximately 3000 gpm; see Data and Alarm Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

C-08

SW Sumps	P-7A <u>OFF</u>	P-7B <u>ON</u>	P-7C <u>OFF</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>OFF</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>47.</u> F	B <u>47.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>108</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>117</u> F	Line Temp <u>103</u> F
Letdown Flow	<u>6.</u> gpm	Pumps P-55A <u>OFF</u> P-55B <u>OFF</u> P-55C <u>ON</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>70.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>235.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>119.9</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>
Stuck Rods <u>NONE</u> # <u>0</u>		GP4 <u>0.</u>	GP5(P) <u>1.</u>
		GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure	95. psig				
Containment Building Pressure	-5. psig			Dome Temperature	103 F
S/G A Compartment				Humidity	29. %
S/G B Compartment				Temperature	102 F
SIRW Tank Level	98. %			Humidity	30. %
WR Containment Pressure (R)	9. psia			Temperature	93. F
Containment Sump Level	585 %			Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.	B 39.	C 39.	D 39.	
SI Tank Pressure (psig)	A 149	B 149	C 149	D 151	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow	0. %	Pressure Level (cold)	96.9 %	P-50D	0.
Loop Thot (F)	Loop 1	Loop 2	120		
Loop Tcold (F)	Loop 1	Loop 2	120		
Tcold Wide range	Loop 1	Loop 2	119		
Subcooling	Temp	Press	233 psi		
PCS Prssure	WR	NR	235. psia		
Level	Steam Generator A	(NR)	90. %	Steam Generator B	(NR)
Press	(WR)		87. %	(WR)	87. %
Flow	1. psia	Feed	13. psia	Feed	13. psia
	Steam	0. PPH	0. PPH	Steam	0. PPH
		Note: Steam and Feed Flow	X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	0.	Amps	0.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	.0 cpm
			RIA-2327	.0 mr/hr

MESSAGE No: 3

X-01

	1	2	3	4	5	6	7	8	9	10	11	12	
1	ON				ON			ON	ON				
2		ON		ON				ON	ON				
3					ON					ON	ON		
4		ON			ON			ON		ON			
5		ON								ON			
6								ON	ON	ON	ON	ON	

K-02

★ 1 ★	★ 2 ★	★ 3 ★	★ 4 ★	★ 5 ★	★ 6 ★	★ 7 ★	★ 8 ★	★ 9 ★	★ 10 ★	★ 11 ★	★ 12 ★	★
★	★	★	★	★	★	★	★	★	★	★	★	★
1	★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★	★
2	★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★	★
3	★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★	★
4	★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★	★
5	★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★	★
6	★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★	★

PALEX-93

TIME: 0823
SCENARIO TIME: 0003MESSAGE No: 3ANNUNCIATOR DISPLAYS

K-03

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **
*      *      *      *      *      *      *
1 ON  * ON  *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2 ON  *      * ON  *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
3      *      *      *      *      * ON  *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
4      *      *      * ON  *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
5      *      *      * ON  *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
6      * ON  *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-05

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3 ON  *      * ON  *      *      * ON  *      *      * ON  *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4 ON  *      *      * ON  *      *      * ON  *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
5 ON  *      *      *      *      *      *      * ON  *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
6      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

PALEX-93

TIME: 0833
SCENARIO TIME: 0003MESSAGE No: 3ANNUNCIATOR DISPLAYS

K-06A

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	*	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	*	*
*	*	*	*	*

K-06B

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	* ON	* ON	*	*
*	*	*	*	*

K-06C

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1 ON	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2 ON	*	* ON	*	*
*	*	*	*	*

K-06D

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	* ON	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	* ON	*
*	*	*	*	*

PALEX-93

TIME: 0833
SCENARIO TIME: 0003MESSAGE No: 3ANNUNCIATOR DISPLAYS

K-07

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	ON	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	ON	ON	*	ON	*	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	ON	*	*	*	*	ON	*	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	ON	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-09

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	ON	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	ON	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	ON	*	*	*	*	ON	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	ON	*	*	*	ON	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0833
SCENARIO TIME: 0003

MESSAGE No: 3

ANNUNCIATOR DISPLAYS

K-11

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	**** 10	**** 11	**** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	ON	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6 ON	*	ON	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-13

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	**** 10	**** 11	**** 12	**** 13	**
*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
2 ON	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
3 ON	*	*	*	*	*	ON	*	*	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0823
SCENARIO TIME: 0003MESSAGE No: 3ANNUNCIATOR DISPLAYS

K-21

** 1 **	** 2 **	** 3 **	** 4 **	** 5 **
*	*	*	*	*
1	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2	*	*	*	*
*	*	*	*	*

*	*	*	*	*
3	*	*	*	*
*	*	*	*	*

*	*	*	*	*
4	*	*	*	*
*	*	*	*	*

K-22

** 1 **	** 2 **	** 3 **	** 4 **	** 5 **
*	*	*	*	*
1	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2	*	*	*	*
*	*	*	*	*

*	*	*	*	*
3	*	*	*	*
*	*	*	*	*

*	*	*	*	*
4	*	ON	ON	*
*	*	*	*	*

PALEX-93

TIME: 0833
SCENARIO TIME: 0003MESSAGE No: 3ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ***
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 0835

Message No: 4

Scenario Time: 0005

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:
Loss of Bus 1D

Message:

The Spent Fuel Handling Machine, with bundle L-015 in its mast, has lost power at SFP location L-10 (in front of the south Tilt Pit gate). Also, lack of circulation indicates that the SFP Cooling Pump has tripped.

FOR CONTROLLER USE ONLY

Controller Notes:

1. Message should be phoned into the Control Room by the simulator console operator to simulate the operators in the SFP area.
2. If the SFP operators are directed to manually position the SFHM, the Control Room should be advised (again, by phone) that movement is difficult as the hoist brake appears to be engaged.

Action expected:

Operators will manually energize Bus 1D from Startup power or crosstie Load Centers 11 and 12 to restore SFP Cooling and the SFHM.

Scenario: PALEX-93

Time: 0844

Message No: 5

Scenario Time: 0014

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:
Reenergization of Bus 1D

Message:
Bus 1D has been reenergized by Startup Power. See Data and Alarm Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

1. If the less likely option of crosstieing LCCs 11 and 12 was selected, then verbally provide appropriate confirmation of restoration of power to SFP cooling and the SFHM at this time.

Action expected:

1. Resume fuel handling operations.
2. Start additional Service Water and CCW Pumps as necessary to stabilize PCS temperature when Buss 1D is reenergized and restore normal Charging lineup.

Date OCTOBER 26, 1993Message # 5

(Page 1)

Time 0844
Time JumpScenario Time 0014
Scenario Time JumpC-08

SW Sumps	P-7A <u>OFF</u>	P-7B <u>ON</u>	P-7C <u>OFF</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>OFF</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>	<u>Charging</u>
Intermediate Press Letdown Temp	Flow <u>40.</u> gpm
Letdown Line Temp	Line Temp <u>91.</u> F
Letdown Flow	Pumps P-55A <u>OFF</u> P-55B <u>OFF</u> P-55C <u>ON</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia				
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>		
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>		
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>	Block Valve MOV-1042A	<u>OPEN</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>	P-50C	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>	NI-03	<u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>	NI-07	<u>.12E-07</u>
				MOV-1043A	<u>OPEN</u>
				P-50D	<u>OFF</u>
				NI-04	<u>.80E-08</u>
				NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u> GP7(B) <u>0.</u>		
Stuck Rods <u>NONE</u>	# <u>0</u>		

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure			100 psig	Dome Temperature	102 F
Containment Building Pressure			-5. psig	Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level			98. %	Temperature	93. F
WR Containment Pressure (R)			9. psia	Humidity	30. %
Containment Sump Level			585 %	Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.	B 39.	C 39.	D 39.	
SI Tank Pressure (psig)	A 149	B 149	C 149	D 150	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow		Pressure Level (cold)			96.6 %
Loop Thot (F)	Loop 1	Loop 2	120		
Loop Tcold (F)	Loop 1	Loop 2	120		
Tcold Wide range	Loop 1	Loop 2	119		
Subcooling	Temp	Press	247 psi		
PCS Prssure	WR	NR	249. psia		
Level	Steam Generator A	(NR)	90. %	Steam Generator B	(NR)
Press	(WR)		1. psia		87. %
Flow	Steam	Feed	.0 PPH	Steam	.0 PPH
		Note:	Steam and Feed Flow X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	.0
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	.0 cpm
			RIA-2327	.0 mr/hr

MESSAGE No: 5

K-01

1	2	3	4	5	6	7	8	9	10	11	12
1 ON				ON			ON	ON			
2			ON				CN	ON			
3									ON	ON	
4	ON						ON		ON		
5	ON								ON		
6							ON	ON	ON	ON	ON

[illegible]

PALEX-93

TIME: 0844
SCENARIO TIME: 0014MESSAGE No: 5ANNUNCIATOR DISPLAYS

K-03

```
*** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ***
*      *      *      *      *      *      *
1 ON  * ON  *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2 ON  *      * ON  *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
3      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      * ON  *      *      *
*      *      *      *      *      *      *
*****
*      *      *      * ON  *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
6      * ON  *      *      *      *      *
*      *      *      *      *      *      *
*****
```

K-05

```
*** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ***
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3 ON  *      *      *      *      *      *      *      *      * ON  *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      * ON  *      *      * ON  *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
5 ON  *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
6      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
```

PALEX-93

TIME: 0844
SCENARIO TIME: 0014MESSAGE No: 5ANNUNCIATOR DISPLAYS

K-06A

```

** 1 ***** 2 ***** 3 ***** 4 ***
*           *           *           *
1           *           * ON          *
*           *           *           *
*****
*           *           *           *
2           *           * ON          *
*           *           *           *
*****

```

K-06B

```

** 1 ***** 2 ***** 3 ***** 4 ***
*           *           *           *
1           * ON        * ON        *
*           *           *           *
*****
*           *           *           *
2           * ON        * ON        *
*           *           *           *
*****

```

K-06C

```

** 1 ***** 2 ***** 3 ***** 4 ***
*           *           *           *
1 ON        *           *           *
*           *           *           *
*****
*           *           *           *
2 ON        *           * ON        *
*           *           *           *
*****

```

K-06D

```

** 1 ***** 2 ***** 3 ***** 4 ***
*           *           *           *
1           * ON        * ON        * ON
*           *           *           *
*****
*           *           *           *
2           *           * ON        * ON
*           *           *           *
*****

```

MESSAGE No: 5

4-27

[illegible]

K-09

[illegible]

PALEX-93

TIME: 0844
SCENARIO TIME: 0014MESSAGE No: 5ANNUNCIATOR DISPLAYS

K-11

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1	*	*	*	*	*	ON	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	ON	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	*	*	*	*	*	ON	*
ON	*	*	*	*	*	*	*	*	*	*	ON	*
6 ON	*	ON	*	*	*	*	*	ON	*	*	*	*

K-13

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	** 13	**
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
2 ON	ON	*	*	*	*	ON	*	*	*	*	*	*	*
3 ON	*	*	*	*	*	ON	*	*	*	*	ON	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	ON	ON	ON	ON	*	*	*	*	OFF	*	*	*

PALEX-93

TIME: 0844
SCENARIO TIME: 0014MESSAGE No: 5ANNUNCIATOR DISPLAYS

K-21

1	2	3	4	5
1	*	*	*	*
2	*	*	*	*
3	*	*	*	*
4	*	*	*	*
5	*	*	*	*

K-22

1	2	3	4	5
1	*	*	*	*
2	*	*	*	*
3	*	*	*	*
4	*	ON	ON	*
5	*	*	*	*

PALEX-93

TIME: 0844
SCENARIO TIME: 0014

MESSAGE No: 5

ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ***
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 0845

Message No: 6

Scenario Time: 0015

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Tornado striking Auxiliary Building\SFP

Message:

A tornado has just destroyed the Safety Injection and Refueling Water Tank and the Spent Fuel Pool enclosure. Safety Injection Tank levels and pressures are in alarm; the Control Room is experiencing heavy buffeting and negative atmospheric pressure. Plant Area Monitoring High Radiation Alarm EK-13 annunciator no.66 is in alarm due to SFP Area Monitor RIA-2313 being upscale high. The following HVAC Fans have tripped:

V-7	V-67	V-69
V-8A	V-68A	V-70A
V-8B	V-68B	V-70B

Control Room HVAC is operating normally. See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

1. If questioned, the alternate SFP Area Monitor RIA-5709 is failed low, i.e. is non-functional; SIRWT level indicators LIA-0331 and LIA-0332a are failed low; and SIRWT temperature indicators TIA-0328 and TIA-0332 are failed high. SFP instruments LS-0924, TIA-0925 and TIA-0926 have been destroyed and their respective alarms are not functioning.

Action expected:

1. Declare an "ALERT" based on "Natural Phenomenon - Tornado Striking Facility" or a "SITE AREA EMERGENCY" based on "Fission Product Barriers - Major Damage to Irradiated Fuel in Containment or Fuel Handling Building" (the real Control Room must sound the siren).
2. Operators will implement ONP 11.2, "Fuel Handling Accident" and dispatch personnel to locate/evacuate personnel in the SFP area.

Date OCTOBER 26, 1993Message # 6

(Page 1)

Time 0845
Time JumpScenario Time 0015
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
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C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F	
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps
			P-67A <u>OFF</u>
			P-67B <u>ON</u>

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>	<u>Charging</u>
Intermediate Press Letdown Temp	Flow <u>40.</u> gpm
Letdown Line Temp	Line Temp <u>91.</u> F
Letdown Flow	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
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Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
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Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
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Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve	MOV-1042A <u>OPEN</u>
			P-50C <u>ON</u>
			MOV-1043A <u>OPEN</u>
			P-50D <u>OFF</u>
			NI-04 <u>.80E-08</u>
			NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	
AFW Pump P-8B Steam Pressure	<u>0.</u> psig	AFW Pump Amps	P-8A <u>0.</u>
		AFW Disch Press	P-8A & P-8B <u>18.</u>
			P-8C <u>18.</u> psi

Secondary System

MSIV Bypass	MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	
MFP Suction Pressure	<u>15.</u> psig	MSIV's	CV-0501 <u>CLOSED</u>
Moisture Separator Drain Tank Level	<u>26.</u> %	MFP Discharge Pressure	A <u>15.</u>
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Hotwell Level	<u>70.</u> %
Heater Drain Pump Status	P-10A <u>OFF</u>	Condenser Vacuum	<u>0.</u> in Hg.
	P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.
		Condensate Pump Status	P-2A <u>OFF</u>
			P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW	<u>0.</u>	Net MW	<u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>
Stuck Rods	<u>NONE</u>	# <u>0</u>		GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure	100 psig			Dome Temperature	102 F
Containment Building Pressure	-5. psig			Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level	0. %			Temperature	93. F
WR Containment Pressure (R)	9. psia				
Containment Sump Level	585 %			Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.	B 39.	C 39.	D 39.	
SI Tank Pressure (psig)	A 149	B 149	C 149	D 150	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow	34. %	Pressure Level (cold)	96.6 %	P-50D	0.
Loop Thot (F)	Loop 1 120	Loop 2 120			
Loop Tcold (F)	Loop 1 119	Loop 2 120			
Tcold Wide range	Loop 1 120	Loop 2 119			
Subcooling	Temp 281 F	Press 247 psi			
PCS Prssure	WR 249.	NR 249. psia			
Level	Steam Generator A (WR) 90. %	(NR) 90. %	Steam Generator B (WR) 87. %	(NR) 87. %	
Press	1. psia		13. psia		
Flow	Steam 0. PPH	Feed 0. PPH	Steam 0. PPH	Feed 0. PPH	
		Note: Steam and Feed Flow X 1000000			

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	0. cpm
			RIA-2327	0. mr/hr

TIME: 0845
SCENARIO TIME: 0015

MESSAGE No: 6

ANNUNCIATOR DISPLAYS

K-01

	1	2	3	4	5	6	7	8	9	10	11	12	
1 ON	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	ON	*	*	*	CN	* ON	*	*	*	*
3	*	*	*	*	*	*	*	*	*	* ON	* ON	*	*
4	* ON	*	*	*	*	*	*	* ON	*	* ON	*	*	*
5	* ON	*	*	*	*	*	*	*	*	* ON	*	*	*
6	*	*	*	*	*	*	*	* ON	* ON	* ON	* ON	* ON	*

K-02

[illegible]

MESSAGE No: 6

K-03

** 1	** 2	** 3	** 4	** 5	** 6	**
1 ON	ON					

2 ON		ON				

3						

4			ON			

5			ON			

6	ON					

K-05

PALEX-93

TIME: 0845
SCENARIO TIME: 0015MESSAGE No: 6ANNUNCIATOR DISPLAYSK-06A

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	*	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	*	*
*	*	*	*	*

K-06B

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	* ON	* ON	*	*
*	*	*	*	*

K-06C

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1 ON	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2 ON	*	* ON	*	*
*	*	*	*	*

K-06D

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	* ON	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	* ON	*
*	*	*	*	*

MESSAGE No: 6

K-27

K-09

[illegible]

PALEX-93

TIME: 0845
SCENARIO TIME: 0015MESSAGE No: 6ANNUNCIATOR DISPLAYS

K-11

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
5 ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6 ON	*	ON	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-13

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	** 13	**
*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
2 ON	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
3 ON	*	*	*	*	*	ON	*	*	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	ON	ON	ON	ON	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0845
SCENARIO TIME: 0015MESSAGE No: 6ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 0845
SCENARIO TIME: 0015

MESSAGE No: 6

ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario No: PALEX-93
Message No: 6A

Time: 0845
Scenario Time: 0015

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Containment HP Technician

Simulated Plant Conditions:

Tornado striking Auxiliary Building/Spent Fuel Pool

Message:

The Containment HP Technician hears a loud roaring sound and then crashing noises from the direction of the equipment hatch. Upon investigation he discovers:

- 1) The equipment hatch is blocked with debris
- 2) Daylight and rain can be seen through the debris pile
- 3) Alarms are sounding in the SFP area, and
- 4) He cannot hear or see the Operators who were in the SFP handling machine.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Scenario No: PALEX-93
Message No: 6B

Time: 0845
Scenario Time: 0015

**PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM**

Message For: CAS and SAS Operators

Simulated Plant Conditions:

Message:

CAS and SAS alarm panels receive the following alarms:

84, 85, 97, 98, 1, 4 intrusion and tamper alarms, alarms will not clear;

86a, 86e, 93, 94, 95, 96, 99, 100, 101 intrusion alarms, alarms clear, some re-alarm and clear.

Doors 162, 163, 164, 166, 306, 144; 163 and 164 will not clear.

CAS and SAS have no coverage of PA from cameras 2, 14, 15, 16, or 23.

CCTV coverage from other cameras indicate debris, sheet metal siding, bags, etc, in alarm zones 84, 85, and 1.

It appears that fence, E-Field and Microwave damaged in southwest corner of PA and east side of PA along zone 85.

FOR CONTROLLER USE ONLY

Controller Notes:

Once security personnel have determined appropriate compensatory measures and applicable reportability, if any, compensatory measures may be simulated since recovery will be long term.

Action expected:

Security will determine how to respond to and compensate for alarms and damaged equipment.

Scenario No: PALEX-93
Message No: 6C

Time: 0850
Scenario Time: 0035

**PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM**

Message For: Response Officer to Doors 144, 166 and 164

Simulated Plant Conditions:

Message:

1. Upon response to Doors 144 and 166, the doors and area are found secure.
2. Upon response to Door 164, the door has been ripped from hinges. A hole in the roof allows rain to enter the Spent Fuel Pool Area. Radiation monitors are alarming.

FOR CONTROLLER USE ONLY

Controller Notes:

Information for "2" to be given to officer upon arrival at Doors 166 and 144.

Action Expected:

Notify CAS of findings, and follow directions from CAS and HP.

Scenario No: PALEX-93
Message No: 6D

Time: 0850
Scenario Time: 0035

**PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM**

Message For: Patrol Officer - North End of Protected Area

Simulated Plant Conditions:

Message:

(Upon arrival of player) Debris in Zones 84 and 85.
Microwave heads damaged by debris. Zone 1 fence north of
support building damaged (holes in wire mesh).

FOR CONTROLLER USE ONLY

Controller Notes:

Message given to officer when "damage should be in view."

Action Expected:

Report findings to CAS and wait for further instructions.

Scenario No: PALEX-93
Message No: 6E

Time: 0850
Scenario Time: 0035

**PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM**

Message For: Security Officers - South End of Protected Area

Simulated Plant Conditions:

Message:

(Upon arrival of Player) Large hole is in the Southwest corner of the Protected Area fence. South end of Zone 7 and West half of Zone 98 missing due to tornado striking area. CCTVs 14, 15, 16 and 23 along with the south end of the turbine building - roof is severely damaged.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Contact CAS of findings in the area and follow proper compensatory measures. Await further instruction from CAS.

Scenario: PALEX-93

Time: 0900

Message No: 7

Scenario Time: 0030

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:
post-tornado

Message:
See Data and Alarm Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

1. Continue SEP activation.
2. Place Control Room HVAC in "Emergency" mode and seal any open penetrations in the CR/TSC envelope.

Date OCTOBER 26, 1993Message # 7

(Page 1)

Time 0900
Time JumpScenario Time 0030
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u> CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-03	<u>.82E-08</u>
		NI-07	<u>.12E-07</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u> GP7(B) <u>0.</u>		
Stuck Rods <u>NONE</u>	# <u>0</u>		

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure	100 psig			Dome Temperature	102 F
Containment Building Pressure	-5. psig			Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level	0. %			Temperature	93. F
WR Containment Pressure (R)	9. psia			Humidity	30. %
Containment Sump Level	585 %			Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.	B 39.	C 39.	D 39.	
SI Tank Pressure (psig)	A 149	B 149	C 149	D 150	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow	0. %	Pressure	Level (cold)		96.6 %
Loop Thot (F)	Loop 1	Loop 2	120		
Loop Tcold (F)	Loop 1	Loop 2	120		
Tcold Wide range	Loop 1	Loop 2	119		
Subcooling	Temp	Press	247 psi		
PCS Prssure	WR	NR	249. psia		
Level	Steam Generator A	(NR)	90. %	Steam Generator B	(NR)
Press	(WR)		87. %	(WR)	87. %
Flow	Steam	Feed	13. psia	Steam	13. psia
	0. PPH	0. PPH	0. PPH	0. PPH	0. PPH
		Note: Steam and Feed Flow	X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	0. cpm
			RIA-2327	0. mr/hr

PALEX-93

TIME: 0900
SCENARIO TIME: 0030

MESSAGE No: 7

ANNUNCIATOR DISPLAYS

K-03

```

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **
*      *      *      *      *      *
1 ON  * ON  *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2 ON  *      * ON  *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      * ON  *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
5      *      * ON  *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
6      * ON  *      *      *      *
*      *      *      *      *      *
*****

```

K-05

```

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **
*      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
3 ON  *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
4      *      * ON  *      * ON  *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
5 ON  *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
6      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****

```

PALEX-93

TIME: 0900
SCENARIO TIME: 0030MESSAGE No: 7ANNUNCIATOR DISPLAYSK-06A

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*

K-06B

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*

K-06C

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	ON	*	*	*	*	*	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	ON	*	ON	*	*	*	*
*	*	*	*	*	*	*	*

K-06D

** 1	*****	2	*****	3	*****	4	***
*	*	*	*	*	*	*	*
1	*	ON	*	ON	*	ON	*
*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*
2	*	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*

PALEX-93

TIME: 0900
SCENARIO TIME: 0030MESSAGE No: 7ANNUNCIATOR DISPLAYS

K-27

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	ON	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	ON	*	*	ON	*	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	ON	*	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	ON	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-09

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	ON	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	ON	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

MESSAGE No: 7

ANNUNCIATOR DISPLAYS

K-11

K-13

[illegible]

PALEX-93

TIME: 0900
SCENARIO TIME: 0030MESSAGE No: 7ANNUNCIATOR DISPLAYS

K-21

```

** 1 **** 2 **** 3 **** 4 **** 5 **
*      *      *      *      *      *
1      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      *      *      *      *
*      *      *      *      *      *
*****

```

K-22

```

** 1 **** 2 **** 3 **** 4 **** 5 **
*      *      *      *      *      *
1      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      * ON * ON *      *
*      *      *      *      *      *
*****

```

PALEX-93

TIME: 0900
SCENARIO TIME: 0030MESSAGE No: 7ANNUNCIATOR DISPLAYS

K-33

```
** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
```

K-34

```
** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
```

K-35

```
** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
```

Scenario: PALEX-93
Message No: 8

Time: 0905
Scenario Time: 0035

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Auxiliary Operator(s) dispatched to SFP area.

Simulated Plant Conditions: Post Tornado

Message:

Initial damage assessment of SFP area:

1. High radiation levels at entrance to SFP.
2. Roof and walls of SFP enclosure are demolished, Equipment Hatch is plugged with debris, much debris in and around SFP.
3. SFP appears to be approximately 10 feet low and is continuing to fall; the sound of rushing water can be heard.
4. SFHM mast is exposed and is dangling from the machine by cables.
5. No sign of the operators known to have been in the area.

Additionally, your electronic dosimetry is alarming.

FOR CONTROLLER USE ONLY

Controller Notes:

1. Message may be delayed slightly if it takes longer than anticipated to transit from the simulator control room to the plant.
2. Due to the physical distances involved, once the AOs are dispatched from the simulator they will have to take all future direction from the control room by phone (ie, no "body double").

Action Expected:

1. Phone in report to simulator control room (2219/2238/2239).
2. Report to OSC and Health Physics for assessment of dose received.
3. Again report by phone to simulator control room when available for assignment.

Date OCTOBER 26, 1993Message # 8

(Page 1)

Time 0905
Time JumpScenario Time 0035
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F	
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps
			P-67A <u>OFF</u>
			P-67B <u>ON</u>

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>	
Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105.</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps	P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve	MOV-1042A <u>OPEN</u>
			MOV-1043A <u>OPEN</u>
			P-50C <u>ON</u>
			P-50D <u>OFF</u>
			NI-04 <u>.80E-08</u>
			NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	
AFW Pump P-8B Steam Pressure	<u>0.</u> psig	AFW Pump Amps	P-8A <u>0.</u>
		AFW Disch Press	P-8A & P-8B <u>18.</u>
			P-8C <u>0.</u>
			P-8C <u>18.</u> psi

Secondary System

MSIV Bypass	MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	
MFP Suction Pressure	<u>15.</u> psig	MSIV's	CV-0501 <u>CLOSED</u>
Moisture Separator Drain Tank Level	<u>26.</u> %	MFP Discharge Pressure	A <u>15.</u>
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Hotwell Level	<u>70.</u> %
Heater Drain Pump Status	P-10A <u>OFF</u>	Condenser Vacuum	<u>0.</u> in Hg.
	P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.
		Condensate Pump Status	P-2A <u>OFF</u>
			P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>
Stuck Rods <u>NONE</u>	# <u>0</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>
		GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level <u>90.</u> %	T-939 Level <u>93.</u> %	Condensate Storage Tank Level T-2 <u>89.</u> %
Instrument Air Pressure <u>100</u> psig		
Containment Building Pressure <u>-5.</u> psig		
S/G A Compartment		Dome Temperature <u>102</u> F Humidity <u>29.</u> %
S/G B Compartment		Temperature <u>102</u> F Humidity <u>30.</u> %
SIRW Tank Level <u>0.</u> %		Temperature <u>93.</u> F Humidity <u>30.</u> %
WR Containment Pressure (R) <u>9.</u> psia		
Containment Sump Level <u>585</u> %		Containment Water Level (R) <u>0.</u> %
SI Tank Level (%) A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig) A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels	T53A <u>100.</u> %	T53B <u>10.6</u> %
Reactor Vessel DP	<u>16.8</u> psid	
PORV Discharge Temperature	<u>112</u> F	
Pzr Safety Valve Discharge Temp (F)	RV-1039 <u>127</u>	RV-1040 <u>142</u> RV-1041 <u>177</u>
PCP Current (Amps) P-50A <u>0.</u>	P-50B <u>667</u>	P-50C <u>678</u> P-50D <u>0.</u>
PCS Flow <u>34.</u> %	Pressure Level (cold) <u>96.6</u> %	
Loop Thot (F) Loop 1 <u>120</u>	Loop 2 <u>120</u>	
Loop Tcold (F) Loop 1 <u>119</u>	Loop 2 <u>120</u>	
Tcold Wide range Loop 1 <u>120</u>	Loop 2 <u>119</u>	
Subcooling Temp <u>281</u> F	Press <u>247</u> psi	
PCS Pressure WR <u>249.</u>	NR <u>249.</u> psia	
Level	Steam Generator A (WR) <u>90.</u> %	Steam Generator B (WR) <u>87.</u> %
Press	(NR) <u>90.</u> %	(NR) <u>87.</u> %
Flow	Feed <u>0</u> PPH	Feed <u>0</u> PPH
	Steam <u>13.</u> psia	Steam <u>13.</u> psia
	Steam <u>0</u> PPH	Steam <u>0</u> PPH
	Note: Steam and Feed Flow X 1000000	

C-11

AFW Flow to A S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
AFW Flow to B S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
Condenser Vacuum (R)	<u>0.</u>	
PCP Seal Leakoff Flow	P-50A <u>1.0</u> PPH	P-50B <u>1.0</u> PPH
	P-50C <u>1.0</u> PPH	P-50D <u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1 <u>60.</u>	1-2 <u>0</u>
1-C BUS Voltage	<u>2433</u>	Amps <u>494</u>
1-D BUS Voltage	<u>2482</u>	Amps <u>45.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 <u>.2E-01</u>	RIA-1806 <u>.2E-01</u>
	RIA-1807 <u>.2</u>	RIA-1808 <u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321 <u>.1E-01</u>	RIA-2322 <u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R <u>0.</u>	AI-2401L <u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324 <u>.3E+02</u>	RIA-2323 <u>.2E+02</u>
Stack Monitors	RIA-2325 <u>????</u> cpm	RIA-2326 <u>0</u> cpm
		RIA-2327 <u>0</u> mr/hr

PALEX-93

TIME: 0905
SCENARIO TIME: 0035

MESSAGE No: 8

ANNUNCIATOR DISPLAYS

K-01

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **** 11 **** 12 ****
* * * * *
1 ON * * * * ON * * * * CN * ON * * * *
* * * * *
2 * * * * ON * * * * CN * ON * * * *
* * * * *
3 * * * * * * * * * * ON * ON * * * *
* * * * *
4 * ON * * * * * ON * * ON * * * *
* * * * *
5 * ON * * * * * * * * ON * * * *
* * * * *
6 * * * * * ON * ON * ON * ON * ON * * * *
* * * * *

K-02

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **** 11 **** 12 ****
* * * * *
1 * * * * * * * * * * * * * * *
* * * * *
2 * * * * * * * * * * * * * * *
* * * * *
3 * * * * * * * * * * * * * * *
* * * * *
4 * * * * * * * * * * * * * * *
* * * * *
5 * * * * * * * * * * * * * * *
* * * * *
6 * * * * * * * * * * * * * * *
* * * * *

PALEX-93

TIME: 0905
SCENARIO TIME: 0035

MESSAGE No: 8

ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 0905
SCENARIO TIME: 0035MESSAGE No: 8ANNUNCIATOR DISPLAYS

K-06A

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	*	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	*	*
*	*	*	*	*

K-06B

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	* ON	* ON	*	*
*	*	*	*	*

K-06C

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1 ON	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2 ON	*	* ON	*	*
*	*	*	*	*

K-06D

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	* ON	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	* ON	*
*	*	*	*	*

MESSAGE No: 8

K-27

	1	2	3	4	5	6	7	8	9	10	11	12
1	*	*	*	*	*	*	ON	*	*	ON	ON	*
2	*	*	*	*	*	*	ON	*	*	ON	*	*
3	*	*	ON	*	*	*	ON	*	*	ON	*	ON
4 ON	*	*	*	*	*	*	ON	*	*	ON	*	ON
5	*	*	ON	*	*	*	*	*	ON	*	*	*
6	*	*	*	*	*	*	*	*	ON	*	*	*

K-09

[illegible]

PALEX-93

TIME: 0905
SCENARIO TIME: 0035

MESSAGE No: 8

ANNUNCIATOR DISPLAYS

K-11

1	2	3	4	5	6	7	8	9	10	11	12
1	*	*	*	*	*	ON	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	*	*	*	*	*	ON
5	ON	*	*	*	*	*	*	*	*	*	ON
6	ON	*	ON	*	*	*	*	ON	*	*	*

K-13

1	2	3	4	5	6	7	8	9	10	11	12	13
1	ON	*	*	*	*	ON	*	*	*	*	*	*
2	ON	ON	*	*	*	ON	*	*	*	*	*	*
3	ON	*	*	*	*	ON	*	*	*	*	ON	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*
	*	ON	ON	ON	ON	*	*	*	*	ON	*	*

PALEX-93

TIME: 0905
SCENARIO TIME: 0035

MESSAGE No: 8

ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	ON	ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 0905
SCENARIO TIME: 0035

MESSAGE No: 8

ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 0915

Message No: 9.

Scenario Time: 0045

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:
See Alarm and Data Sheets

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

1. Complete SEP activation; communications turnover to TSC.
2. Upon receipt of report of low SFP level, operators will line up to make up to the SFP from Firewater per SOP 27 with TSC concurrence.

C-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>OFF</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u> CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u> GP7(B) <u>0.</u>		
Stuck Rods <u>NONE</u>	# <u>0</u>		

C-13

T-81 Level <u>90.</u> %	T-939 Level <u>93.</u> %	Condensate Storage Tank Level T-2 <u>89.</u> %
Instrument Air Pressure <u>100</u> psig		
Containment Building Pressure <u>-5.</u> psig		
S/G A Compartment		Dome Temperature <u>102</u> F Humidity <u>29.</u> %
S/G B Compartment		Temperature <u>102</u> F Humidity <u>30.</u> %
SIRW Tank Level <u>0.</u> %		Temperature <u>93.</u> F Humidity <u>30.</u> %
WR Containment Pressure (R) <u>9.</u> psia		
Containment Sump Level <u>585</u> %		Containment Water Level (R) <u>0.</u> %
SI Tank Level (%) A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig) A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels	T53A <u>100.</u> %	T53B <u>10.6</u> %
Reactor Vessel DP	<u>16.8</u> psid	
PORV Discharge Temperature	<u>112</u> F	
Pzr Safety Valve Discharge Temp (F)	RV-1039 <u>127</u>	RV-1040 <u>142</u> RV-1041 <u>177</u>
PCP Current (Amps) P-50A <u>0.</u>	P-50B <u>667</u>	P-50C <u>678</u> P-50D <u>0.</u>
PCS Flow <u>34.</u> %	Pressure Level (cold) <u>96.6</u> %	
Loop Thot (F) Loop 1 <u>120</u>	Loop 2 <u>120</u>	
Loop Tcold (F) Loop 1 <u>119</u>	Loop 2 <u>120</u>	
Tcold Wide range Loop 1 <u>120</u>	Loop 2 <u>119</u>	
Subcooling Temp <u>281</u> F	Press <u>247</u> psi	
PCS Prssure WR <u>249.</u>	NR <u>249.</u> psia	
Level (WR) <u>90.</u> %	(NR) <u>90.</u> %	Steam Generator B (WR) <u>87.</u> % (NR) <u>87.</u> %
Press <u>1.</u> psia		Press <u>13.</u> psia
Flow Steam <u>0</u> PPH	Feed <u>0</u> PPH	Steam <u>0</u> PPH Feed <u>0</u> PPH

Note: Steam and Feed Flow X 1000000

C-11

AFW Flow to A S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
AFW Flow to B S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
Condenser Vacuum (R)	<u>0.</u>	
PCP Seal Leakoff Flow P-50A <u>1.0</u> PPH	P-50B <u>1.0</u> PPH	P-50C <u>1.0</u> PPH P-50D <u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1 <u>60.</u>	1-2 <u>0</u>
1-C BUS Voltage <u>2433</u>	Amps <u>494</u>	
1-D BUS Voltage <u>2482</u>	Amps <u>45.</u>	

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 <u>.2E-01</u>	RIA-1806 <u>.2E-01</u>
	RIA-1807 <u>.2</u>	RIA-1808 <u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321 <u>.1E-01</u>	RIA-2322 <u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R <u>0.</u>	AI-2401L <u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324 <u>.3E+02</u>	RIA-2323 <u>.2E+02</u>
Stack Monitors	RIA-2325 <u>???</u> cpm	RIA-2326 <u>0</u> cpm
		RIA-2327 <u>0</u> mr/hr

MESSAGE No: 9

K-01

[illegible]

PALEX-93

TIME: 0915
SCENARIO TIME: 0045

MESSAGE No: 9

ANNUNCIATOR DISPLAYS

K-03

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 0915
SCENARIO TIME: 0045MESSAGE No: 9ANNUNCIATOR DISPLAYSK-06A

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	*	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	*	*
*	*	*	*	*

K-06B

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	* ON	* ON	*	*
*	*	*	*	*

K-06C

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1 ON	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2 ON	*	* ON	*	*
*	*	*	*	*

K-06D

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	* ON	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	* ON	*
*	*	*	*	*

TIME: 0915
SCENARIO TIME: 0045

MESSAGE No: 9

ANNUNCIATOR DISPLAYS

K-37

*	1	2	3	4	5	6	7	8	9	10	11	12	*
1	*	*	*	*	*	*	ON	*	*	ON	ON	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	ON	*	*	ON	*	*	ON	*	ON	*
4	ON	*	*	*	*	*	ON	*	*	ON	*	ON	*
5	*	*	*	CN	*	*	*	*	ON	*	*	*	*
6	*	*	*	*	*	*	*	*	ON	*	*	*	*

K-C9

[illegible]

MESSAGE No: 9

K-11

*★	1	*★	2	*★	3	*★	4	*★	5	*★	6	*★	7	*★	8	*★	9	*★	10	*★	11	*★	12	*★
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
1	*	*	*	*	*	*	ON	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
2	*	*	*	*	*	*	*	*	*	*	ON	*	*	*	*	*	*	*	*	*	*	*	*	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
4 ON	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	ON	*	*	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

* ON	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	ON	*	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

ON	*	ON	*	*	*	*	*	*	*	ON	*	*	*	*	*	*	*	*	*	*	*	*	*	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	

K-13

[illegible]

PALEX-93

TIME: 0915
SCENARIO TIME: 0045MESSAGE No: 9ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 0915
SCENARIO TIME: 0045

MESSAGE No: 9

ANNUNCIATOR DISPLAYS

K-33

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****	7 ****	8 ****	9 ****	10 ****
*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

K-34

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

K-35

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****	7 ****
*	*	*	*	*	*	*
1	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
2	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
3	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
4	*	*	ON	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
5	*	*	*	*	*	*
*	*	*	*	*	*	*

Scenario: PALEX-93

Time: 0930

Message No: 10

Scenario Time: 0100

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

See attached Data and Alarm sheets. Electric Fire Pump P-9A is running due to SFP fill efforts.

FOR CONTROLLER USE ONLY

Controller Notes:

Control room controller needs to remember to have simulator personnel start P-9A at this point.

Action expected:

1. Commence search and rescue operations.
2. Upgrade SEP classification, if not done previously, to Site Area Emergency or higher.
3. Commence debris capture/retention efforts.

C-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>	
Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u>	P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psi
-------------------	-------------------------	--------------------	--

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PRV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		NI-03	<u>.82E-08</u>
		NI-07	<u>.12E-07</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>		AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig			AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
Control Rod Position								
Stuck Rods <u>NONE</u>	# <u>0</u>							

Core Exit Thermocouple Temperature 120.0 F

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure	100	psig		Dome Temperature	102 F
Containment Building Pressure	-5.	psig		Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level	0.	%		Temperature	93. F
WR Containment Pressure (R)	9.	psia		Humidity	30. %
Containment Sump Level	585	%		Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.		B 39.	C 39.	D 39.
SI Tank Pressure (psig)	A 149		B 149	C 149	D 150

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow	0. %	Pressure Level (cold)	96.6 %	P-50D	177
Loop Thot (F)	Loop 1 120	Loop 2 120			0.
Loop Tcold (F)	Loop 1 119	Loop 2 120			
Tcold Wide range	Loop 1 120	Loop 2 119			
Subcooling	Temp 281 F	Press 247 psi			
PCS Pressure	WR 249.	NR 249. psia			
Level	Steam Generator A (WR) 90. %	(NR) 90. %	Steam Generator B (WR) 87. %	(NR) 87. %	
Press	1. psia		13. psia		
Flow	Steam 0. PPH	Feed 0. PPH	Steam 0. PPH	Feed 0. PPH	

Note: Steam and Feed Flow X 1000000

C-11

AFW Flow to A S/G	From P-8A&B 0.	From P-8C 0.		
AFW Flow to B S/G	From P-8A&B 0.	From P-8C 0.		
Condenser Vacuum (R)	0.			
PCP Seal Leakoff Flow	P-50A 1.0 PPH	P-50B 1.0 PPH	P-50C 1.0 PPH	P-50D 1.0 PPH

C-04

Diesel Generator Frequency	1-1 60.	1-2 0.
1-C BUS Voltage	2433	Amps 494
1-D BUS Voltage	2482	Amps 45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 .2E-01	RIA-1806 .2E-01
	RIA-1807 .2	RIA-1808 .8E-01
High Range Containment Monitors (R/Hr)	RIA-2321 .1E-01	RIA-2322 .1E-01
Containment Hydrogen Concentration (%)	AI-2401R 0.	AI-2401L 0.
Main Steam Line Gamma (cpm)	RIA-2324 .3E+02	RIA-2323 .2E+02
Stack Monitors	RIA-2325 ??? cpm	RIA-2326 0 cpm
		RIA-2327 0 mr/hr

TIME: 0930
SCENARIO TIME: 0100

ANNUNCIATOR DISPLAYS

[illegible]

** 1	** 2	*** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	*** 10	*** 11	*** 12	***
1	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

7	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

8	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

9	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

10	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

11	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

12	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0930
SCENARIO TIME: 0100

MESSAGE No: 10

ANNUNCIATOR DISPLAYS

K-03

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 0930
SCENARIO TIME: 0100

MESSAGE No: 10

ANNUNCIATOR DISPLAYS

K-06A

```

** 1 **** 2 **** 3 **** 4 ***
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 ***
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 ***
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 ***
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```


PALEX-93

TIME: 0430
SCENARIO TIME: 0100MESSAGE No: 10ANNUNCIATOR DISPLAYS

K-11

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 ** 11 ** 12 **

* * * * *

1 * * * * * ON * * * * *

* * * * *

* * * * *

2 * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

3 * * * * * * * * * *

* * * * *

* * * * *

* * * * *

* * * * *

4 ON * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

5 ON * * * * * * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

ON * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

K-13

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 ** 11 ** 12 ** 13 **

* * * * *

1 * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

2 ON * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

3 ON * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

4 * * * * * ON * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

5 * * * * * * * * * *

* * * * *

* * * * *

* * * * *

* * * * *

* * * * * ON * * * * * ON * * * * * ON * * * * *

* * * * *

* * * * *

* * * * *

PALEX-93

TIME: 0930
SCENARIO TIME: 0100MESSAGE No: 10ANNUNCIATOR DISPLAYS

K-21

** 1	** 2	** 3	** 4	** 5	**
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	** 2	** 3	** 4	** 5	**
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	ON	ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 0930
SCENARIO TIME: 0100MESSAGE No: 10ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 0945

Message No: //

Scenario Time: 0115

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

SFP level is recovering at approximately 2 inches per minute. See attached Data And Alarm Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

Develope strategy to increase SFP boron to compensate for dillution from Fire Water.

Date OCTOBER 26, 1993Message # 11

(Page 1)

Time 0945
Time JumpScenario Time 0115
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>	<u>Charging</u>
Intermediate Press Letdown Temp	Flow <u>40.</u> gpm
Letdown Line Temp	Line Temp <u>91.</u> F
Letdown Flow	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
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Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia				
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>		
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>		
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>	Block Valve MOV-1042A	<u>OPEN</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>	P-50C	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>	NI-03	<u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>	NI-07	<u>.12E-07</u>
				NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>
Stuck Rods <u>NONE</u> # <u>0</u>		GP4 <u>0.</u>	GP5(P) <u>1.</u>
		GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure		100	psig	Dome Temperature	102 F
Containment Building Pressure		-5.	psig	Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level		0.	%	Temperature	93. F
WR Containment Pressure (R)		9.	psia	Humidity	30. %
Containment Sump Level		585	%	Containment Water Level (R)	0. %
SI Tank Level (%)	A	40.		B	39.
SI Tank Pressure (psig)	A	149		C	39.
				D	39.
				C	149
				D	150

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP		16.8	psid		
PORV Discharge Temperature		112	F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	0.		P-50C	678
PCS Flow		34. %		P-50D	0.
Loop Thot (F)	Loop 1	120		Pressure Level (cold)	96.6 %
Loop Tcold (F)	Loop 1	119		Loop 2	120
Tcold Wide range	Loop 1	120		Loop 2	120
Subcooling	Temp	281 F		Loop 2	119
PCS Prssure	WR	249.		Press	247 psi
				NR	249. psia
Level	Steam Generator A			Steam Generator B	
Press	(WR)	90. %		(NR)	87. %
Flow	Steam	1. psia		(NR)	87. %
		0. PPH		Feed	0. PPH
				Steam	0. PPH
				Feed	0. PPH

Note: Steam and Feed Flow X 1000000

C-11

AFW Flow to A S/G	From P-8A&B	0.		From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.		From P-8C	0.
Condenser Vacuum (R)		0.			
PCP Seal Leakoff Flow	P-50A	1.0	PPH	P-50B	1.0 PPH
				P-50C	1.0 PPH
				P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.		1-2	0.
1-C BUS	Voltage	2433		Amps	494
1-D BUS	Voltage	2482		Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01		RIA-1806	.2E-01
	RIA-1807	.2		RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01		RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.		AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02		RIA-2323	.2E+02
Stack Monitors	RIA-2325	????	cpm	RIA-2326	0.
				cpm	RIA-2327
				mr/hr	

PALEX-93

TIME: 0945
SCENARIO TIME: 0115

MESSAGE No: 11

ANNUNCIATOR DISPLAYS

K-01

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1 ON	*	*	*	*	ON	*	*	ON	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	ON	*	*	*	ON	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	ON	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	ON	*	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	ON	*	*	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	ON	ON	ON	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-02

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

7	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

8	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

9	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

10	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

11	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

12	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 0945
SCENARIO TIME: 0115MESSAGE No: 11ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

1 ON * ON * * * *

2 ON * * ON * * *

3 * * * * *

4 * * * ON * *

5 * * * ON * *

6 * ON * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

1 * * * * *

2 * * * * *

3 ON * * * * * ON *

4 * * * ON * * ON *

5 ON * * * * *

6 * * * * *

PALEX-93

TIME: 0945
SCENARIO TIME: 0115MESSAGE No: 11ANNUNCIATOR DISPLAYSK-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

TIME: 0945
SCENARIO TIME: 0115

MESSAGE No: //

ANNUNCIATOR DISPLAYS

X-27

[illegible]

K-09

[illegible]

PALEX-93

TIME: 0945
SCENARIO TIME: 0115

MESSAGE No: 11

ANNUNCIATOR DISPLAYS

K-11

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1	*	*	*	*	*	ON	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	*	*	*	ON	*
5	ON	*	*	*	*	*	*	*	*	*	ON	*
6	ON	*	ON	*	*	*	*	ON	*	*	*	*

K-13

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	** 13	**
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
2	ON	ON	*	*	*	ON	*	*	*	*	*	*	*
3	ON	*	*	*	*	ON	*	*	*	*	ON	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	ON	ON	ON	ON	*	*	*	*	ON	*	*	*

PALEX-93

TIME: 0945
SCENARIO TIME: 0115

MESSAGE No: 11

ANNUNCIATOR DISPLAYS

K-21

1	2	3	4	5
1	*	*	*	*

2	*	*	*	*

3	*	*	*	*

4	*	*	*	*

K-22

1	2	3	4	5
1	*	*	*	*

2	*	*	*	*

3	*	*	*	*

4	*	ON	ON	*

PALEX-93

TIME: 0945
SCENARIO TIME: 0715

MESSAGE No: 11

ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 1000

Message No: 12

Scenario Time: 0130

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

SFP level continues to recover at approximately 2 inches per minute. See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

C-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>	
Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u>	P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>
NI-05	<u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		NI-03	<u>.82E-08</u>
		NI-07	<u>.12E-07</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	
AFW Pump P-8B Steam Pressure	<u>0.</u> psig	AFW Pump Amps	P-8A <u>0.</u>
		AFW Disch Press	P-8A & P-8B <u>18.</u>
			P-8C <u>0.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)				
Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature		<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
Stuck Rods <u>NONE</u>	# <u>0</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure		100	psig	Dome Temperature	102 F
Containment Building Pressure		-5.	psig	Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level		0.	%	Temperature	93. F
WR Containment Pressure (R)		9.	psia	Humidity	30. %
Containment Sump Level		585	%	Containment Water Level (R)	0. %
SI Tank Level (%)	A	40.		B	39.
SI Tank Pressure (psig)	A	149		C	39.
				D	39.
				C	149
				D	150

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP		16.8	psid		
PORV Discharge Temperature		112	F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	0.		P-50C	678
PCS Flow		34. %		P-50D	0.
Loop Thot (F)	Loop 1	120		Pressure Level (cold)	96.6 %
Loop Tcold (F)	Loop 1	119		Loop 2	120
Tcold Wide range	Loop 1	120		Loop 2	120
Subcooling	Temp	281 F		Press	247 psi
PCS Pressure	WR	249.		NR	249. psia
Level	Steam Generator A			Steam Generator B	
Press	(WR)	90. %	(NR)	(WR)	87. %
Flow	Steam	1. psia	Feed	Steam	13. psia
		0 PPH	Feed	Steam	0 PPH
			Note: Steam and Feed Flow	X	1000000

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	0 cpm
			RIA-2327	0 mr/hr

MESSAGE No: 12

X-03

PALEX-93

TIME: 1000
SCENARIO TIME: 0130MESSAGE No: 12ANNUNCIATOR DISPLAYS

K-06A

```

** 1 ***** 2 ***** 3 ***** 4 ***
*      *      *      *      *
1      *      * ON    *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON    *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 ***** 2 ***** 3 ***** 4 ***
*      *      *      *      *
1      * ON    * ON    *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON    * ON    *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 ***** 2 ***** 3 ***** 4 ***
*      *      *      *      *
1 ON    *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON    *      * ON    *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 ***** 2 ***** 3 ***** 4 ***
*      *      *      *      *
1      * ON    * ON    * ON    *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON    * ON    *
*      *      *      *      *
*****

```


PALEX-93

TIME: 1000
SCENARIO TIME: 0130MESSAGE No: 12ANNUNCIATOR DISPLAYS

K-11

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	ON	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
5 ON	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
ON	*	ON	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-13

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	** 13	**
*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
2 ON	ON	*	*	*	*	ON	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
3 ON	*	*	*	*	*	ON	*	*	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	ON	ON	ON	ON	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1000
SCENARIO TIME: 0130MESSAGE No: 12ANNUNCIATOR DISPLAYS

K-33

```
** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
```

K-34

```
** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
```

K-35

```
** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
```

Scenario: PALEX-93

Time: 1015

Message No: 13

Scenario Time: 0145

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

SFP level continues to recover at approximately 2 inches per minute. See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

As SFP radiation levels decrease, develop strategies to:

1. Capture the damaged SFHM mast and hoist box containing the fuel bundle.
2. Restore SFP cooling in an orderly fashion.

Date OCTOBER 26, 1993Message # 13

(Page 1)

Time 1015
Time JumpScenario Time 0145
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105.</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u> Loop 2 (TR-0121) <u>119</u>		
Pressurizer Level (R) LRC-0101A	<u>100</u> % LRC-0101B <u>100</u> %	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		NI-03	<u>.82E-08</u>
		NI-07	<u>.12E-07</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u> P-8B <u>OFF</u> P-8C <u>OFF</u>	AFW Pump Amps P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure <u>0.</u> psig	AFW Disch Press P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u> MOV-0510 <u>CLOSED</u>	MSIV's CV-0501 <u>CLOSED</u> CV-0510 <u>CLOSED</u>
MFP Suction Pressure <u>15.</u> psig	MFP Discharge Pressure A <u>15.</u> B <u>15.</u> psi
Moisture Separator Drain Tank Level <u>26.</u> %	Condenser Hotwell Level <u>70.</u> %
Atmospheric Dump Valves <u>CLOSED</u>	Condenser Vacuum <u>0.</u> in Hg.
Heater Drain Pump Status P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum <u>14.2</u> in Hg.
	Condensate Pump Status P-2A <u>OFF</u> P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u> GP7(B) <u>0.</u>			
Stuck Rods <u>NONE</u> # <u>0</u>			

C-13

T-81 Level	<u>90.</u> %	T-939 Level	<u>93.</u> %	Condensate Storage Tank Level T-2	<u>89.</u> %
Instrument Air Pressure	<u>100</u> psig			Dome Temperature	<u>102</u> F
Containment Building Pressure	<u>-5.</u> psig			Temperature	<u>102</u> F
S/G A Compartment				Temperature	<u>93.</u> F
S/G B Compartment				Humidity	<u>29.</u> %
SIRW Tank Level	<u>0.</u> %			Humidity	<u>30.</u> %
WR Containment Pressure (R)	<u>9.</u> psia				
Containment Sump Level	<u>585</u> %			Containment Water Level (R)	<u>0.</u> %
SI Tank Level (%)	A <u>40.</u>	B <u>39.</u>	C <u>39.</u>	D <u>39.</u>	
SI Tank Pressure (psig)	A <u>149</u>	B <u>149</u>	C <u>149</u>	D <u>150</u>	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	<u>100.</u> %	T53B	<u>10.6</u> %
Reactor Vessel DP			<u>16.8</u> psid		
PORV Discharge Temperature			<u>112</u> F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	<u>127</u>	RV-1040	<u>142</u>
PCP Current (Amps)	P-50A	P-50B	<u>667</u>	P-50C	<u>678</u>
PCS Flow	<u>34.</u> %	Pressure Level (cold)	<u>96.6</u> %	P-50D	<u>0.</u>
Loop Thot (F)	Loop 1 <u>120</u>	Loop 2 <u>120</u>			
Loop Tcold (F)	Loop 1 <u>119</u>	Loop 2 <u>120</u>			
Tcold Wide range	Loop 1 <u>120</u>	Loop 2 <u>119</u>			
Subcooling	Temp <u>281</u> F	Press <u>247</u> psi			
PCS Prssure	WR <u>249.</u>	NR <u>249.</u> psia			
Level	Steam Generator A		Steam Generator B		
Press	(WR) <u>90.</u> %	(NR) <u>90.</u> %	(WR) <u>87.</u> %	(NR) <u>87.</u> %	
Flow	Steam <u>1.</u> psia	Feed <u>0</u> PPH	Steam <u>13.</u> psia	Feed <u>0</u> PPH	
	Steam <u>0</u> PPH	Note: Steam and Feed Flow X 1000000	Steam <u>0</u> PPH	Feed <u>0</u> PPH	

C-11

AFW Flow to A S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
AFW Flow to B S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
Condenser Vacuum (R)		<u>0.</u>		
PCP Seal Leakoff Flow	P-50A	<u>1.0</u> PPH	P-50B	<u>1.0</u> PPH
			P-50C	<u>1.0</u> PPH
			P-50D	<u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1	<u>60.</u>	1-2	<u>0</u>
1-C BUS	Voltage	<u>2433</u>	Amps	<u>494</u>
1-D BUS	Voltage	<u>2482</u>	Amps	<u>45.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	<u>.2E-01</u>	RIA-1806	<u>.2E-01</u>
	RIA-1807	<u>.2</u>	RIA-1808	<u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321	<u>.1E-01</u>	RIA-2322	<u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R	<u>0.</u>	AI-2401L	<u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324	<u>.3E+02</u>	RIA-2323	<u>.2E+02</u>
Stack Monitors	RIA-2325	<u>???</u> cpm	RIA-2326	<u>0</u> cpm
			RIA-2327	<u>0</u> mr/hr

TIME: 1015
SCENARIO TIME: 0145

MESSAGE No: 13

ANNUNCIATOR DISPLAYS

K-01

K-02

** 1	** 2	*** 3	*** 4	*** 5	*** 6	*** 7	*** 8	*** 9	*** 10	*** 11	*** 12	***
1	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

7	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

8	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

9	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

10	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

11	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

12	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1015
SCENARIO TIME: 0145MESSAGE No: 13ANNUNCIATOR DISPLAYS

K-03

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1015
SCENARIO TIME: 0145MESSAGE No: 13ANNUNCIATOR DISPLAYS

K-06A

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1          *          * ON        *          *
*          *          *          *          *
*****
*          *          *          *          *
2          *          * ON        *          *
*          *          *          *          *
*****

```

K-06B

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1          * ON        * ON        *          *
*          *          *          *          *
*****
*          *          *          *          *
2          * ON        * ON        *          *
*          *          *          *          *
*****

```

K-06C

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1 ON        *          *          *          *
*          *          *          *          *
*****
*          *          *          *          *
2 ON        *          * ON        *          *
*          *          *          *          *
*****

```

K-06D

```

** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1          * ON        * ON        * ON        *
*          *          *          *          *
*****
*          *          *          *          *
2          *          * ON        * ON        *
*          *          *          *          *
*****

```


TIME: 1015
SCENARIO TIME: 0145

ANNUNCIATOR DISPLAYS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	ON					ON							
2	ON	ON				ON							
3	ON					ON					ON		
4		ON	ON	ON	ON								
5													
		ON	ON	ON	ON					ON			

PALEX-93

TIME: 1015
SCENARIO TIME: 0145MESSAGE No: 13ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 1015
SCENARIO TIME: 0145MESSAGE No: 13ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ***
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      * ON *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 1030

Message No: 14

Scenario Time: 0200

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

SFP level continues to recover at approximately 2 inches per minute. See Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

Date OCTOBER 26, 1993Message # 14

(Page 1)

Time 1030
Time JumpScenario Time 0200
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u> CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		NI-03	<u>.82E-08</u>
		NI-07	<u>.12E-07</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>		AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig			AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>
Stuck Rods <u>NONE</u> # <u>0</u>		GP4 <u>0</u>	GP5(P) <u>1.</u>
		GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	<u>90.</u> %	T-939 Level	<u>93.</u> %	Condensate Storage Tank Level T-2	<u>89.</u> %
Instrument Air Pressure	<u>100</u> psig				
Containment Building Pressure	<u>-5.</u> psig			Dome Temperature	<u>102</u> F
S/G A Compartment				Humidity	<u>29.</u> %
S/G B Compartment				Temperature	<u>102</u> F
SIRW Tank Level	<u>0.</u> %			Humidity	<u>30.</u> %
WR Containment Pressure (R)	<u>9.</u> psia			Temperature	<u>93.</u> F
Containment Sump Level	<u>585</u> %			Humidity	<u>30.</u> %
		Containment Water Level (R)	<u>0.</u> %		
SI Tank Level (%)	A <u>40.</u>	B <u>39.</u>	C <u>39.</u>	D <u>39.</u>	
SI Tank Pressure (psig)	A <u>149</u>	B <u>149</u>	C <u>149</u>	D <u>150</u>	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	<u>100.</u> %	T53B	<u>10.6</u> %
Reactor Vessel DP			<u>16.8</u> psid		
PORV Discharge Temperature			<u>112</u> F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	<u>127</u>	RV-1040	<u>142</u>
PCP Current (Amps)	P-50A	P-50B	<u>667</u>	P-50C	<u>678</u>
PCS Flow	<u>34.</u> %	Pressure Level (cold)	<u>96.6</u> %	P-50D	<u>0.</u>
Loop Thot (F)	Loop 1 <u>120</u>	Loop 2 <u>120</u>			
Loop Tcold (F)	Loop 1 <u>119</u>	Loop 2 <u>120</u>			
Tcold Wide range	Loop 1 <u>120</u>	Loop 2 <u>119</u>			
Subcooling	Temp <u>281</u> F	Press <u>247</u> psi			
PCS Prssure	WR <u>249.</u>	NR <u>249.</u> psia			
Level	Steam Generator A		Steam Generator B		
Press	(WR) <u>90.</u> %	(NR) <u>90.</u> %	(WR) <u>87.</u> %	(NR) <u>87.</u> %	
Flow	Steam <u>1.</u> psia	Feed <u>0</u> PPH	Steam <u>13.</u> psia	Feed <u>0</u> PPH	
		Note: Steam and Feed Flow X 1000000			

C-11

AFW Flow to A S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
AFW Flow to B S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
Condenser Vacuum (R)		<u>0.</u>		
PCP Seal Leakoff Flow	P-50A	<u>1.0</u> PPH	P-50B	<u>1.0</u> PPH
			P-50C	<u>1.0</u> PPH
			P-50D	<u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1	<u>60.</u>	1-2	<u>0</u>
1-C BUS	Voltage	<u>2433</u>	Amps	<u>494</u>
1-D BUS	Voltage	<u>2482</u>	Amps	<u>45.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	<u>.2E-01</u>	RIA-1806	<u>.2E-01</u>
	RIA-1807	<u>.2</u>	RIA-1808	<u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321	<u>.1E-01</u>	RIA-2322	<u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R	<u>0.</u>	AI-2401L	<u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324	<u>.3E+02</u>	RIA-2323	<u>.2E+02</u>
Stack Monitors	RIA-2325	<u>???</u> cpm	RIA-2326	<u>0</u> cpm
			RIA-2327	<u>0</u> mr/hr

MESSAGE No: 14

K-01

	* * 1	* * * * 2	* * * 3	* * * * 4	* * * 5	* * * * 6	* * * 7	* * * * 8	* * * 9	* * * 10	* * 11	* * * 12	* *
1	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

4	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

6	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1030
SCENARIO TIME: 0200MESSAGE No: 14ANNUNCIATOR DISPLAYS

K-03

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1030
SCENARIO TIME: 0200MESSAGE No: 14ANNUNCIATOR DISPLAYS

K-06A

** 1	** 2	** 3	** 4	**
1	*	* ON	*	*
2	*	* ON	*	*

K-06B

** 1	** 2	** 3	** 4	**
1	* ON	* ON	*	*
2	* ON	* ON	*	*

K-06C

** 1	** 2	** 3	** 4	**
1 ON	*	*	*	*
2 ON	*	* ON	*	*

K-06D

** 1	** 2	** 3	** 4	**
1	* ON	* ON	* ON	*
2	*	* ON	* ON	*

TIME: 1030
SCENARIO TIME: 0200

ANNUNCIATOR DISPLAYS

[illegible]

MESSAGE No: 14

ANNUNCIATOR DISPLAYS

K-11

K-13

[illegible]

PALEX-93

TIME: 1030
SCENARIO TIME: 0200MESSAGE No: 14ANNUNCIATOR DISPLAYS

K-33

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
* * * * *
1 * * * * *
* * * * *

* * * * *
2 * * * * *
* * * * *

* * * * *
3 * * * * *
* * * * *

* * * * *
4 * * * * *
* * * * *

K-34

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
* * * * *
1 * * * * *
* * * * *

* * * * *
2 * * * * *
* * * * *

K-35

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
* * * * *
1 * * * * *
* * * * *

* * * * *
2 * * * * *
* * * * *

* * * * *
3 * * * * *
* * * * *

* * * * *
4 * * * * *
* * * * *

* * * * *
5 * * * * *
* * * * *

Scenario: PALEX-93

Time: 1045

Message No: 15

Scenario Time: 0215

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

The SFP has been refilled to above the SFP Cooling Pumps suction connection (645'). See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

High radiation levels will occur in the SFP Heat Exchanger Room and adjacent areas of the Auxiliary Building when SFP Cooling Pump P-51B is started.

Action expected:

Place SFP on recirc per SOP 27.

C-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>
	CV-3031 (SIRW) <u>CLOSED</u>
	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>	<u>Charging</u>
Intermediate Press Letdown Temp	Flow <u>40.</u> gpm
Letdown Line Temp	Line Temp <u>91.</u> F
Letdown Flow	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia				
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>		
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>		
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>	Block Valve MOV-1042A	<u>OPEN</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>	P-50C	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>	NI-03	<u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>	NI-07	<u>.12E-07</u>
				NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>			
AFW Pump P-8B Steam Pressure	<u>0.</u> psig				
		AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>	
		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u>	psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>	
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u>	psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %		
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.		
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.		
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>	

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>			Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>
Stuck Rods <u>NONE</u> # <u>0</u>				GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure	100 psig			Dome Temperature	102 F
Containment Building Pressure	-5. psig			Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level	0. %			Temperature	93. F
WR Containment Pressure (R)	9. psia			Humidity	30. %
Containment Sump Level	585 %			Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.	B 39.	C 39.	D 39.	
SI Tank Pressure (psig)	A 149	B 149	C 149	D 150	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow	0. %	Pressure Level (cold)	96.6 %	RV-1041	177
Loop Thot (F)	Loop 1	Loop 2	120	P-50D	0.
Loop Tcold (F)	Loop 1	Loop 2	120		
Tcold Wide range	Loop 1	Loop 2	119		
Subcooling	Temp	Press	247 psi		
PCS Prssure	WR	NR	249. psia		
Level	Steam Generator A	Steam Generator B			
Press	(WR) 90. %	(NR) 90. %	(WR) 87. %	(NR) 87. %	
Flow	Steam 1. psia	Feed 0 PPH	Steam 13. psia	Feed 0 PPH	
	0 PPH		0 PPH	0 PPH	
		Note: Steam and Feed Flow	X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	.0 cpm
			RIA-2327	.0 mr/hr

TIME: 1045
SCENARIO TIME: 02/5

ANNUNCIATOR DISPLAYS

[illegible][illegible]

PALEX-93

TIME: 1045
SCENARIO TIME: 0215MESSAGE No: 15ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

* * * * *

PALEX-93

TIME: 1045
SCENARIO TIME: 0245MESSAGE No: 15ANNUNCIATOR DISPLAYS

K-06A

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	*	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	*	*
*	*	*	*	*

K-06B

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	* ON	* ON	*	*
*	*	*	*	*

K-06C

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1 ON	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2 ON	*	* ON	*	*
*	*	*	*	*

K-06D

** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	* ON	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	* ON	*
*	*	*	*	*

PALEX-93

TIME: 1045
SCENARIO TIME: 0215

MESSAGE No: 15

ANNUNCIATOR DISPLAYS

K-11

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1	*	*	*	*	*	ON	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	*	*	*	ON	*
5	ON	*	*	*	*	*	*	*	*	*	ON	*
6	ON	*	ON	*	*	*	*	ON	*	*	*	*

K-13

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	** 13	**
1	ON	*	*	*	*	ON	*	*	*	*	*	*	*
2	ON	ON	*	*	*	ON	*	*	*	*	*	*	*
3	ON	*	*	*	*	ON	*	*	*	*	ON	*	*
4	*	ON	ON	ON	ON	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	ON	ON	ON	ON	*	*	*	*	ON	*	*	*

PALEX-93

TIME: 1045
SCENARIO TIME: 0215MESSAGE No: 15ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 1045
SCENARIO TIME: 0215MESSAGE No: 15ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      * ON *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

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Scenario: PALEX-93

Time: 1053

Message No: 16

Scenario Time: 0223

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

SFP Cooling Pump P-51B has been started and appears to be operating normally.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

Expedite repairs to the alternate pump P-51A.

C-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>OFF</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u> CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia				
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>		
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>		
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>	Block Valve MOV-1042A	<u>OPEN</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>	P-50C	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>	NI-03	<u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>	NI-07	<u>.12E-07</u>
				NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)						
Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature			<u>120.0</u> F	
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>
Stuck Rods <u>NONE</u> # <u>0</u>					GP7(B) <u>0.</u>	

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure	100 psig			Dome Temperature	102 F
Containment Building Pressure	-5. psig			Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level	0. %			Temperature	93. F
WR Containment Pressure (R)	9. psia			Humidity	30. %
Containment Sump Level	585 %			Containment Water Level (R)	0. %
SI Tank Level (%)	A 40.	B 39.	C 39.	D 39.	
SI Tank Pressure (psig)	A 149	B 149	C 149	D 150	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow	0. %	Pressure Level (cold)	96.6 %	P-50D	0.
Loop Thot (F)	Loop 1	Loop 2	120		
Loop Tcold (F)	Loop 1	Loop 2	120		
Tcold Wide range	Loop 1	Loop 2	119		
Subcooling	Temp	Press	247 psi		
PCS Prssure	WR	NR	249. psia		
Level	Steam Generator A (WR)	(NR)	90. %	Steam Generator B (WR)	87. %
Press	1. psia	Feed	0. PPH	Steam	0. PPH
Flow	Steam	0. PPH		Feed	0. PPH
		Note:	Steam and Feed Flow X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	0. cpm
			RIA-2327	0. mr/hr

MESSAGE No: 16

K-01

1	2	3	4	5	6	7	8	9	10	11	12
1	ON			ON			CN	ON			
2			ON				CN	ON			
3									ON	ON	
4	ON						ON		ON		
5	ON								ON		
6							ON	ON	ON	ON	ON

	**	1	**	2	**	3	**	4	**	5	**	6	**	7	**	8	**	9	**	10	**	11	**	12	**
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1053
SCENARIO TIME: 0223MESSAGE No: 16ANNUNCIATOR DISPLAYS

K-03

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **
*      *      *      *      *      *      *
1 ON  * ON  *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2 ON  *      * ON  *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
3      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      * ON  *      *      *
*      *      *      *      *      *      *
*****
*      *      *      * ON  *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
6      * ON  *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-05

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3 ON  *      *      *      *      *      *      *      *      * ON  *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      * ON  *      *      * ON  *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
5 ON  *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
6      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

PALEX-93

TIME: 1053
SCENARIO TIME: 0223MESSAGE No: 16ANNUNCIATOR DISPLAYSK-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

PALEX-93

TIME: 1053
SCENARIO TIME: 0223MESSAGE No: 16ANNUNCIATOR DISPLAYS

K-37

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12
*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	ON	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	ON	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	CN	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

K-09

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12
*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	ON	*	ON	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
5	*	ON	*	*	*	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

MESSAGE No: 16

ANNUNCIATOR DISPLAYS

K-11

**	1	**	2	**	3	**	4	**	5	**	6	**	7	**	8	**	9	**	10	**	11	**	12	**
*	*		*		*		*		*		*		*		*		*		*		*		*	
1	*		*		*		*		* ON		*		*		*		*		*		*		*	
*	*		*		*		*		*		*		*		*		*		*		*		*	

*	*		*		*		*		*		*		*		*		*		*		*		*	
2	*		*		*		*		*		*		*		* ON		*		*		*		*	
*	*		*		*		*		*		*		*		*		*		*		*		*	

*	*		*		*		*		*		*		*		*		*		*		*		*	
3	*		*		*		*		*		*		*		*		*		*		*		*	
*	*		*		*		*		*		*		*		*		*		*		*		*	

*	*		*		*		*		*		*		*		*		*		*		*		*	
4 ON	*		*		*		*		* ON		*		*		*		*		*		*		* ON	
*	*		*		*		*		*		*		*		*		*		*		*		*	

*	*		*		*		*		*		*		*		*		*		*		*		*	
5 ON	*		*		*		*		*		*		*		*		*		*		*		* ON	
*	*		*		*		*		*		*		*		*		*		*		*		*	

*	*		*		*		*		*		*		*		*		*		*		*		*	
ON	*		* ON		*		*		*		*		*		* ON		*		*		*		*	
*	*		*		*		*		*		*		*		*		*		*		*		*	

K-13

1	2	3	4	5	6	7	8	9	10	11	12	13
1	ON					ON						
2	ON	ON				ON						
3	ON					ON					ON	
4		ON	ON	ON	ON							
5												
		ON	ON	ON	ON					ON		

PALEX-93

TIME: 1053
SCENARIO TIME: 0223MESSAGE No: 16ANNUNCIATOR DISPLAYS

K-21

** 1	**** 2	**** 3	**** 4	**** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	**** 2	**** 3	**** 4	**** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 1053
SCENARIO TIME: 0223MESSAGE No: 16ANNUNCIATOR DISPLAYS

K-33

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****	7 ****	8 ****	9 ****	10 ****
1	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*

7	*	*	*	*	*	*	*	*	*
8	*	*	*	*	*	*	*	*	*

9	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*

K-34

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****
1	*	*	*	*	*
2	*	*	*	*	*

3	*	*	*	*	*
4	*	*	*	*	*

K-35

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****	7 ****
1	*	*	*	*	*	*
2	*	*	*	*	*	*

3	*	*	*	*	*	*
4	*	*	*	*	*	*

5	*	*	*	*	*	*
6	*	*	*	*	*	*

7	*	*	*	*	*	*
8	*	*	*	*	*	*

9	*	*	*	*	*	*
10	*	*	*	*	*	*

Scenario: PALEX-93

Time: 1100

Message No: 17

Scenario Time: 0230

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

Continue efforts to capture the damaged SFHM equipment and increase SFP boron concentration.

Date OCTOBER 26, 1993Message # 17

(Page 1)

Time 1100
Time JumpScenario Time 0230
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u> CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u> GP7(B) <u>0.</u>		
Stuck Rods <u>NONE</u>	# <u>0</u>		

C-13

T-81 Level <u>90.</u> %	T-939 Level <u>93.</u> %	Condensate Storage Tank Level T-2 <u>89.</u> %
Instrument Air Pressure <u>100</u> psig		
Containment Building Pressure <u>-5.</u> psig		
S/G A Compartment		Dome Temperature <u>102</u> F Humidity <u>29.</u> %
S/G B Compartment		Temperature <u>102</u> F Humidity <u>30.</u> %
SIRW Tank Level <u>0.</u> %		Temperature <u>93.</u> F Humidity <u>30.</u> %
WR Containment Pressure (R) <u>9.</u> psia		
Containment Sump Level <u>585</u> %		Containment Water Level (R) <u>0.</u> %
SI Tank Level (%) A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig) A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels	T53A <u>100.</u> %	T53B <u>10.6</u> %
Reactor Vessel DP	<u>16.8</u> psid	
PORV Discharge Temperature	<u>112</u> F	
Pzr Safety Valve Discharge Temp (F)	RV-1039 <u>127</u>	RV-1040 <u>142</u> RV-1041 <u>177</u>
PCP Current (Amps) P-50A <u>0.</u>	P-50B <u>667</u>	P-50C <u>678</u> P-50D <u>0.</u>
PCS Flow <u>34.</u> %	Pressure Level (cold) <u>96.6</u> %	
Loop Thot (F) Loop 1 <u>120</u>	Loop 2 <u>120</u>	
Loop Tcold (F) Loop 1 <u>119</u>	Loop 2 <u>120</u>	
Tcold Wide range Loop 1 <u>120</u>	Loop 2 <u>119</u>	
Subcooling Temp <u>281</u> F	Press <u>247</u> psi	
PCS Pressure WR <u>249.</u>	NR <u>249.</u> psia	
Level	Steam Generator A (WR) <u>90.</u> %	Steam Generator B (WR) <u>87.</u> %
Press	(NR) <u>90.</u> %	(NR) <u>87.</u> %
Flow	Steam <u>1.</u> psia	Steam <u>13.</u> psia
	Feed <u>0</u> PPH	Feed <u>0</u> PPH
	Note: Steam and Feed Flow X 1000000	

C-11

AFW Flow to A S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
AFW Flow to B S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
Condenser Vacuum (R)	<u>0.</u>	
PCP Seal Leakoff Flow P-50A <u>1.0</u> PPH	P-50B <u>1.0</u> PPH	P-50C <u>1.0</u> PPH P-50D <u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1 <u>60.</u>	1-2 <u>0</u>
1-C BUS Voltage <u>2433</u>	Amps <u>494</u>	
1-D BUS Voltage <u>2482</u>	Amps <u>45.</u>	

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 <u>.2E-01</u>	RIA-1806 <u>.2E-01</u>
	RIA-1807 <u>.2</u>	RIA-1808 <u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321 <u>.1E-01</u>	RIA-2322 <u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R <u>0.</u>	AI-2401L <u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324 <u>.3E+02</u>	RIA-2323 <u>.2E+02</u>
Stack Monitors	RIA-2325 <u>????</u> cpm	RIA-2326 <u>0</u> cpm RIA-2327 <u>0</u> mr/hr

TIME: 1100
SCENARIO TIME: 0230

ANNUNCIATOR DISPLAYS

[illegible][illegible]

PALEX-93

TIME: 1100
SCENARIO TIME: 0230MESSAGE No: 17ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1100
SCENARIO TIME: 0230MESSAGE No: 17ANNUNCIATOR DISPLAYSK-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

PALEX-93

TIME: 1100
SCENARIO TIME: 0230MESSAGE No: 17ANNUNCIATOR DISPLAYS

K-07

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12
*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	ON	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	ON	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	ON	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

K-09

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12
*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	ON	*	ON	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
5	*	ON	*	*	*	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1100
SCENARIO TIME: 0230MESSAGE No: 17ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 1100
SCENARIO TIME: 0230MESSAGE No: 17ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      * ON *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario: PALEX-93

Time: 1115

Message No: 18

Scenario Time: 0245

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action expected:

Date OCTOBER 26, 1993Message # 18

(Page 1)

Time 1115
Time JumpScenario Time 0245
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>				

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>	
Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps	P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve	MOV-1042A <u>OPEN</u>
			P-50C <u>ON</u>
			MOV-1043A <u>OPEN</u>
			P-50D <u>OFF</u>
			NI-04 <u>.80E-08</u>
			NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	
AFW Pump P-8B Steam Pressure	<u>0.</u> psig	AFW Pump Amps	P-8A <u>0.</u>
		AFW Disch Press	P-8A & P-8B <u>18.</u>
			P-8C <u>0.</u>
			P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)				Core Exit Thermocouple Temperature			
Gross MW <u>0.</u>	Net MW <u>0.</u>	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>
Control Rod Position							GP7(B) <u>0.</u>
Stuck Rods <u>NONE</u>	# <u>0</u>						

C-13

T-81 Level	<u>90.</u> %	T-939 Level	<u>93.</u> %	Condensate Storage Tank Level T-2	<u>89.</u> %
Instrument Air Pressure	<u>100</u> psig			Dome Temperature	<u>102</u> F
Containment Building Pressure	<u>-5.</u> psig			Humidity	<u>29.</u> %
S/G A Compartment				Temperature	<u>102</u> F
S/G B Compartment				Humidity	<u>30.</u> %
SIRW Tank Level	<u>0.</u> %			Temperature	<u>93.</u> F
WR Containment Pressure (R)	<u>9.</u> psia			Humidity	<u>30.</u> %
Containment Sump Level	<u>585</u> %			Containment Water Level (R)	<u>0.</u> %
SI Tank Level (%)	A <u>40.</u>	B <u>39.</u>	C <u>39.</u>	D <u>39.</u>	
SI Tank Pressure (psig)	A <u>149</u>	B <u>149</u>	C <u>149</u>	D <u>150</u>	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	<u>100.</u> %	T53B	<u>10.6</u> %
Reactor Vessel DP			<u>16.8</u> psid		
PORV Discharge Temperature			<u>112</u> F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	<u>127</u>	RV-1040	<u>142</u>
PCP Current (Amps)	P-50A	P-50B	<u>667</u>	P-50C	<u>678</u>
PCS Flow	<u>34.</u> %	Pressure Level (cold)	<u>96.6</u> %	P-50D	<u>0.</u>
Loop Thot (F)	Loop 1 <u>120</u>	Loop 2 <u>120</u>			
Loop Tcold (F)	Loop 1 <u>119</u>	Loop 2 <u>120</u>			
Tcold Wide range	Loop 1 <u>120</u>	Loop 2 <u>119</u>			
Subcooling	Temp <u>281</u> F	Press <u>247</u> psi			
PCS Prssure	WR <u>249.</u>	NR <u>249.</u> psia			
Level	Steam Generator A	(NR)	<u>90.</u> %	Steam Generator B	(NR)
Press	(WR) <u>90.</u> %			(WR) <u>87.</u> %	
Flow	Steam <u>1.</u> psia	Feed <u>0.</u> PPH		Steam <u>13.</u> psia	Feed <u>0.</u> PPH
	Steam <u>0.</u> PPH	Note: Steam and Feed Flow X 1000000		Steam <u>0.</u> PPH	Feed <u>0.</u> PPH

C-11

AFW Flow to A S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
AFW Flow to B S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
Condenser Vacuum (R)		<u>0.</u>		
PCP Seal Leakoff Flow	P-50A	<u>1.0</u> PPH	P-50B	<u>1.0</u> PPH
			P-50C	<u>1.0</u> PPH
			P-50D	<u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1	<u>60.</u>	1-2	<u>0.</u>
1-C BUS	Voltage	<u>2433</u>	Amps	<u>494</u>
1-D BUS	Voltage	<u>2482</u>	Amps	<u>45.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	<u>.2E-01</u>	RIA-1806	<u>.2E-01</u>
	RIA-1807	<u>.2</u>	RIA-1808	<u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321	<u>.1E-01</u>	RIA-2322	<u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R	<u>0.</u>	AI-2401L	<u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324	<u>.3E+02</u>	RIA-2323	<u>.2E+02</u>
Stack Monitors	RIA-2325	<u>???</u> cpm	RIA-2326	<u>0.</u> cpm
			RIA-2327	<u>0.</u> mr/hr

PALEX-93

TIME: 1115
SCENARIO TIME: 0245MESSAGE No: 18ANNUNCIATOR DISPLAYS

K-01

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1 ON	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	ON	*	*	*	ON	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	ON	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	ON	*	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	ON	*	*	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	ON	ON	ON	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-02

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
1	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

4	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1115
SCENARIO TIME: 0245

MESSAGE No: 18

ANNUNCIATOR DISPLAYS

K-03

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ***

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ***

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1115
SCENARIO TIME: 0245MESSAGE No: 18ANNUNCIATOR DISPLAYSK-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

TIME: 1115
SCENARIO TIME: 0245

MESSAGE No: 18

ANNUNCIATOR DISPLAYS

K-27

K-09

MESSAGE No: 18

K-11

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12	13
1	ON					ON						
2	ON	ON				ON						
3	ON					ON					ON	
4		ON	ON	ON	ON							
5												
		ON	ON	ON	ON					ON		

PALEX-93

TIME: 1115
SCENARIO TIME: 0245MESSAGE No: 18ANNUNCIATOR DISPLAYS

K-21

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	***** 2	***** 3	***** 4	***** 5	***
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	* ON	* ON	*	*
*	*	*	*	*	*

PALEX-93

TIME: 1115
SCENARIO TIME: 0245

MESSAGE No: 18

ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      * ON *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario No: **PALEX-93**
Message No: **19**

Time: **1130**
Scenario Time: **0300**

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:
See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Date OCTOBER 26, 1993Message # 19

(Page 1)

Time 1130
Time JumpScenario Time 0300
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
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C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u> CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>
Intermediate Press Letdown Temp	<u>98.</u> F	Flow <u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp <u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve MOV-1042A	<u>OPEN</u>
		P-50C	<u>ON</u>
		NI-03	<u>.82E-08</u>
		NI-07	<u>.12E-07</u>
		MOV-1043A	<u>OPEN</u>
		P-50D	<u>OFF</u>
		NI-04	<u>.80E-08</u>
		NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	
AFW Pump P-8B Steam Pressure	<u>0.</u> psig	AFW Pump Amps P-8A <u>0.</u>	P-8C <u>0.</u>
		AFW Disch Press P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in Hg.
Heater Drain Pump Status P-10A <u>OFF</u>	P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.
		Condensate Pump Status P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)		Core Exit Thermocouple Temperature	<u>120.0</u> F
Gross MW <u>0.</u>	Net MW <u>0.</u>	GP1 <u>0.</u>	GP2 <u>0.</u>
Control Rod Position		GP3 <u>0.</u>	GP4 <u>0.</u>
Stuck Rods <u>NONE</u>	# <u>0</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>
		GP7(B) <u>0.</u>	

C-13

T-81 Level <u>90.</u> %	T-939 Level <u>93.</u> %	Condensate Storage Tank Level T-2 <u>89.</u> %
Instrument Air Pressure <u>100</u> psig		
Containment Building Pressure <u>-5.</u> psig		
S/G A Compartment		Dome Temperature <u>102</u> F Humidity <u>29.</u> %
S/G B Compartment		Temperature <u>102</u> F Humidity <u>30.</u> %
SIRW Tank Level <u>0.</u> %		Temperature <u>93.</u> F Humidity <u>30.</u> %
WR Containment Pressure (R) <u>9.</u> psia		
Containment Sump Level <u>585</u> %		Containment Water Level (R) <u>0.</u> %
SI Tank Level (%) A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig) A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels	T53A <u>100.</u> %	T53B <u>10.6</u> %
Reactor Vessel DP	<u>16.8</u> psid	
PORV Discharge Temperature	<u>112</u> F	
Pzr Safety Valve Discharge Temp (F)	RV-1039 <u>127</u>	RV-1040 <u>142</u> RV-1041 <u>177</u>
PCP Current (Amps) P-50A <u>0.</u>	P-50B <u>667</u>	P-50C <u>678</u> P-50D <u>0.</u>
PCS Flow <u>34.</u> %	Pressure Level (cold) <u>96.6</u> %	
Loop Thot (F) Loop 1 <u>120</u>	Loop 2 <u>120</u>	
Loop Tcold (F) Loop 1 <u>119</u>	Loop 2 <u>120</u>	
Tcold Wide range Loop 1 <u>120</u>	Loop 2 <u>119</u>	
Subcooling Temp <u>281</u> F	Press <u>247</u> psi	
PCS Pressure WR <u>249.</u>	NR <u>249.</u> psia	
Level	Steam Generator A (WR) <u>90.</u> %	(NR) <u>90.</u> %
Press	<u>1.</u> psia	Steam Generator B (WR) <u>87.</u> %
Flow	Steam <u>.0</u> PPH	(NR) <u>87.</u> %
	Feed <u>.0</u> PPH	Steam <u>.0</u> PPH
	Note: Steam and Feed Flow X 1000000	Feed <u>.0</u> PPH

C-11

APW Flow to A S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
APW Flow to B S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
Condenser Vacuum (R)	<u>0.</u>	
PCP Seal Leakoff Flow	P-50A <u>1.0</u> PPH	P-50B <u>1.0</u> PPH
	P-50C <u>1.0</u> PPH	P-50D <u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1 <u>60.</u>	1-2 <u>.0</u>
1-C BUS Voltage	<u>2433</u>	Amps <u>494</u>
1-D BUS Voltage	<u>2482</u>	Amps <u>45.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 <u>.2E-01</u>	RIA-1806 <u>.2E-01</u>
	RIA-1807 <u>.2</u>	RIA-1808 <u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321 <u>.1E-01</u>	RIA-2322 <u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R <u>0.</u>	AI-2401L <u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324 <u>.3E+02</u>	RIA-2323 <u>.2E+02</u>
Stack Monitors	RIA-2325 <u>????</u> cpm	RIA-2326 <u>.0</u> cpm
		RIA-2327 <u>.0</u> mr/hr

PALEX-93

TIME: 1130
SCENARIO TIME: 0300MESSAGE No: 19ANNUNCIATOR DISPLAYS

K-01

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	**** 10	**** 11	**** 12	**
1 ON	*	*	*	ON	*	*	ON	ON	*	*	*	*

2	*	*	ON	*	*	*	ON	ON	*	*	*	*

3	*	*	*	*	*	*	*	*	ON	ON	*	*

4	ON	*	*	*	*	*	ON	*	ON	*	*	*

5	ON	*	*	*	*	*	*	*	ON	*	*	*

	*	*	*	*	*	*	ON	ON	ON	ON	ON	*

K-02

** 1	**** 2	**** 3	**** 4	**** 5	**** 6	**** 7	**** 8	**** 9	**** 10	**** 11	**** 12	**
1	*	*	*	*	*	*	*	*	*	*	*	*

2	*	*	*	*	*	*	*	*	*	*	*	*

3	*	*	*	*	*	*	*	*	*	*	*	*

4	*	*	*	*	*	*	*	*	*	*	*	*

5	*	*	*	*	*	*	*	*	*	*	*	*

	*	*	*	*	*	*	*	*	*	*	*	*

PALEX-93

TIME: 1130
SCENARIO TIME: 0300MESSAGE No: 19ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

* * * * *

PALEX-93

TIME: 1130
SCENARIO TIME: 0300MESSAGE No: 19ANNUNCIATOR DISPLAYSK-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

PALEX-93

TIME: 1130
SCENARIO TIME: 0300MESSAGE No: 19ANNUNCIATOR DISPLAYS

K-27

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****	7 ****	8 ****	9 ****	10 ****	11 ****	12 ****
*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	ON	*	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	ON	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	ON	*	*	ON	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	ON	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

K-09

** 1 ****	2 ****	3 ****	4 ****	5 ****	6 ****	7 ****	8 ****	9 ****	10 ****	11 ****	12 ****
*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	ON	*	ON	ON
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
5	*	ON	*	*	*	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*

MESSAGE No: 19

K-11

	1	2	3	4	5	6	7	8	9	10	11	12	
1	*	*	*	*	*	ON	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	ON	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	*	*	*	*	ON	*
5	ON	*	*	*	*	*	*	*	*	*	*	ON	*
	ON	*	ON	*	*	*	*	ON	*	*	*	*	*

K-13

1	2	3	4	5	6	7	8	9	10	11	12	13
1	ON					ON						
2	ON	ON				ON						
3	ON					ON					ON	
4		ON	ON	ON	ON							
5												
6		ON	ON	ON	ON					ON		

PALEX-93

TIME: 1130
SCENARIO TIME: 0300MESSAGE No: 19ANNUNCIATOR DISPLAYS

K-21

** 1	** 2	** 3	** 4	** 5	**
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	*	*	*
*	*	*	*	*	*

K-22

** 1	** 2	** 3	** 4	** 5	**
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
3	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
4	*	*	ON	ON	*
*	*	*	*	*	*

PALEX-93

TIME: 1130
SCENARIO TIME: 0300MESSAGE No: 19ANNUNCIATOR DISPLAYS

K-33

```
* 1 ***** 2 ***** 3 ***** 4 ***** 5 ***** 6 ***** 7 ***** 8 ***** 9 ***** 10 *****
*
*
1 *
*****
*
2 *
*****
*
3 *
*****
*
4 *
*****
*
*
*****
```

K-34

```
** 1 ***** 2 ***** 3 ***** 4 ***** 5 ***** 6 *****
*
1 *
*****
*
2 *
*****
*
*****
```

K-35

```
** 1 ***** 2 ***** 3 ***** 4 ***** 5 ***** 6 ***** 7 *****
*
1 *
*****
*
2 *
*****
*
3 *
*****
*
4 *
*****
*
5 *
*****
*
*****
```

Scenario No: **PALEX-93**
Message No: **20**

Time: **1200**
Scenario Time: **0315**

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:
See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Date OCTOBER 26, 1993Message # 20

(Page 1)

Time 1145
Time JumpScenario Time 0315
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>	<u>Charging</u>
Intermediate Press Letdown Temp	Flow <u>40.</u> gpm
Letdown Line Temp	Line Temp <u>91.</u> F
Letdown Flow	Pumps P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102.</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
--------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	NI-03 <u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	NI-07 <u>.12E-07</u>
		Block Valve	MOV-1042A <u>OPEN</u>
			MOV-1043A <u>OPEN</u>
			P-50C <u>ON</u>
			P-50D <u>OFF</u>
			NI-04 <u>.80E-08</u>
			NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>0.</u> in-Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)								
Gross MW <u>0.</u>	Net MW <u>0.</u>	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
Control Rod Position								
Stuck Rods <u>NONE</u>	# <u>0</u>							

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure		100 psig		Dome Temperature	102 F
Containment Building Pressure		-5. psig		Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level		0. %		Temperature	93. F
WR Containment Pressure (R)		9. psia		Humidity	30. %
Containment Sump Level		585 %		Containment Water Level (R)	0. %
SI Tank Level (%)	A	40.	B	39.	C
SI Tank Pressure (psig)	A	149	B	149	C
				D	39.
				D	150

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP		16.8 psid			
PORV Discharge Temperature		112 F			
Pzr Safety Valve Discharge Temp (F)		RV-1039 127		RV-1040 142	RV-1041 177
PCP Current (Amps)	P-50A	0.		P-50C 678	P-50D 0.
PCS Flow		34. %		Pressure Level (cold)	96.6 %
Loop Thot (F)	Loop 1	120		Loop 2 120	
Loop Tcold (F)	Loop 1	119		Loop 2 120	
Tcold Wide range	Loop 1	120		Loop 2 119	
Subcooling	Temp	281 F		Press 247 psi	
PCS Pssure	WR	249.		NR 249. psia	
Level	Steam Generator A			Steam Generator B	
Press	(WR)	90. %	(NR)	90. %	(WR)
Flow	Steam	1. psia	Feed	0. PPH	Steam
			Note: Steam and Feed Flow	X 1000000	

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	.0 cpm
			RIA-2327	.0 mr/hr

MESSAGE No: 20

K-01

1	2	3	4	5	6	7	8	9	10	11	12
1	ON			ON			ON	ON			
2			ON				ON	ON			
3									ON	ON	
4	ON						ON		ON		
5	ON								ON		
6							ON	ON	ON	ON	ON

PALEX-93

TIME: 1145
SCENARIO TIME: 0315MESSAGE No: 20ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

1 ON * ON * * * *

2 ON * * ON * * *

3 * * * * *

* * * * *

4 * * * ON * * *

* * * * *

5 * * * ON * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

2 * * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

5 ON * * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1145
SCENARIO TIME: 0315MESSAGE No: 20ANNUNCIATOR DISPLAYS

K-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

MESSAGE No: 20
504-1733
B. McCabe, OEDO
Contact:

ANNUNCIATOR DISPLAYS

James L. Blaha
Assistant for Operations, OEDO

James L. Blaha

K-27

[illegible]

Office of Administration
Items of Interest
Week Ending November 26, 1993

Significant FOIA Requests Received by the NRC For 4-Day Period of November 19
- November 24, 1993

Request for copies of the transcript, meeting minutes and written comments obtained from the Advisory Committee on Medical Use of Isotopes meeting held November 1-2, 1993. (Hal Siegel, Hybritech Incorporated, FOIA-93-612)

Request for records regarding the final Table S-3 and the Draft Environmental Statements and Regulatory Guides. (Michaela Noble, FOIA-93-613)

TIME: 1145
SCENARIO TIME: 0315

MESSAGE No: 20
NOVEMBER 26, 1993

ANNUNCIATOR DISPLAYS

K-21

1	2	3	4	5
1	*	*	*	*
2	*	*	*	*
3	*	*	*	*
4	*	*	*	*
5	*	*	*	*

K-22

1	2	3	4	5
1	*	*	*	*
2	*	*	*	*
3	*	*	*	*
4	*	*	*	*
5	*	*	*	*

The Office of International Programs submitted a request to the Office of Information Resources Management to provide Japan's Ministry of International Trade and Industry a copy of the NRC MACCS-1.5 (Reactor Accident Consequence) computer code. The code version requested operates on an IBM mainframe computer. The latest version, MACCS-1.5.11.1, operates on a microcomputer. ESTSC will provide the code and will inquire as to which platform version would best suite the requestor's need.

Energy Science and Technology Software Center (ESTSC)

Office of Information Resources Management
Items of Interest
Week Ending November 19, 1993

Office of Personnel ;
Items of Interest
Week Ending November 26, 1993

Courses Offered for SES and Supervisory Development Program Participants

From November 15-19, 1993, participants in the SES Candidate Development Program and the NRC Supervisory Development Program attended two special courses: a two-day EEO for Managers and Supervisors course and a three-day Personnel Management Practices course, which included a half-day workshop on the President's National Performance Review.

Arrivals

KHANNA, Meena	MATERIALS ENGINEER (PFT)	NRR
---------------	--------------------------	-----

Departures

MILLER, Isabelle	REACTOR SYSTEMS ENGINEER (PFT)	NRR
MONREAL, Lynn	OFFICE AUTOMATION ASSISTANT (OPFT)	RIV
ROYACK, Michael	REACTOR INSPECTOR (PFT)	RV

NOVEMBER 26, 1993

ENCLOSURE I

PALEX-93

TIME: 1145
SCENARIO TIME: 0315MESSAGE No: 20ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario No: PALEX-93
Message No: 21

Time: 1200
Scenario Time: 0330

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:
See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Date OCTOBER 26, 1993Message # 21

(Page 1)

Time 1200
Time JumpScenario Time 0330
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps P-55A <u>ON</u>	P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia				
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>		
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %	LIA-0102A	<u>97.</u> %
Pzr Htr Amps LCC 15	<u>0.</u>	LCC 16	<u>0.</u>		
PORV PRV-1042B	<u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>	Block Valve MOV-1042A	<u>OPEN</u>
PCPs P-50A	<u>OFF</u>	P-50B	<u>ON</u>	P-50C	<u>ON</u>
Reactor Power Level NI-01	<u>.18E+02</u>	NI-02	<u>.18E+02</u>	NI-03	<u>.82E-08</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>	NI-07	<u>.12E-07</u>
				NI-08	<u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig	MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %	Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Vacuum	<u>.0</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u> P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
		Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)

Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u> GP2 <u>0.</u> GP3 <u>0.</u>	GP4 <u>0.</u> GP5(P) <u>1.</u> GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
Stuck Rods <u>NONE</u>	# <u>0</u>		

C-13

T-81 Level <u>90.</u> %	T-939 Level <u>93.</u> %	Condensate Storage Tank Level T-2 <u>89.</u> %
Instrument Air Pressure <u>100</u> psig		
Containment Building Pressure <u>-5.</u> psig		
S/G A Compartment		Dome Temperature <u>102</u> F Humidity <u>29.</u> %
S/G B Compartment		Temperature <u>102</u> F Humidity <u>30.</u> %
SIRW Tank Level <u>0.</u> %		Temperature <u>93.</u> F Humidity <u>30.</u> %
WR Containment Pressure (R) <u>9.</u> psia		
Containment Sump Level <u>585</u> %		Containment Water Level (R) <u>0.</u> %
SI Tank Level (%) A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig) A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels	T53A <u>100.</u> %	T53B <u>10.6</u> %
Reactor Vessel DP	<u>16.8</u> psid	
PORV Discharge Temperature	<u>112</u> F	
Pzr Safety Valve Discharge Temp (F)	RV-1039 <u>127</u>	RV-1040 <u>142</u> RV-1041 <u>177</u>
PCP Current (Amps) P-50A <u>0.</u>	P-50B <u>667</u>	P-50C <u>678</u> P-50D <u>0.</u>
PCS Flow <u>34.</u> %	Pressure Level (cold) <u>96.6</u> %	
Loop Thot (F) Loop 1 <u>120</u>	Loop 2 <u>120</u>	
Loop Tcold (F) Loop 1 <u>119</u>	Loop 2 <u>120</u>	
Tcold Wide range Loop 1 <u>120</u>	Loop 2 <u>119</u>	
Subcooling Temp <u>281</u> F	Press <u>247</u> psi	
PCS Prssure WR <u>249.</u>	NR <u>249.</u> psia	
Level	Steam Generator A (WR) <u>90.</u> %	(NR) <u>90.</u> %
Press	<u>1.</u> psia	Steam Generator B (WR) <u>87.</u> %
Flow	Steam <u>0.</u> PPH	(NR) <u>87.</u> %
	Feed <u>0.</u> PPH	Steam <u>13.</u> psia
	Note: Steam and Feed Flow X 1000000	Feed <u>0.</u> PPH

C-11

AFW Flow to A S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
AFW Flow to B S/G	From P-8A&B <u>0.</u>	From P-8C <u>0.</u>
Condenser Vacuum (R)	<u>0.</u>	
PCP Seal Leakoff Flow P-50A <u>1.0</u> PPH	P-50B <u>1.0</u> PPH	P-50C <u>1.0</u> PPH P-50D <u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1 <u>60.</u>	1-2 <u>0.</u>
1-C BUS Voltage <u>2433</u>	Amps <u>494</u>	
1-D BUS Voltage <u>2482</u>	Amps <u>45.</u>	

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805 <u>.2E-01</u>	RIA-1806 <u>.2E-01</u>
	RIA-1807 <u>.2</u>	RIA-1808 <u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321 <u>.1E-01</u>	RIA-2322 <u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R <u>0.</u>	AI-2401L <u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324 <u>.3E+02</u>	RIA-2323 <u>.2E+02</u>
Stack Monitors	RIA-2325 <u>????</u> cpm	RIA-2326 <u>0.</u> cpm
		RIA-2327 <u>0.</u> mr/hr

TIME: 1200
SCENARIO TIME: 0330

ANNUNCIATOR DISPLAYS

[illegible]

★ 1 ★	★ 2 ★	★ 3 ★	★ 4 ★	★ 5 ★	★ 6 ★	★ 7 ★	★ 8 ★	★ 9 ★	★ 10 ★	★ 11 ★	★ 12 ★
★	★	★	★	★	★	★	★	★	★	★	★
1	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
2	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
3	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
4	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
5	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
6	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

PALEX-93

TIME: 1200
SCENARIO TIME: 0330MESSAGE No: 21ANNUNCIATOR DISPLAYS

K-03

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * * *

* * * * *

* * * * *

5 * * * ON * * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

K-05

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1200
SCENARIO TIME: 0330MESSAGE No: 21ANNUNCIATOR DISPLAYS

K-06A

```
*** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1          *          * ON        *          *
*          *          *          *          *
*****
*          *          *          *          *
2          *          * ON        *          *
*          *          *          *          *
*****
```

K-06B

```
*** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1          * ON      * ON      *          *
*          *          *          *          *
*****
*          *          *          *          *
2          * ON      * ON      *          *
*          *          *          *          *
*****
```

K-06C

```
*** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1 ON      *          *          *          *
*          *          *          *          *
*****
*          *          *          *          *
2 ON      *          * ON      *          *
*          *          *          *          *
*****
```

K-06D

```
*** 1 ***** 2 ***** 3 ***** 4 ***
*          *          *          *          *
1          * ON      * ON      * ON      *
*          *          *          *          *
*****
*          *          *          *          *
2          *          * ON      * ON      *
*          *          *          *          *
*****
```

MESSAGE No: 21

X-27

	1	2	3	4	5	6	7	8	9	10	11	12
1	*	*	*	*	*	*	ON	*	*	ON	ON	*
2	*	*	*	*	*	*	ON	*	*	ON	*	*
3	*	*	ON	*	*	ON	*	*	ON	*	*	ON
4	ON	*	*	*	*	ON	*	*	ON	*	*	ON
5	*	*	ON	*	*	*	*	*	ON	*	*	*
6	*	*	*	*	*	*	*	*	ON	*	*	*

K-09

[illegible]

PALEX-93

TIME: 1200
SCENARIO TIME: 0330MESSAGE No: 21ANNUNCIATOR DISPLAYS

K-33

1	2	3	4	5	6	7	8	9	10
*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*

K-34

1	2	3	4	5	6
*	*	*	*	*	*
1	*	*	*	*	*
*	*	*	*	*	*

*	*	*	*	*	*
2	*	*	*	*	*
*	*	*	*	*	*

K-35

1	2	3	4	5	6	7
*	*	*	*	*	*	*
1	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
2	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
3	*	*	*	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
4	*	*	ON	*	*	*
*	*	*	*	*	*	*

*	*	*	*	*	*	*
5	*	*	*	*	*	*
*	*	*	*	*	*	*

Scenario No: PALEX-93

Message No: 22

Time: 1215

Scenario Time: 0345

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:

See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Date OCTOBER 26, 1993Message # 22

(Page 1)

Time 1215
Time JumpScenario Time 0345
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>			
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>	

Safety Injection Suction Supply

Train A		Train B	
CV-3057 (SIRW) <u>CLOSED</u>	CV-3029 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

<u>Letdown</u>		<u>Charging</u>	
Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps	P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psi
-------------------	-------------------------	--------------------	--

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u>	Loop 2 (TR-0121)	<u>119</u>
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps	LCC 15 <u>0.</u>	LCC 16	<u>0.</u>
PORV	PRV-1042B <u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs	P-50A <u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02 <u>.18E+02</u>	
	NI-05 <u>.12E-07</u>	NI-06 <u>.11E-07</u>	
		Block Valve	MOV-1042A <u>OPEN</u>
			P-50C <u>ON</u>
			NI-03 <u>.82E-08</u>
			NI-07 <u>.12E-07</u>
			MOV-1043A <u>OPEN</u>
			P-50D <u>OFF</u>
			NI-04 <u>.80E-08</u>
			NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	
AFW Pump P-8B Steam Pressure	<u>0.</u> psig	AFW Pump Amps	P-8A <u>0.</u>
		AFW Disch Press	P-8A & P-8B <u>18.</u>
			P-8C <u>0.</u>
			P-8C <u>18.</u> psi

Secondary System

MSIV Bypass	MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	
MFP Suction Pressure	<u>15.</u> psig	MSIV's	CV-0501 <u>CLOSED</u>
Moisture Separator Drain Tank Level	<u>26.</u> %	MFP Discharge Pressure	A <u>15.</u>
Atmospheric Dump Valves	<u>CLOSED</u>	Condenser Hotwell Level	<u>70.</u> %
Heater Drain Pump Status	P-10A <u>OFF</u>	Condenser Vacuum	<u>0.</u> in Hg.
	P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.
		Condensate Pump Status	P-2A <u>OFF</u>
			P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)			
Gross MW <u>0.</u>	Net MW <u>0.</u>	Core Exit Thermocouple Temperature	<u>120.0</u> F
Control Rod Position	GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>
Stuck Rods <u>NONE</u>	# <u>0</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>
		GP6(A) <u>0.</u>	GP7(B) <u>0.</u>

C-13

T-81 Level	<u>90.</u> %	T-939 Level	<u>93.</u> %	Condensate Storage Tank Level T-2	<u>89.</u> %
Instrument Air Pressure	<u>100</u> psig			Dome Temperature	<u>102</u> F
Containment Building Pressure	<u>-5.</u> psig			Temperature	<u>102</u> F
S/G A Compartment				Temperature	<u>93.</u> F
S/G B Compartment				Humidity	<u>29.</u> %
SIRW Tank Level	<u>0.</u> %			Humidity	<u>30.</u> %
WR Containment Pressure (R)	<u>9.</u> psia				
Containment Sump Level	<u>585</u> %			Containment Water Level (R)	<u>0.</u> %
SI Tank Level (%)	A <u>40.</u>	B <u>39.</u>	C <u>39.</u>	D <u>39.</u>	
SI Tank Pressure (psig)	A <u>149</u>	B <u>149</u>	C <u>149</u>	D <u>150</u>	

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	<u>100.</u> %	T53B	<u>10.6</u> %
Reactor Vessel DP			<u>16.8</u> psid		
PORV Discharge Temperature			<u>112</u> F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	<u>127</u>	RV-1040	<u>142</u>
PCP Current (Amps)	P-50A	P-50B	<u>667</u>	P-50C	<u>678</u>
PCS Flow	<u>34.</u> %	Pressure Level (cold)	<u>96.6</u> %	P-50D	<u>0.</u>
Loop Thot (F)	Loop 1 <u>120</u>	Loop 2 <u>120</u>			
Loop Tcold (F)	Loop 1 <u>119</u>	Loop 2 <u>120</u>			
Tcold Wide range	Loop 1 <u>120</u>	Loop 2 <u>119</u>			
Subcooling	Temp <u>281</u> F	Press <u>247</u> psi			
PCS Pressure	WR <u>249.</u>	NR <u>249.</u> psia			
Level	Steam Generator A	(NR)	<u>90.</u> %	Steam Generator B	(NR)
Press	(WR) <u>1.</u> psia	Feed	<u>0</u> PPH	(WR) <u>13.</u> psia	Feed
Flow	Steam <u>0</u> PPH	Steam	<u>0</u> PPH	Steam	<u>0</u> PPH
		Note: Steam and Feed Flow	X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
AFW Flow to B S/G	From P-8A&B	<u>0.</u>	From P-8C	<u>0.</u>
Condenser Vacuum (R)		<u>0.</u>		
PCP Seal Leakoff Flow	P-50A	<u>1.0</u> PPH	P-50B	<u>1.0</u> PPH
			P-50C	<u>1.0</u> PPH
			P-50D	<u>1.0</u> PPH

C-04

Diesel Generator Frequency	1-1	<u>60.</u>	1-2	<u>0</u>
1-C BUS	Voltage	<u>2433</u>	Amps	<u>494</u>
1-D BUS	Voltage	<u>2482</u>	Amps	<u>45.</u>

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	<u>.2E-01</u>	RIA-1806	<u>.2E-01</u>
	RIA-1807	<u>.2</u>	RIA-1808	<u>.8E-01</u>
High Range Containment Monitors (R/Hr)	RIA-2321	<u>.1E-01</u>	RIA-2322	<u>.1E-01</u>
Containment Hydrogen Concentration (%)	AI-2401R	<u>0.</u>	AI-2401L	<u>0.</u>
Main Steam Line Gamma (cpm)	RIA-2324	<u>.3E+02</u>	RIA-2323	<u>.2E+02</u>
Stack Monitors	RIA-2325	???? cpm	RIA-2326	<u>0</u> cpm
			RIA-2327	<u>0</u> mr/hr

MESSAGE No: 22

K-01

[illegible]

K-02

★ 1 ★	★ 2 ★	★ 3 ★	★ 4 ★	★ 5 ★	★ 6 ★	★ 7 ★	★ 8 ★	★ 9 ★	★ 10 ★	★ 11 ★	★ 12 ★
★	★	★	★	★	★	★	★	★	★	★	★
1	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
2	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
3	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
4	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
5	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

★	★	★	★	★	★	★	★	★	★	★	★
★	★	★	★	★	★	★	★	★	★	★	★

PALEX-93

TIME: 1215
SCENARIO TIME: 0345MESSAGE No: 22ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * *

* * * * *

* * * * *

5 * * * ON * *

* * * * *

* * * * *

6 * ON * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * *

* * * * *

* * * * *

4 * * * ON * * * ON * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1215
SCENARIO TIME: 0345MESSAGE No: 22ANNUNCIATOR DISPLAYSK-06A

*** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	*	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	*	*
*	*	*	*	*

K-06B

*** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	*	*
*	*	*	*	*

*	*	*	*	*
2	* ON	* ON	*	*
*	*	*	*	*

K-06C

*** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1 ON	*	*	*	*
*	*	*	*	*

*	*	*	*	*
2 ON	*	* ON	*	*
*	*	*	*	*

K-06D

*** 1	***** 2	***** 3	***** 4	***
*	*	*	*	*
1	* ON	* ON	* ON	*
*	*	*	*	*

*	*	*	*	*
2	*	* ON	* ON	*
*	*	*	*	*

PALEX-93

TIME: 1215
SCENARIO TIME: 0345MESSAGE No: 22ANNUNCIATOR DISPLAYS

K-27

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	ON	*	*	ON	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	ON	*	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	ON	*	*	ON	*	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4 ON	*	*	*	*	*	ON	*	*	ON	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	ON	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

K-09

** 1	** 2	** 3	** 4	** 5	** 6	** 7	** 8	** 9	** 10	** 11	** 12	**
*	*	*	*	*	*	*	*	*	*	*	*	*
1	ON	*	*	*	*	ON	*	ON	*	ON	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	ON	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	ON	*	ON	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
4	ON	*	*	*	*	ON	*	ON	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	ON	*	*	*	*	ON	*	ON	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*
6	*	*	*	*	*	*	*	*	*	*	ON	*
*	*	*	*	*	*	*	*	*	*	*	*	*

MESSAGE No: 22

K-11

1	2	3	4	5	6	7	8	9	10	11	12
1					ON						
2								ON			
3											
4 ON					ON						ON
5 ON											ON
ON		ON						ON			

K-13

1	2	3	4	5	6	7	8	9	10	11	12	13
1	ON					ON						
2	ON	ON				ON						
3	ON					ON					ON	
4		ON	ON	ON	ON							
5												
		ON	ON	ON	ON					ON		

PALEX-93

TIME: 1215
SCENARIO TIME: 0345MESSAGE No: 22ANNUNCIATOR DISPLAYS

K-21

```
*** 1 *** 2 *** 3 *** 4 *** 5 ***
*      *      *      *      *      *
1      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      *      *      *      *
*      *      *      *      *      *
*****
```

K-22

```
*** 1 *** 2 *** 3 *** 4 *** 5 ***
*      *      *      *      *      *
1      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
2      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
3      *      *      *      *      *
*      *      *      *      *      *
*****
*      *      *      *      *      *
4      *      * ON  * ON  *      *
*      *      *      *      *      *
*****
```

PALEX-93

TIME: 1215
SCENARIO TIME: 0345MESSAGE No: 22ANNUNCIATOR DISPLAYS

K-33

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 **** 8 **** 9 **** 10 ****
*      *      *      *      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *      *      *      *
*****

```

K-34

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 ****
*      *      *      *      *      *      *
1      *      *      *      *      *      *
*      *      *      *      *      *      *
*****
*      *      *      *      *      *      *
2      *      *      *      *      *      *
*      *      *      *      *      *      *
*****

```

K-35

```

** 1 **** 2 **** 3 **** 4 **** 5 **** 6 **** 7 ****
*      *      *      *      *      *      *      *
1      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
2      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
3      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
4      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****
*      *      *      *      *      *      *      *
5      *      *      *      *      *      *      *
*      *      *      *      *      *      *      *
*****

```

Scenario No: **PALEX-93**
Message No: **23**

Time: **1230**
Scenario Time: **0400**

PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM

Message For: Control Room Operators

Simulated Plant Conditions:

Message:
See attached Alarm and Data Sheets.

FOR CONTROLLER USE ONLY

Controller Notes:

Action Expected:

Date OCTOBER 26, 1993Message # 23

(Page 1)

Time 1230
Time JumpScenario Time 0400
Scenario Time JumpC-08

SW Sumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>	SW Critical Hdr Press	A <u>46.</u>	B <u>46.</u> psig
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>	FPC Pumps	P-51A <u>OFF</u>	
Fire Pumps	P-9A <u>ON</u>	P-9B <u>OFF</u>	P-41 <u>OFF</u>		P-51B <u>ON</u>	

Containment Cooler Recirc Fans

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>	V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>
----------------	----------------	----------------	---------------	----------------	----------------	---------------	---------------

C-03

CCW Cooler Outlet Temp	A <u>52.</u> F	B <u>52.</u> F				
Containment Spray Pumps	P-54A <u>OFF</u>	P-54B <u>OFF</u>	P-54C <u>OFF</u>	LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>				

Safety Injection Suction Supply

Train A	Train B
CV-3057 (SIRW) <u>CLOSED</u>	CV-3031 (SIRW) <u>CLOSED</u>
CV-3029 (SIRW) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02CVCS

Intermediate Press Letdown Temp	<u>98.</u> F	Flow	<u>40.</u> gpm
Letdown Line Temp	<u>105</u> F	Line Temp	<u>91.</u> F
Letdown Flow	<u>32.</u> gpm	Pumps	P-55A <u>ON</u> P-55B <u>OFF</u> P-55C <u>OFF</u>

Volume Control Tank

Temp <u>85.</u> F	Pressure <u>38.</u> psi	Level <u>94.</u> %	PCP Control Bleedoff Pressure <u>150</u> psig
-------------------	-------------------------	--------------------	---

Shutdown Cooling System

SDCS from PCS (R) <u>120</u> F	SDCS to PCS (R) <u>73.</u> F
--------------------------------	------------------------------

Quench Tank

Temp <u>102</u> F	Pressure <u>-2.</u> psig	Level <u>65.</u> %
-------------------	--------------------------	--------------------

Primary Coolant System

Pressurizer Pressure (R)	<u>249.</u> psia		
PCS Tave (R) Loop 1 (TR-0111)	<u>119</u> Loop 2 (TR-0121)	<u>119</u>	
Pressurizer Level (R) LRC-0101A	<u>100</u> %	LRC-0101B	<u>100</u> %
Pzr Htr Amps	LCC 15 <u>0.</u>	LCC 16	<u>0.</u>
PORV	PRV-1042B <u>CLOSED</u>	PRV-1043B	<u>CLOSED</u>
PCPs	P-50A <u>OFF</u>	P-50B	<u>ON</u>
Reactor Power Level	NI-01 <u>.18E+02</u>	NI-02	<u>.18E+02</u>
	NI-05 <u>.12E-07</u>	NI-06	<u>.11E-07</u>
		Block Valve	MOV-1042A <u>OPEN</u>
			P-50C <u>ON</u>
			MOV-1043A <u>OPEN</u>
			P-50D <u>OFF</u>
			NI-03 <u>.82E-08</u>
			NI-04 <u>.80E-08</u>
			NI-07 <u>.12E-07</u>
			NI-08 <u>.12E-07</u>

C-01AFW System

AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>	AFW Pump Amps	P-8A <u>0.</u>	P-8C <u>0.</u>
AFW Pump P-8B Steam Pressure	<u>0.</u> psig		AFW Disch Press	P-8A & P-8B <u>18.</u>	P-8C <u>18.</u> psi

Secondary System

MSIV Bypass	MOV-0501 <u>CLOSED</u>	MOV-0510 <u>CLOSED</u>	MSIV's	CV-0501 <u>CLOSED</u>	CV-0510 <u>CLOSED</u>
MFP Suction Pressure	<u>15.</u> psig		MFP Discharge Pressure	A <u>15.</u>	B <u>15.</u> psi
Moisture Separator Drain Tank Level	<u>26.</u> %		Condenser Hotwell Level	<u>70.</u> %	
Atmospheric Dump Valves	<u>CLOSED</u>		Condenser Vacuum	<u>0.</u> in Hg.	
Heater Drain Pump Status	P-10A <u>OFF</u>	P-10B <u>OFF</u>	Gland Seal Condenser Vacuum	<u>14.2</u> in Hg.	
			Condensate Pump Status	P-2A <u>OFF</u>	P-2B <u>OFF</u>

PIP

(Demand Log + Constant, Rod, or Flux/Temp)									
Gross MW	<u>0.</u>	Net MW	<u>0.</u>	Core Exit Thermocouple Temperature				<u>120.0</u> F	
Control Rod Position		GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	GP5(P) <u>1.</u>	GP6(A) <u>0.</u>	GP7(B) <u>0.</u>	
Stuck Rods	<u>NONE</u>	# <u>0</u>							

C-13

T-81 Level	90. %	T-939 Level	93. %	Condensate Storage Tank Level T-2	89. %
Instrument Air Pressure		100	psig	Dome Temperature	102 F
Containment Building Pressure		-5.	psig	Humidity	29. %
S/G A Compartment				Temperature	102 F
S/G B Compartment				Humidity	30. %
SIRW Tank Level		0.	%	Temperature	93. F
WR Containment Pressure (R)		9.	psia		
Containment Sump Level		585	%	Containment Water Level (R)	0. %
SI Tank Level (%)	A	40.		B	39.
SI Tank Pressure (psig)	A	149		C	39.
				D	39.
				C	149
				D	150

PANEL K-13SIAS Alarm NOContainment High Pressure Alarm NOContainment High Radiation Alarm NOC-12

Concentrated Boric Acid Tank Levels		T53A	100. %	T53B	10.6 %
Reactor Vessel DP			16.8 psid		
PORV Discharge Temperature			112 F		
Pzr Safety Valve Discharge Temp (F)		RV-1039	127	RV-1040	142
PCP Current (Amps)	P-50A	P-50B	667	P-50C	678
PCS Flow		Pressure Level (cold)	96.6 %	P-50D	0.
Loop Thot (F)	Loop 1	Loop 2	120		
Loop Tcold (F)	Loop 1	Loop 2	120		
Tcold Wide range	Loop 1	Loop 2	119		
Subcooling	Temp	Press	247 psi		
PCS Prssure	WR	NR	249. psia		
Level	Steam Generator A	(NR)	90. %	Steam Generator B	(NR)
Press	(WR)		87. %	(WR)	87. %
Flow	Steam	Feed	13. psia	Steam	13. psia
		Feed	0. PPH	Feed	0. PPH
		Note:	Steam and Feed Flow X 1000000		

C-11

AFW Flow to A S/G	From P-8A&B	0.	From P-8C	0.
AFW Flow to B S/G	From P-8A&B	0.	From P-8C	0.
Condenser Vacuum (R)		0.		
PCP Seal Leakoff Flow	P-50A	1.0 PPH	P-50B	1.0 PPH
			P-50C	1.0 PPH
			P-50D	1.0 PPH

C-04

Diesel Generator Frequency	1-1	60.	1-2	0.
1-C BUS	Voltage	2433	Amps	494
1-D BUS	Voltage	2482	Amps	45.

C-11 Back C-11A

Containment Area Monitors (R/Hr)	RIA-1805	.2E-01	RIA-1806	.2E-01
	RIA-1807	.2	RIA-1808	.8E-01
High Range Containment Monitors (R/Hr)	RIA-2321	.1E-01	RIA-2322	.1E-01
Containment Hydrogen Concentration (%)	AI-2401R	0.	AI-2401L	0.
Main Steam Line Gamma (cpm)	RIA-2324	.3E+02	RIA-2323	.2E+02
Stack Monitors	RIA-2325	???? cpm	RIA-2326	.0 cpm
			RIA-2327	.0 mr/hr

TIME: 1230
SCENARIO TIME: 0400

ANNUNCIATOR DISPLAYS

[illegible]

1	2	3	4	5	6	7	8	9	10	11	12
1											
2											
3											
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72											

PALEX-93

TIME: 1230
SCENARIO TIME: 0400MESSAGE No: 23ANNUNCIATOR DISPLAYS

K-03

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 **

* * * * *

1 ON * ON * * * *

* * * * *

* * * * *

2 ON * * ON * * *

* * * * *

* * * * *

3 * * * * *

* * * * *

* * * * *

4 * * * ON * *

* * * * *

* * * * *

5 * * * ON * *

* * * * *

* * * * *

6 * ON * * * *

* * * * *

* * * * *

K-05

** 1 ** 2 ** 3 ** 4 ** 5 ** 6 ** 7 ** 8 ** 9 ** 10 **

* * * * *

1 * * * * *

* * * * *

* * * * *

2 * * * * *

* * * * *

* * * * *

3 ON * * * * * ON * *

* * * * *

* * * * *

4 * * * ON * * * ON * * *

* * * * *

* * * * *

5 ON * * * * *

* * * * *

* * * * *

6 * * * * *

* * * * *

PALEX-93

TIME: 1230
SCENARIO TIME: 0400MESSAGE No: 23ANNUNCIATOR DISPLAYSK-06A

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      *      * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   *      *
*      *      *      *      *
*****

```

K-06B

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   *      *
*      *      *      *      *
*****
*      *      *      *      *
2      * ON   * ON   *      *
*      *      *      *      *
*****

```

K-06C

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1 ON   *      *      *      *
*      *      *      *      *
*****
*      *      *      *      *
2 ON   *      * ON   *      *
*      *      *      *      *
*****

```

K-06D

```

** 1 **** 2 **** 3 **** 4 **
*      *      *      *      *
1      * ON   * ON   * ON   *
*      *      *      *      *
*****
*      *      *      *      *
2      *      * ON   * ON   *
*      *      *      *      *
*****

```

TIME: 1230
SCENARIO TIME: 0400

MESSAGE No: 23

X-27

[illegible]

K-09

[illegible]

MESSAGE No: 23

K-11

1	2	3	4	5	6	7	8	9	10	11	12	13
1	ON					ON						
2	ON	ON				ON						
3	ON					ON					ON	
4		ON	ON	ON	ON							
5												
6		ON	ON	ON	ON					ON		

PALEX-93

TIME: 1230
SCENARIO TIME: 0400MESSAGE No: 23ANNUNCIATOR DISPLAYS

K-21

1	2	3	4	5
1	*	*	*	*
*	*	*	*	*

2	*	*	*	*
*	*	*	*	*

3	*	*	*	*
*	*	*	*	*

4	*	*	*	*
*	*	*	*	*

K-22

1	2	3	4	5
1	*	*	*	*
*	*	*	*	*

2	*	*	*	*
*	*	*	*	*

3	*	*	*	*
*	*	*	*	*

4	*	ON	ON	*
*	*	*	*	*

PALEX-93

TIME: 1230
SCENARIO TIME: 0400MESSAGE No: 23ANNUNCIATOR DISPLAYS

K-33

** 1	****	2	****	3	****	4	****	5	****	6	****	7	****	8	****	9	****	10	****
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

K-34

** 1	****	2	****	3	****	4	****	5	****	6	****
*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*

K-35

** 1	****	2	****	3	****	4	****	5	****	6	****	7	****
*	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	ON	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*

Scenario No: PALEX-93
Message No: 24

Time: 1245 +24 hrs
Scenario Time: 0415 +24 hrs

**PALISADES NUCLEAR PLANT
EMERGENCY PREPAREDNESS EXERCISE FORM**

Message For: Site Emergency Director and EOF Director

Simulated Plant Conditions:
See attached assessment sheet.

Message:
Begin Recovery Planning

Plant personnel involved in Recovery Planning report to the EOF for Recovery Discussions at 2:00 pm.

FOR CONTROLLER USE ONLY

Controller Notes:

If Environmental vegetation, milk, and water samples have not been obtained (simulated discussions) then **DELETE** Item #4 from RAD Data on Recovery Sheet before giving to players. This should have taken place and if not an item on the critique.

Have Players break for lunch - 1/2 hour maximum.

All Players participate in Facility Critique (may perform facility critique while eating lunch).

Plant personnel for recovery will travel to the EOF for Recovery Planning Discussions.

Action Expected:

Rad Data for Re-entry/Recovery

1. The bulk material from the tornado has been picked up or secured.

Dose Rates are all less than 1 mR/HR.

2. There is still loose and fixed contamination on the access road inside the Protected Area ranging from 100 to 10,000 cpm.
3. There has been no identified hot spots of contamination outside the Protected Area. Monitoring Teams are still checking surrounding environs. The environmental TLDs and Air Samples have been pulled with no activity identified by plant equipment but they have been sent offsite for evaluation.
4. Environmental vegetation, milk, and water samples have been obtained and are being readied for shipment.

General Data

1. Work is continuing on covering the Spent Fuel Pool and SIRW Tank with temporary coverings.
2. Security is manning the breaches in the Protected Area fencing 24 hours a day.
3. General debris clean-up and site evaluation is on going.
4. Procedure changes and Facility repair/changes are being evaluated.

CFMS OPERATIONS DATA

Time 0800
Time Jump

Scenario Time -0030
Scenario Time Jump

Message # 1

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>95.</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>101</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>92.</u>	F
S/G B Humidity	<u>30</u>	%
(16) Dome Temperature	<u>103</u>	F
(11) SIRW Tank Level	<u>98.</u>	%
(15) WR Containment Pressure (R)	<u>10</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
D <u>39.</u>		
SI Tank Pressure (psig)		
A <u>150</u>	B <u>151</u>	C <u>151</u>
D <u>152</u>		
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels		
T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.9</u>	psid
(12) PORV Discharge Temperature	<u>111</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>126</u>	F
RV-1040	<u>141</u>	F
RV-1041	<u>176</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>668</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>115</u>	F
	Loop 2	<u>115</u>	F
(2) Tcold (F)	Loop 1A	<u>114</u>	F
	Loop 2A	<u>115</u>	F
	Loop 1B	<u>115</u>	F
	Loop 2B	<u>114</u>	F
(5) Subcooling	<u>283</u>	F	<u>242</u> PSIA
(7) PCS WR Pressure (R)	<u>244.</u>	PSIA	
(7) PCS NR Pressure (R)	<u>244.</u>	PSIA	
(30) S/G A LEVEL WR	<u>90.</u>	%	
(30) S/G A LEVEL (R)	<u>90.</u>	%	
(30) S/G A PRESS	<u>1.</u>	psia	
S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH	
(30) S/G B LEVEL WR	<u>87.</u>	%	
(30) S/G B LEVEL (R)	<u>87.</u>	%	
(30) S/G B PRESS	<u>13.</u>	psia	
S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH	

PANEL K-13

(20) CONTAINMENT HIGH PRESS	<u>NO</u>
(20) Containment High Radiation	<u>NO</u>

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0800
Time Jump

Scenario Time -0030
Scenario Time Jump

Message # 1

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>.0</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2447</u>	Amps <u>365</u>
(32) 1-D BUS VOLTS	<u>2455</u>	Amps <u>291</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0800
Time Jump

Scenario Time -0030
Scenario Time Jump

Message # 1

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>ON</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>ON</u>	P-67B <u>OFF</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>85.</u>	F
Charging Line Temperature	<u>99.</u>	F
Letdown Line Temp	<u>84.</u>	F
SDCS from PCS (R)	<u>115</u>	F
SDCS to PCS (R)	<u>70.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>90.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>47.</u>	gpm
(26) Charging Flow	<u>46.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>244.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97</u> %
	LT0103	<u>96.7</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>115</u> F
	LOOP2 (TR-0121)	<u>115</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>		
Net MW	<u>-3.</u>		
(28) Control Rod Position			
GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
GP6(A) <u>0.</u>	GP7(B) <u>0.</u>		
Stuck Rods	<u>NONE</u>	<optional>#	<u>0</u>
Core Exit Temp			<u>115.3F</u>

Time 0832Scenario Time 0002Message # 2

140

Time Jump

Scenario Time Jump

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>103</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>103</u>	F
(11) SIRW Tank Level	<u>98.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
D <u>39.</u>		
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>150</u>
D <u>151</u>		
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels

T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.6</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>126</u>	F
RV-1040	<u>141</u>	F
RV-1041	<u>176</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>120</u>	F
	Loop 2A	<u>119</u>	F
	Loop 1B	<u>119</u>	F
	Loop 2B	<u>120</u>	F
(5) Subcooling	<u>277</u>	F	<u>238</u> PSIA
(7) PCS WR Pressure (R)	<u>240.</u>	PSIA	
(7) PCS NR Pressure (R)	<u>240.</u>	PSIA	
(30) S/G A LEVEL WR	<u>90.</u>	%	
(30) S/G A LEVEL (R)	<u>90.</u>	%	
(30) S/G A PRESS	<u>1.</u>	psia	
S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH	
(30) S/G B LEVEL WR	<u>87.</u>	%	
(30) S/G B LEVEL (R)	<u>87.</u>	%	
(30) S/G B PRESS	<u>13.</u>	psia	
S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH	

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0832
Time Jump

Scenario Time 0002
Scenario Time Jump

Message # 2

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A	OFF	P-8B OFF
Heater Drain Pump	P-10A OFF	P-10B OFF
Condensate Pump	P-2A OFF	P-2B OFF

C-11

(31) AFW FLOW TO SGA	
FROM P8A, B	0.
From P-8C	0. gpm
(31) AFW FLOW TO SGB	
FROM P-8A&B	0.
From P-8C	0. gpm
Condensor Vacuum (R)	0. IN HG.
PCP A Leak-off Flow (R)	1.0
PCP B Leak-off Flow (R)	1.0
PCP C Leak-off Flow (R)	1.0
PCP D Leak-off Flow (R)	1.0

C-04

(32) D/G Freq	1-1	60.	1-2	.0
(32) 1-C BUS VOLTS		2442	Amps	407
(32) 1-D BUS VOLTS		0.	Amps	0.

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	.2E-01	R/Hr
RIA-1806	.2E-01	R/Hr
RIA-1807	.2	R/Hr
RIA-1808	.8E-01	R/Hr
(17) High Range Containment Monitors		
RIA-2321	.1E-01	R/Hr
RIA-2322	.1E-01	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	0.	%
AI-2401L	0.	%
(30) Main Steam Line Gamma		
RIA-2324	.3E+02	CPM
RIA-2323	.2E+02	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0832
Time Jump

Scenario Time 0002
Scenario Time Jump

Message # 2

142

C-08

SW Pumps	P-7A <u>OFF</u>	P-7B <u>ON</u>	P-7C <u>OFF</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>OFF</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>OFF</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>113</u>	F
Charging Line Temperature	<u>99.</u>	F
Letdown Line Temp	<u>118</u>	F
SDCS from PCS (R)	<u>94.</u>	F
SDCS to PCS (R)	<u>88.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>23.</u>	gpm
(26) Charging Flow	<u>0.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>240.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.8</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>OFF</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>120</u> F
	LOOP2 (TR-0121)	<u>120</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>.0</u>
---------------	---------------	---------------	---------------

GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
------------------	------------------

Stuck Rods	<u>NONE</u>
------------	-------------

Core Exit Temp	<optional># <u>0</u>
	<u>119.9F</u>

Time 0833
Time Jump

Scenario Time 0003
Scenario Time Jump

Message # 3

140

C-13

Condensate Storage Tank Level T-2 89. %
Instrument Air Pressure 95. psig
(15) Containment Building Pressure -5. psig
(16) S/G A Compartment Temperature 102 F
S/G A COMPARTMENT Humidity 30. %
(16) S/G B Compartment Temperature 93. F
S/G B Humidity 30. %
(16) Dome Temperature 103 F
(11) SIRW Tank Level 98. %
(15) WR Containment Pressure (R) 9. psia
(14) Containment Sump Level 585 %
(14) Containment Water Level (R) 0. %
(22) SI Tank Level (%)
A 40. B 39. C 39. D 39.
SI Tank Pressure (psig)
A 149 B 149 C 149 D 151
(21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels
T53A 100. %
T53B 10.6 %
Reactor Vessel DP 16.8 psid
(12) PORV Discharge Temperature 112 F
(13) Pzr Safety Valve Discharge Temp (F)
RV-1039 127 F
RV-1040 142 F
RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
P-50C 678 P-50D 0.

(6) PCS Flow
(3) Thot (F) Loop 1 120 F
Loop 2 120 F
(2) Tcold (F) Loop 1A 119 F
Loop 2A 120 F
Loop 1B 120 F
Loop 2B 119 F
(5) Subcooling 275 F 233 PSIA
(7) PCS WR Pressure (R) 235. PSIA
(7) PCS NR Pressure (R) 235. PSIA
(30) S/G A LEVEL WR 90. %
(30) S/G A LEVEL (R) 90. %
(30) S/G A PRESS 1. psia
S/G A STM FLW (R) .0 X10**6 PPH
S/G A FD FLW (R) .0 X10**6 PPH
(30) S/G B LEVEL WR 87. %
(30) S/G B LEVEL (R) 87. %
(30) S/G B PRESS 13. psia
S/G B STM FLW (R) .0 X10**6 PPH
S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO
(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0833
Time Jump

Scenario Time 0003
Scenario Time Jump

Message # 3

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq 1-1	<u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>0.</u>	Amps <u>0.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

T S C S T A T U S P A G E

142

C-02

	P55A	<u>OFF</u>	P55B	<u>OFF</u>	P55C	<u>ON</u>	
(6) PCPS	P50A	<u>OFF</u>	P50B	<u>ON</u>	P50C	<u>ON</u>	P50D <u>OFF</u>
	PZR HTR AMPS	LC15	<u>0.</u>	LCC 16	<u>0.</u>		
(1) PCS TAVE (R)		LOOP1	(TR-0111)	<u>119</u>	F		
		LOOP2	(TR-0121)	<u>119</u>	F		
(25) REACTOR POWER LEVEL							
NI1	<u>.18E+02</u>	cps	NI3	<u>.82E-08</u>	%	NI7	<u>.12E-07</u>
NI2	<u>.18E+02</u>	cps	NI4	<u>.80E-08</u>	%	NI8	<u>.12E-07</u>
			NI-05	<u>.12E-07</u>	%	NI-09	
			NI-06	<u>.11E-07</u>	%	NI-10	

```

      PIP
(DMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)
      Gross MW      0.
      Net MW        0.
(28) Control Rod Position
      GP1 0. GP2 0.      GP3 0.      GP4 .0
      GP6(A) 0. GP7(B) 0.
      Stuck Rods    NONE      <optional># 0
      Core Exit Temp      119.9F

```

Intermediate Press Letdown Temp	<u>108</u>	F
Charging Line Temperature	<u>103</u>	F
Letdown Line Temp	<u>117</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	70.	F

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	0.
Net MW	0.

(28) Control Rod Position

GP1 0. GP2 0. GP3 0. GP4 .0

GP6 (A) 0. GP7 (B) 0.

```

Stuck Rods      NONE      <optional># 0
Core Exit Temp  119.9F

```

Time 0844
Time Jump

Scenario Time 0014
Scenario Time Jump

Message # 5

140

C-13

Condensate Storage Tank Level T-2	89.	%
Instrument Air Pressure	100	psig
(15) Containment Building Pressure	-5.	psig
(16) S/G A Compartment Temperature	102	F
S/G A COMPARTMENT Humidity	30.	%
(16) S/G B Compartment Temperature	93.	F
S/G B Humidity	30.	%
(16) Dome Temperature	102	F
(11) SIRW Tank Level	98.	%
(15) WR Containment Pressure (R)	9.	psia
(14) Containment Sump Level	585	%
(14) Containment Water Level (R)	0.	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
D <u>39.</u>		
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u>
D <u>150</u>		
(21) SIAS Alarm	NO	

C-12

Concentrated Boric Acid Tank Levels		
T53A	100.	%
T53B	10.6	%
Reactor Vessel DP	16.8	psid
(12) PORV Discharge Temperature	112	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	127	F
RV-1040	142	F
RV-1041	177	F

C-12

PCP Current (Amps)			
P-50A	0.	P-50B	667
P-50C	678	P-50D	0.
(6) PCS Flow			
(3) Thot (F)	Loop 1	120	F
	Loop 2	120	F
(2) Tcold (F)	Loop 1A	119	F
	Loop 2A	120	F
	Loop 1B	120	F
	Loop 2B	119	F
(5) Subcooling	281	F	247 PSIA
(7) PCS WR Pressure (R)	249.	PSIA	
(7) PCS NR Pressure (R)	249.	PSIA	
(30) S/G A LEVEL WR	90.	%	
(30) S/G A LEVEL (R)	90.	%	
(30) S/G A PRESS	1.	psia	
S/G A STM FLW (R)	.0	X10**6 PPH	
S/G A FD FLW (R)	.0	X10**6 PPH	
(30) S/G B LEVEL WR	87.	%	
(30) S/G B LEVEL (R)	87.	%	
(30) S/G B PRESS	13.	psia	
S/G B STM FLW (R)	.0	X10**6 PPH	
S/G B FD FLW (R)	.0	X10**6 PPH	

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0844
Time Jump

Scenario Time 0014
Scenario Time Jump

Message # 5

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

T S C S T A T U S P A G E

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C-02

(10)	VCT Temp	85.	F
(10)	VCT Pressure	38.	psi
(10)	VCT Level	94.	%
	PCP Control Bleedoff Pressure	150	psig
(26)	Letdown Flow	32.	gpm
(26)	Charging Flow	40.	gpm
(9)	Quench Tank Temp	102	F
(9)	Quench TANK Pressure	-2.	psig
(9)	Quench TANK Level	65.	%
(7)	Pressurizer Pressure (R)	249.	psia
(8)	PZR Level (R)	97.	%
	LT0102A		
	LT0103	96.6	%

(12) PORV	PRV-1042A	<u>CLOSED</u>	1043B	<u>CLOSED</u>
(12) BLOCK	MOV-1042A	OPEN	1043A	OPEN

CHARGING PUMPS

	P55A	OFF	P55B	OFF	P55C	ON	
(6) PCPS	P50A	OFF	P50B	ON	P50C	ON	P50D OFF
	PZR HTR AMPS		LC15	0.	LCC 16	0.	
(1) PCS TAVE (R)			LOOP1 (TR-0111)		119	F	
			LOOP2 (TR-0121)		119	F	
(25) REACTOR POWER LEVEL							
NI1	.18E+02	cps	NI3	.82E-08	%	NI7	.12E-07
NI2	.18E+02	cps	NI4	.80E-08	%	NI8	.12E-07
			NI-05	.12E-07	%	NI-09	
			NI-06	.11E-07	%	NI-10	

PIP
(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>			
Net MW	<u>0.</u>			
Control Rod Position				
GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>	
GP6(A) <u>0.</u>	GP7(B) <u>0.</u>			
Stuck Rods	<u>NONE</u>	<optional>#	<u>0</u>	
Core Exit Temp				<u>12</u>

Time 0845Scenario Time 0015Message # 6

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Time Jump

Scenario Time Jump

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>
(21) SIAS Alarm		<u>NO</u>

C-12

Concentrated Boric Acid Tank Levels

T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
S/G A STM FLW (R)		<u>.0</u>	X10**6 PPH
S/G A FD FLW (R)		<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
S/G B STM FLW (R)		<u>.0</u>	X10**6 PPH
S/G B FD FLW (R)		<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0845
Time Jump

Scenario Time 0015
Scenario Time Jump

Message # 6

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B 0.	From P-8C 0.	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B 0.	From P-8C 0.	gpm
Condensor Vacuum (R)	0.	IN HG.
PCP A Leak-off Flow (R)	1.0	
PCP B Leak-off Flow (R)	1.0	
PCP C Leak-off Flow (R)	1.0	
PCP D Leak-off Flow (R)	1.0	

C-04

(32) D/G Freq 1-1	60.	1-2 .0
(32) 1-C BUS VOLTS	2433	Amps494
(32) 1-D BUS VOLTS	2482	Amps45.

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	.2E-01	R/Hr
RIA-1806	.2E-01	R/Hr
RIA-1807	.2	R/Hr
RIA-1808	.8E-01	R/Hr
(17) High Range Containment Monitors		
RIA-2321	.1E-01	R/Hr
RIA-2322	.1E-01	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	0.	%
AI-2401L	0.	%
(30) Main Steam Line Gamma		
RIA-2324	.3E+02	CPM
RIA-2323	.2E+02	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0845
Time Jump

Scenario Time 0015
Scenario Time Jump

Message # 6

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp		<u>85.</u>	F
(10) VCT Pressure		<u>38.</u>	psi
(10) VCT Level		<u>94.</u>	%
	PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow		<u>32.</u>	gpm
(26) Charging Flow		<u>40.</u>	gpm
(9) Quench Tank Temp		<u>102</u>	F
(9) Quench TANK Pressure		<u>-2.</u>	psig
(9) Quench TANK Level		<u>65.</u>	%
(7) Pressurizer Pressure (R)		<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u>	%
	LT0103	<u>96.6</u>	%
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>	
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>	
	CHARGING PUMPS		
	P55A <u>ON</u> P55B <u>OFF</u> P55C <u>OFF</u>		
(6) PCPS	P50A <u>OFF</u> P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>		
	PZR HTR AMPS	LC15 <u>0.</u> LCC 16 <u>0.</u>	
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u>	F
	LOOP2 (TR-0121)	<u>119</u>	F
(25) REACTOR POWER LEVEL			
	NI1 <u>.18E+02</u> cps NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %		
	NI2 <u>.18E+02</u> cps NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %		
		NI-05 <u>.12E-07</u> % NI-09	
		NI-06 <u>.11E-07</u> % NI-10	

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1	<u>0.</u>	GP2	<u>0.</u>	GP3	<u>0.</u>	GP4	<u>.0</u>
-----	-----------	-----	-----------	-----	-----------	-----	-----------

GP6(A)	<u>0.</u>	GP7(B)	<u>0.</u>
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Stuck Rods	<u>NONE</u>	<optional>#	<u>0</u>
Core Exit Temp			<u>120.0F</u>

Time 0900
Time Jump

Scenario Time 0030
Scenario Time Jump

Message # 7

140

C-13

Condensate Storage Tank Level T-2 89. %
Instrument Air Pressure 100 psig
(15) Containment Building Pressure -5. psig
(16) S/G A Compartment Temperature 102 F
S/G A COMPARTMENT Humidity 30. %
(16) S/G B Compartment Temperature 93. F
S/G B Humidity 30. %
(16) Dome Temperature 102 F
(11) SIRW Tank Level 0. %
(15) WR Containment Pressure (R) 9. psia
(14) Containment Sump Level 585 %
(14) Containment Water Level (R) 0. %
(22) SI Tank Level (%)
A 40. B 39. C 39. D 39.
SI Tank Pressure (psig)
A 149 B 149 C 149 D 150
(21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels
T53A 100. %
T53B 10.6 %
Reactor Vessel DP 16.8 psid
(12) PORV Discharge Temperature 112 F
(13) Pzr Safety Valve Discharge Temp (F)
RV-1039 127 F
RV-1040 142 F
RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
P-50C 678 P-50D 0.

(6) PCS Flow
(3) Thot (F) Loop 1 120 F
Loop 2 120 F
(2) Tcold (F) Loop 1A 119 F
Loop 2A 120 F
Loop 1B 120 F
Loop 2B 119 F
(5) Subcooling 281 F 247 PSIA
(7) PCS WR Pressure (R) 249. PSIA
(7) PCS NR Pressure (R) 249. PSIA
(30) S/G A LEVEL WR 90. %
(30) S/G A LEVEL (R) 90. %
(30) S/G A PRESS 1. psia
S/G A STM FLW (R) .0 X10**6 PPH
S/G A FD FLW (R) .0 X10**6 PPH
(30) S/G B LEVEL WR 87. %
(30) S/G B LEVEL (R) 87. %
(30) S/G B PRESS 13. psia
S/G B STM FLW (R) .0 X10**6 PPH
S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO
(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0900
Time Jump

Scenario Time 0030
Scenario Time Jump

Message # 7

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq 1-1	<u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0900
Time Jump

Scenario Time 0030
Scenario Time Jump

Message # 7

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1	<u>.18E+02</u> cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2	<u>.18E+02</u> cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>
(28) Control Rod Position	
GP1	<u>0.</u>
GP2	<u>0.</u>
GP3	<u>0.</u>
GP4	<u>.0</u>
GP6(A)	<u>0.</u>
GP7(B)	<u>0.</u>
Stuck Rods	<u>NONE</u>
Core Exit Temp	<optional># <u>0</u> <u>120.0F</u>

Time 0905 Scenario Time 0035
 Time Jump Scenario Time Jump

Message # 8 140

C-13

Condensate Storage Tank Level T-2 89. %
 Instrument Air Pressure 100 psig
 (15) Containment Building Pressure -5. psig
 (16) S/G A Compartment Temperature 102 F
 S/G A COMPARTMENT Humidity 30. %
 (16) S/G B Compartment Temperature 93. F
 S/G B Humidity 30. %
 (16) Dome Temperature 102 F
 (11) SIRW Tank Level 0. %
 (15) WR Containment Pressure (R) 9. psia
 (14) Containment Sump Level 585 %
 (14) Containment Water Level (R) 0. %
 (22) SI Tank Level (%)
 A 40. B 39. C 39. D 39.
 SI Tank Pressure (psig)
 A 149 B 149 C 149 D 150
 (21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels
 T53A 100. %
 T53B 10.6 %
 Reactor Vessel DP 16.8 psid
 (12) PORV Discharge Temperature 112 F
 (13) Pzr Safety Valve Discharge Temp (F)
 RV-1039 127 F
 RV-1040 142 F
 RV-1041 177 F

C-12

PCP Current (Amps)
 P-50A 0. P-50B 667
 P-50C 678 P-50D 0.
 (6) PCS Flow
 (3) Thot (F) Loop 1 120 F
 Loop 2 120 F
 (2) Tcold (F) Loop 1A 119 F
 Loop 2A 120 F
 Loop 1B 120 F
 Loop 2B 119 F
 (5) Subcooling 281 F 247 PSIA
 (7) PCS WR Pressure (R) 249. PSIA
 (7) PCS NR Pressure (R) 249. PSIA
 (30) S/G A LEVEL WR 90. %
 (30) S/G A LEVEL (R) 90. %
 (30) S/G A PRESS 1. psia
 S/G A STM FLW (R) .0 X10**6 PPH
 S/G A FD FLW (R) .0 X10**6 PPH
 (30) S/G B LEVEL WR 87. %
 (30) S/G B LEVEL (R) 87. %
 (30) S/G B PRESS 13. psia
 S/G B STM FLW (R) .0 X10**6 PPH
 S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
 NO
 (20) Containment High Radiation
 NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0905
Time Jump

Scenario Time 0035
Scenario Time Jump

Message # 8

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump P-10A <u>OFF</u>	P-10B <u>OFF</u>	
Condensate Pump P-2A <u>OFF</u>	P-2B <u>OFF</u>	

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq 1-1	<u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0905
Time Jump

Scenario Time 0035
Scenario Time Jump

Message # 8

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A <u>97.</u>	%
	LT0103 <u>96.6</u>	%
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111) <u>119</u>	F
	LOOP2 (TR-0121) <u>119</u>	F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
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GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
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Stuck Rods	<u>NONE</u>	<optional># <u>0</u>
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Core Exit Temp	<u>120.0F</u>
----------------	---------------

Time 0915
Time Jump

Scenario Time 0045
Scenario Time Jump

Message # 9

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
D <u>39.</u>		
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u>
D <u>150</u>		
(21) SIAS Alarm		<u>NO</u>

C-12

Concentrated Boric Acid Tank Levels		
T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)			
P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
S/G A STM FLW (R)		<u>.0</u>	X10**6 PPH
S/G A FD FLW (R)		<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
S/G B STM FLW (R)		<u>.0</u>	X10**6 PPH
S/G B FD FLW (R)		<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS	<u>NO</u>
(20) Containment High Radiation	<u>NO</u>

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0915
Time Jump

Scenario Time 0045
Scenario Time Jump

Message # 9

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A OFF	P-8B OFF	P-8C OFF
Heater Drain Pump	P-10A OFF	P-10B OFF
Condensate Pump	P-2A OFF	P-2B OFF

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B 0.	From P-8C 0.	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B 0.	From P-8C 0.	gpm
Condensor Vacuum (R)	0.	IN HG.
PCP A Leak-off Flow (R)	1.0	
PCP B Leak-off Flow (R)	1.0	
PCP C Leak-off Flow (R)	1.0	
PCP D Leak-off Flow (R)	1.0	

C-04

(32) D/G Freq	1-1 60.	1-2 .0
(32) 1-C BUS VOLTS	2433	Amps494
(32) 1-D BUS VOLTS	2482	Amps45.

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	.2E-01	R/Hr
RIA-1806	.2E-01	R/Hr
RIA-1807	.2	R/Hr
RIA-1808	.8E-01	R/Hr
(17) High Range Containment Monitors		
RIA-2321	.1E-01	R/Hr
RIA-2322	.1E-01	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	0.	%
AI-2401L	0.	%
(30) Main Steam Line Gamma		
RIA-2324	.3E+02	CPM
RIA-2323	.2E+02	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0915
Time Jump

Scenario Time 0045
Scenario Time Jump

Message # 9

142

C-08

SW Pumps P-7A ON P-7B ON P-7C STBY
CCW Pumps P-52A ON P-52B ON P-52C STBY
FPC Pumps P-51A OFF P-51B OFF

CONTAINMENT COOLER RECIRC FANS

V1A OFF V2A OFF V3A OFF V4A ON
V1B OFF V2B OFF V3B ON V4B ON

C-03

(23) HPSI Pumps P-66A OFF P-66B OFF
(25) LPSI Pumps P-67A OFF P-67B ON
(18) Containment Spray Pumps
 P-54A OFF P-54B OFF P-54C OFF
(27) HPSIA, LPSIA, SPRAY A SUCTION
 CV-3057 (SIRWT) CV-3030 (Sump)
 CLOSED CLOSED

C-02

Intermediate Press Letdown Temp 98. F
Charging Line Temperature 91. F
Letdown Line Temp 105 F
SDCS from PCS (R) 120 F
SDCS to PCS (R) 73. F

C-02

(10) VCT Temp 85. F
(10) VCT Pressure 38. psi
(10) VCT Level 94. %
 PCP Control Bleedoff Pressure 150 psig
(26) Letdown Flow 32. gpm
(26) Charging Flow 40. gpm
(9) Quench Tank Temp 102 F
(9) Quench TANK Pressure -2. psig
(9) Quench TANK Level 65. %
(7) Pressurizer Pressure (R) 249. psia
(8) PZR Level (R) LT0102A 97. %
 LT0103 96.6 %
(12) PORV PRV-1042A CLOSED 1043B CLOSED
(12) BLOCK MOV-1042A OPEN 1043A OPEN
 CHARGING PUMPS
 P55A ON P55B OFF P55C OFF
(6) PCPS P50A OFF P50B ON P50C ON P50D OFF
 PZR HTR AMPS LC15 0. LCC 16 0.
(1) PCS TAVE (R) LOOP1 (TR-0111) 119 F
 LOOP2 (TR-0121) 119 F
(25) REACTOR POWER LEVEL
 NI1 .18E+02 cps NI3 .82E-08 % NI7 .12E-07 %
 NI2 .18E+02 cps NI4 .80E-08 % NI8 .12E-07 %
 NI-05 .12E-07 % NI-09
 NI-06 .11E-07 % NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW 0.
Net MW 0.
(28) Control Rod Position
 GP1 0. GP2 0. GP3 0. GP4 .0
 GP6(A) 0. GP7(B) 0.
 Stuck Rods NONE <optional># 0
 Core Exit Temp 120.0F

Time 0930
Time Jump

Scenario Time 0100
Scenario Time Jump

Message # 10

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
		D <u>39.</u>
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u>
		D <u>150</u>
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels		
T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling	<u>281</u>	F	<u>247</u> PSIA
(7) PCS WR Pressure (R)	<u>249.</u>	PSIA	
(7) PCS NR Pressure (R)	<u>249.</u>	PSIA	
(30) S/G A LEVEL WR	<u>90.</u>	%	
(30) S/G A LEVEL (R)	<u>90.</u>	%	
(30) S/G A PRESS	<u>1.</u>	psia	
S/G A STM FLW (R)	<u>.0</u>	X10**6	PPH
S/G A FD FLW (R)	<u>.0</u>	X10**6	PPH
(30) S/G B LEVEL WR	<u>87.</u>	%	
(30) S/G B LEVEL (R)	<u>87.</u>	%	
(30) S/G B PRESS	<u>13.</u>	psia	
S/G B STM FLW (R)	<u>.0</u>	X10**6	PPH
S/G B FD FLW (R)	<u>.0</u>	X10**6	PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS	<u>NO</u>
(20) Containment High Radiation	<u>NO</u>

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0930
Time Jump

Scenario Time 0100
Scenario Time Jump

Message # 10

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A	OFF	
P-8B	OFF	
P-8C	OFF	
Heater Drain Pump	P-10A OFF	P-10B OFF
Condensate Pump	P-2A OFF	P-2B OFF

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B	0.	
	From P-8C	0. gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B	0.	
	From P-8C	0. gpm
Condensor Vacuum (R)	0.	IN HG.
PCP A Leak-off Flow (R)	1.0	
PCP B Leak-off Flow (R)	1.0	
PCP C Leak-off Flow (R)	1.0	
PCP D Leak-off Flow (R)	1.0	

C-04

(32) D/G Freq	1-1	60.	1-2	.0
(32) 1-C BUS VOLTS		2433	Amps	494
(32) 1-D BUS VOLTS		2482	Amps	45.

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	.2E-01	R/Hr
RIA-1806	.2E-01	R/Hr
RIA-1807	.2	R/Hr
RIA-1808	.8E-01	R/Hr
(17) High Range Containment Monitors		
RIA-2321	.1E-01	R/Hr
RIA-2322	.1E-01	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	0.	%
AI-2401L	0.	%
(30) Main Steam Line Gamma		
RIA-2324	.3E+02	CPM
RIA-2323	.2E+02	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

T S C S T A T U S P A G E

142

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

```

Stuck Rods      NONE      <optional># 0
Core Exit Temp  120.0F

```

Time 0945
Time Jump

Scenario Time 0115
Scenario Time Jump

Message # 11

140

C-13

Condensate Storage Tank Level T-2 89. %
Instrument Air Pressure 100 psig
(15) Containment Building Pressure -5. psig
(16) S/G A Compartment Temperature 102 F
S/G A COMPARTMENT Humidity 30. %
(16) S/G B Compartment Temperature 93. F
S/G B Humidity 30. %
(16) Dome Temperature 102 F
(11) SIRW Tank Level 0. %
(15) WR Containment Pressure (R) 9. psia
(14) Containment Sump Level 585 %
(14) Containment Water Level (R) 0. %
(22) SI Tank Level (%)
A 40. B 39. C 39. D 39.
SI Tank Pressure (psig)
A 149 B 149 C 149 D 150
(21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels
T53A 100. %
T53B 10.6 %
Reactor Vessel DP 16.8 psid
(12) PORV Discharge Temperature 112 F
(13) Pzr Safety Valve Discharge Temp (F)
RV-1039 127 F
RV-1040 142 F
RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
P-50C 678 P-50D 0.

(6) PCS Flow
(3) Thot (F) Loop 1 120 F
Loop 2 120 F
(2) Tcold (F) Loop 1A 119 F
Loop 2A 120 F
Loop 1B 120 F
Loop 2B 119 F
(5) Subcooling 281 F 247 PSIA
(7) PCS WR Pressure (R) 249. PSIA
(7) PCS NR Pressure (R) 249. PSIA
(30) S/G A LEVEL WR 90. %
(30) S/G A LEVEL (R) 90. %
(30) S/G A PRESS 1. psia
S/G A STM FLW (R) .0 X10**6 PPH
S/G A FD FLW (R) .0 X10**6 PPH
(30) S/G B LEVEL WR 87. %
(30) S/G B LEVEL (R) 87. %
(30) S/G B PRESS 13. psia
S/G B STM FLW (R) .0 X10**6 PPH
S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO
(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0945 Scenario Time 0115
Time Jump Scenario Time Jump

Message # 11 141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq 1-1	<u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
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-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 0945
Time Jump

Scenario Time 0115
Scenario Time Jump

Message # 11

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A <u>97.</u>	%
	LT0103 <u>96.6</u>	%
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
	PZR HTR AMPS	LC15 <u>0.</u> LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>.0</u>
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GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
------------------	------------------

Stuck Rods	<u>NONE</u>
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Core Exit Temp	<u>120.0F</u>
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Time 1000
Time Jump

Scenario Time 0130
Scenario Time Jump

Message # 12

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%	
Instrument Air Pressure	<u>100</u>	psig	
(15) Containment Building Pressure	<u>-5.</u>	psig	
(16) S/G A Compartment Temperature	<u>102</u>	F	
S/G A COMPARTMENT Humidity	<u>30.</u>	%	
(16) S/G B Compartment Temperature	<u>93.</u>	F	
S/G B Humidity	<u>30.</u>	%	
(16) Dome Temperature	<u>102</u>	F	
(11) SIRW Tank Level	<u>0.</u>	%	
(15) WR Containment Pressure (R)	<u>9.</u>	psia	
(14) Containment Sump Level	<u>585</u>	%	
(14) Containment Water Level (R)	<u>0.</u>	%	
(22) SI Tank Level (%)			
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>	D <u>39.</u>
SI Tank Pressure (psig)			
A <u>149</u>	B <u>149</u>	C <u>149</u>	D <u>150</u>
(21) SIAS Alarm		<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels			
T53A	<u>100.</u>	%	
T53B	<u>10.6</u>	%	
Reactor Vessel DP	<u>16.8</u>	psid	
(12) PORV Discharge Temperature	<u>112</u>	F	
(13) Pzr Safety Valve Discharge Temp (F)			
RV-1039	<u>127</u>	F	
RV-1040	<u>142</u>	F	
RV-1041	<u>177</u>	F	

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling	<u>281</u>	F	<u>247</u> PSIA
(7) PCS WR Pressure (R)	<u>249.</u>	PSIA	
(7) PCS NR Pressure (R)	<u>249.</u>	PSIA	
(30) S/G A LEVEL WR	<u>90.</u>	%	
(30) S/G A LEVEL (R)	<u>90.</u>	%	
(30) S/G A PRESS	<u>1.</u>	psia	
S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH	
(30) S/G B LEVEL WR	<u>87.</u>	%	
(30) S/G B LEVEL (R)	<u>87.</u>	%	
(30) S/G B PRESS	<u>13.</u>	psia	
S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH	

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1000
Time Jump

Scenario Time 0130
Scenario Time Jump

Message # 12

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A	<u>OFF</u>	
P-8B	<u>OFF</u>	
P-8C	<u>OFF</u>	
Heater Drain Pump	<u>P-10A OFF</u>	
P-10B	<u>OFF</u>	
Condensate Pump	<u>P-2A OFF</u>	
P-2B	<u>OFF</u>	

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B	<u>0.</u>	
	From P-8C	<u>0.</u> gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B	<u>0.</u>	
	From P-8C	<u>0.</u> gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1	<u>60.</u>	1-2	<u>.0</u>
(32) 1-C BUS VOLTS		<u>2433</u>	Amps	<u>494</u>
(32) 1-D BUS VOLTS		<u>2482</u>	Amps	<u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1000
Time Jump

Scenario Time 0130
Scenario Time Jump

Message # 12

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW 0.

Net MW 0.

(28) Control Rod Position

GP1 0. GP2 0. GP3 0. GP4 0.

GP6(A) 0. GP7(B) 0.

Stuck Rods NONE <optional># 0

Core Exit Temp 120.0F

Time 1015
Time Jump

Scenario Time 0145
Scenario Time Jump

Message # 13

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u> D <u>39.</u>
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u> D <u>150</u>
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels

T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
	S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
	S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1015
Time Jump

Scenario Time 0145
Scenario Time Jump

Message # 13

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump P-10A <u>OFF</u>	P-10B <u>OFF</u>	
Condensate Pump P-2A <u>OFF</u>	P-2B <u>OFF</u>	

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq 1-1	<u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1015
Time Jump

Scenario Time 0145
Scenario Time Jump

Message # 13

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	98.	F
Charging Line Temperature	91.	F
Letdown Line Temp	105	F
SDCS from PCS (R)	120	F
SDCS to PCS (R)	73.	F

C-02

(10) VCT Temp	85.	F
(10) VCT Pressure	38.	psi
(10) VCT Level	94.	%
PCP Control Bleedoff Pressure	150	psig
(26) Letdown Flow	32.	gpm
(26) Charging Flow	40.	gpm
(9) Quench Tank Temp	102	F
(9) Quench TANK Pressure	-2.	psig
(9) Quench TANK Level	65.	%
(7) Pressurizer Pressure (R)	249.	psia
(8) PZR Level (R)	LT0102A	97. %
	LT0103	96.6 %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 0.	LCC 16 0.
(1) PCS TAVE (R)	LOOP1 (TR-0111)	119 F
	LOOP2 (TR-0121)	119 F
(25) REACTOR POWER LEVEL		
NI1	.18E+02 cps	NI3 .82E-08 % NI7 .12E-07 %
NI2	.18E+02 cps	NI4 .80E-08 % NI8 .12E-07 %
	NI-05 .12E-07	% NI-09
	NI-06 .11E-07	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	0.
Net MW	0.
(28) Control Rod Position	
GP1	0. GP2 0. GP3 0. GP4 0.
GP6(A)	0. GP7(B) 0.
Stuck Rods	NONE <optional># 0
Core Exit Temp	120.0F

Time 1030
Time Jump

Scenario Time 0200
Scenario Time Jump

Message # 14

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
D <u>39.</u>		
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u>
D <u>150</u>		
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels		
T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>

(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
	S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
	S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1030 Scenario Time 0200
Time Jump Scenario Time Jump

Message # 14 141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	<u>P-8B OFF</u>	<u>P-8C OFF</u>
Heater Drain Pump	<u>P-10A OFF</u>	<u>P-10B OFF</u>
Condensate Pump	<u>P-2A OFF</u>	<u>P-2B OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1030
Time Jump

Scenario Time 0200
Scenario Time Jump

Message # 14

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
---------------	---------------	---------------	---------------

GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
------------------	------------------

Stuck Rods NONE <optional># 0

Core Exit Temp 120.0F

Time 1045
Time Jump

Scenario Time 0215
Scenario Time Jump

Message # 15

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
		D <u>39.</u>
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u>
		D <u>150</u>
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels

T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
S/G A STM FLW (R)		<u>.0</u>	X10**6 PPH
S/G A FD FLW (R)		<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
S/G B STM FLW (R)		<u>.0</u>	X10**6 PPH
S/G B FD FLW (R)		<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1045
Time Jump

Scenario Time 0215
Scenario Time Jump

Message # 15

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A OFF	P-8B OFF	P-8C OFF
Heater Drain Pump	P-10A OFF	P-10B OFF
Condensate Pump	P-2A OFF	P-2B OFF

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B 0.	From P-8C 0.	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B 0.	From P-8C 0.	gpm
Condensor Vacuum (R)	0.	IN HG.
PCP A Leak-off Flow (R)	1.0	
PCP B Leak-off Flow (R)	1.0	
PCP C Leak-off Flow (R)	1.0	
PCP D Leak-off Flow (R)	1.0	

C-04

(32) D/G Freq 1-1	60.	1-2 .0
(32) 1-C BUS VOLTS	2433	Amps494
(32) 1-D BUS VOLTS	2482	Amps45.

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	.2E-01	R/Hr
RIA-1806	.2E-01	R/Hr
RIA-1807	.2	R/Hr
RIA-1808	.8E-01	R/Hr
(17) High Range Containment Monitors		
RIA-2321	.1E-01	R/Hr
RIA-2322	.1E-01	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	0.	%
AI-2401L	0.	%
(30) Main Steam Line Gamma		
RIA-2324	.3E+02	CPM
RIA-2323	.2E+02	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1045
Time Jump

Scenario Time 0215
Scenario Time Jump

Message # 15

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>OFF</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> %
		NI7 <u>.12E-07</u> %
		NI8 <u>.12E-07</u> %
		NI-05 <u>.12E-07</u> %
		NI-06 <u>.11E-07</u> %
		NI-09
		NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>		
Net MW	<u>0.</u>		
(28) Control Rod Position			
GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
GP6(A) <u>0.</u>	GP7(B) <u>0.</u>		
Stuck Rods	<u>NONE</u>	<optional># <u>0</u>	
Core Exit Temp		<u>120.0F</u>	

Time 1053
Time Jump

Scenario Time 0223
Scenario Time Jump

Message # 16

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u>	B <u>39.</u>	C <u>39.</u>
		D <u>39.</u>
SI Tank Pressure (psig)		
A <u>149</u>	B <u>149</u>	C <u>149</u>
		D <u>150</u>
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels		
T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)

P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling	<u>281</u>	F	<u>247</u> PSIA
(7) PCS WR Pressure (R)	<u>249.</u>	PSIA	
(7) PCS NR Pressure (R)	<u>249.</u>	PSIA	
(30) S/G A LEVEL WR	<u>90.</u>	%	
(30) S/G A LEVEL (R)	<u>90.</u>	%	
(30) S/G A PRESS	<u>1.</u>	psia	
S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH	
(30) S/G B LEVEL WR	<u>87.</u>	%	
(30) S/G B LEVEL (R)	<u>87.</u>	%	
(30) S/G B PRESS	<u>13.</u>	psia	
S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH	
S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH	

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1053
Time Jump

Scenario Time 0223
Scenario Time Jump

Message # 16

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A	OFF	
P-8B	OFF	
P-8C	OFF	
Heater Drain Pump	P-10A	OFF
P-10B	OFF	
Condensate Pump	P-2A	OFF
P-2B	OFF	

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B	0.	
	From P-8C	0. gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B	0.	
	From P-8C	0. gpm
Condensor Vacuum (R)	0.	IN HG.
PCP A Leak-off Flow (R)	1.0	
PCP B Leak-off Flow (R)	1.0	
PCP C Leak-off Flow (R)	1.0	
PCP D Leak-off Flow (R)	1.0	

C-04

(32) D/G Freq	1-1	60.	1-2	.0
(32) 1-C BUS VOLTS	2433	Amps	494	
(32) 1-D BUS VOLTS	2482	Amps	45.	

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	.2E-01	R/Hr
RIA-1806	.2E-01	R/Hr
RIA-1807	.2	R/Hr
RIA-1808	.8E-01	R/Hr
(17) High Range Containment Monitors		
RIA-2321	.1E-01	R/Hr
RIA-2322	.1E-01	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	0.	%
AI-2401L	0.	%
(30) Main Steam Line Gamma		
RIA-2324	.3E+02	CPM
RIA-2323	.2E+02	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

Time 1053 Scenario Time 0223
Time Jump Scenario Time Jump

Message # 16 142

C-08

SW Pumps P-7A ON P-7B ON P-7C STBY
CCW Pumps P-52A ON P-52B ON P-52C STBY
FPC Pumps P-51A OFF P-51B OFF

CONTAINMENT COOLER RECIRC FANS

V1A OFF V2A OFF V3A OFF V4A ON
V1B OFF V2B OFF V3B ON V4B ON

C-03

(23) HPSI Pumps P-66A OFF P-66B OFF
(25) LPSI Pumps P-67A OFF P-67B ON
(18) Containment Spray Pumps
P-54A OFF P-54B OFF P-54C OFF
(27) HPSIA, LPSIA, SPRAY A SUCTION
CV-3057 (SIRWT) CV-3030 (Sump)
CLOSED CLOSED

C-02

Intermediate Press Letdown Temp 98. F
Charging Line Temperature 91. F
Letdown Line Temp 105 F
SDCS from PCS (R) 120 F
SDCS to PCS (R) 73. F

C-02

(10) VCT Temp 85. F
(10) VCT Pressure 38. psi
(10) VCT Level 94. %
PCP Control Bleedoff Pressure 150 psig
(26) Letdown Flow 32. gpm
(26) Charging Flow 40. gpm
(9) Quench Tank Temp 102 F
(9) Quench TANK Pressure -2. psig
(9) Quench TANK Level 65. %
(7) Pressurizer Pressure (R) 249. psia
(8) PZR Level (R) LT0102A 97. %
LT0103 96.6 %
(12) PORV PRV-1042A CLOSED 1043B CLOSED
(12) BLOCK MOV-1042A OPEN 1043A OPEN
CHARGING PUMPS
P55A ON P55B OFF P55C OFF
(6) PCPS P50A OFF P50B ON P50C ON P50D OFF
PZR HTR AMPS LC15 0. LCC 16 0.
(1) PCS TAVE (R) LOOP1 (TR-0111) 119 F
LOOP2 (TR-0121) 119 F
(25) REACTOR POWER LEVEL
NI1 .18E+02 cps NI3 .82E-08 % NI7 .12E-07 %
NI2 .18E+02 cps NI4 .80E-08 % NI8 .12E-07 %
NI-05 .12E-07 % NI-09
NI-06 .11E-07 % NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW 0.
Net MW 0.
(28) Control Rod Position
GP1 0. GP2 0. GP3 0. GP4 0.
GP6(A) 0. GP7(B) 0.
Stuck Rods NONE <optional># 0
Core Exit Temp 120.0F

Time 1100 Scenario Time 0230
 Time Jump Scenario Time Jump

Message # 17 140

C-13

Condensate Storage Tank Level T-2 89. %
 Instrument Air Pressure 100 psig
 (15) Containment Building Pressure -5. psig
 (16) S/G A Compartment Temperature 102 F
 S/G A COMPARTMENT Humidity 30. %
 (16) S/G B Compartment Temperature 93. F
 S/G B Humidity 30. %
 (16) Dome Temperature 102 F
 (11) SIRW Tank Level 0. %
 (15) WR Containment Pressure (R) 9. psia
 (14) Containment Sump Level 585 %
 (14) Containment Water Level (R) 0. %
 (22) SI Tank Level (%)
 A 40. B 39. C 39. D 39.
 SI Tank Pressure (psig)
 A 149 B 149 C 149 D 150
 (21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels
 T53A 100. %
 T53B 10.6 %
 Reactor Vessel DP 16.8 psid
 (12) PORV Discharge Temperature 112 F
 (13) Pzr Safety Valve Discharge Temp (F)
 RV-1039 127 F
 RV-1040 142 F
 RV-1041 177 F

C-12

PCP Current (Amps)
 P-50A 0. P-50B 667
 P-50C 678 P-50D 0.
 (6) PCS Flow
 (3) Thot (F) Loop 1 120 F
 Loop 2 120 F
 (2) Tcold (F) Loop 1A 119 F
 Loop 2A 120 F
 Loop 1B 120 F
 Loop 2B 119 F
 (5) Subcooling 281 F 247 PSIA
 (7) PCS WR Pressure (R) 249. PSIA
 (7) PCS NR Pressure (R) 249. PSIA
 (30) S/G A LEVEL WR 90. %
 (30) S/G A LEVEL (R) 90. %
 (30) S/G A PRESS 1. psia
 S/G A STM FLW (R) .0 X10**6 PPH
 S/G A FD FLW (R) .0 X10**6 PPH
 (30) S/G B LEVEL WR 87. %
 (30) S/G B LEVEL (R) 87. %
 (30) S/G B PRESS 13. psia
 S/G B STM FLW (R) .0 X10**6 PPH
 S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
 NO
 (20) Containment High Radiation
 NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1100
Time Jump

Scenario Time 0230
Scenario Time Jump

Message # 17

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump P-10A <u>OFF</u>	P-10B <u>OFF</u>	
Condensate Pump P-2A <u>OFF</u>	P-2B <u>OFF</u>	

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq 1-1	<u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1100
Time Jump

Scenario Time 0230
Scenario Time Jump

Message # 17

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp		<u>85.</u>	F
(10) VCT Pressure		<u>38.</u>	psi
(10) VCT Level		<u>94.</u>	%
PCP Control Bleedoff Pressure		<u>150</u>	psig
(26) Letdown Flow		<u>32.</u>	gpm
(26) Charging Flow		<u>40.</u>	gpm
(9) Quench Tank Temp		<u>102</u>	F
(9) Quench TANK Pressure		<u>-2.</u>	psig
(9) Quench TANK Level		<u>65.</u>	%
(7) Pressurizer Pressure (R)		<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u>	%
	LT0103	<u>96.6</u>	%
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>	
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>	
CHARGING PUMPS			
	P55A <u>ON</u>	P55B <u>OFF</u>	P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u>	P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16	<u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u>	F
	LOOP2 (TR-0121)	<u>119</u>	F
(25) REACTOR POWER LEVEL			
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u>	% NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u>	% NI8 <u>.12E-07</u> %
		NI-05 <u>.12E-07</u>	% NI-09
		NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>
(28) Control Rod Position	
GP1 <u>0.</u>	GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>.0</u>
GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
Stuck Rods	<u>NONE</u> <optional># <u>0</u>
Core Exit Temp	<u>120.0F</u>

Time 1115 Scenario Time 0245
 Time Jump Scenario Time Jump

Message # 18

140

C-13

Condensate Storage Tank Level T-2 89. %
 Instrument Air Pressure 100 psig
 (15) Containment Building Pressure -5. psig
 (16) S/G A Compartment Temperature 102 F
 S/G A COMPARTMENT Humidity 30. %
 (16) S/G B Compartment Temperature 93. F
 S/G B Humidity 30. %
 (16) Dome Temperature 102 F
 (11) SIRW Tank Level 0. %
 (15) WR Containment Pressure (R) 9. psia
 (14) Containment Sump Level 585 %
 (14) Containment Water Level (R) 0. %
 (22) SI Tank Level (%)
 A 40. B 39. C 39. D 39.
 SI Tank Pressure (psig)
 A 149 B 149 C 149 D 150
 (21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels

T53A 100. %
 T53B 10.6 %
 Reactor Vessel DP 16.8 psid
 (12) PORV Discharge Temperature 112 F
 (13) Pzr Safety Valve Discharge Temp (F)
 RV-1039 127 F
 RV-1040 142 F
 RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
 P-50C 678 P-50D 0.
 (6) PCS Flow
 (3) Thot (F) Loop 1 120 F
 Loop 2 120 F
 (2) Tcold (F) Loop 1A 119 F
 Loop 2A 120 F
 Loop 1B 120 F
 Loop 2B 119 F
 (5) Subcooling 281 F 247 PSIA
 (7) PCS WR Pressure (R) 249. PSIA
 (7) PCS NR Pressure (R) 249. PSIA
 (30) S/G A LEVEL WR 90. %
 (30) S/G A LEVEL (R) 90. %
 (30) S/G A PRESS 1. psia
 S/G A STM FLW (R) .0 X10**6 PPH
 S/G A FD FLW (R) .0 X10**6 PPH
 (30) S/G B LEVEL WR 87. %
 (30) S/G B LEVEL (R) 87. %
 (30) S/G B PRESS 13. psia
 S/G B STM FLW (R) .0 X10**6 PPH
 S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
 NO
 (20) Containment High Radiation
 NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1115
Time Jump

Scenario Time 0245
Scenario Time Jump

Message # 18

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1115
Time Jump

Scenario Time 0245
Scenario Time Jump

Message # 18

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT) <u>CLOSED</u>	CV-3030 (Sump) <u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A <u>97.</u>	%
	LT0103 <u>96.6</u>	%
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111) <u>119</u>	F
	LOOP2 (TR-0121) <u>119</u>	F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
---------------	---------------	---------------	---------------

GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
------------------	------------------

Stuck Rods NONE

<optional># 0

Core Exit Temp	<u>120.0F</u>
----------------	---------------

Time 1130 Scenario Time 0300
 Time Jump Scenario Time Jump

Message # 19 140

C-13

Condensate Storage Tank Level T-2 89. %
 Instrument Air Pressure 100 psig
 (15) Containment Building Pressure -5. psig
 (16) S/G A Compartment Temperature 102 F
 S/G A COMPARTMENT Humidity 30. %
 (16) S/G B Compartment Temperature 93. F
 S/G B Humidity 30. %
 (16) Dome Temperature 102 F
 (11) SIRW Tank Level 0. %
 (15) WR Containment Pressure (R) 9. psia
 (14) Containment Sump Level 585 %
 (14) Containment Water Level (R) 0. %
 (22) SI Tank Level (%)
 A 40. B 39. C 39. D 39.
 SI Tank Pressure (psig)
 A 149 B 149 C 149 D 150
 (21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels
 T53A 100. %
 T53B 10.6 %
 Reactor Vessel DP 16.8 psid
 (12) PORV Discharge Temperature 112 F
 (13) Pzr Safety Valve Discharge Temp (F)
 RV-1039 127 F
 RV-1040 142 F
 RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
 P-50C 678 P-50D 0.

(6) PCS Flow
 (3) Thot (F) Loop 1 120 F
 Loop 2 120 F
 (2) Tcold (F) Loop 1A 119 F
 Loop 2A 120 F
 Loop 1B 120 F
 Loop 2B 119 F
 (5) Subcooling 281 F 247 PSIA
 (7) PCS WR Pressure (R) 249. PSIA
 (7) PCS NR Pressure (R) 249. PSIA
 (30) S/G A LEVEL WR 90. %
 (30) S/G A LEVEL (R) 90. %
 (30) S/G A PRESS 1. psia
 S/G A STM FLW (R) .0 X10**6 PPH
 S/G A FD FLW (R) .0 X10**6 PPH
 (30) S/G B LEVEL WR 87. %
 (30) S/G B LEVEL (R) 87. %
 (30) S/G B PRESS 13. psia
 S/G B STM FLW (R) .0 X10**6 PPH
 S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
 NO
 (20) Containment High Radiation
 NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1130
Time Jump

Scenario Time 0300
Scenario Time Jump

Message # 19

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A	<u>OFF</u>	
P-8B	<u>OFF</u>	
P-8C	<u>OFF</u>	
Heater Drain Pump	<u>OFF</u>	
P-10A	<u>OFF</u>	
P-10B	<u>OFF</u>	
Condensate Pump	<u>OFF</u>	
P-2A	<u>OFF</u>	
P-2B	<u>OFF</u>	

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B	<u>0.</u>	
	From P-8C	<u>0.</u> gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B	<u>0.</u>	
	From P-8C	<u>0.</u> gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1	<u>60.</u>	1-2	<u>.0</u>
(32) 1-C BUS VOLTS		<u>2433</u>	Amps	<u>494</u>
(32) 1-D BUS VOLTS		<u>2482</u>	Amps	<u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

T S C	S T A T U S	P A G E
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

142

C-02

	P55A	<u>ON</u>	P55B	<u>OFF</u>	P55C	<u>OFF</u>	
(6) PCPS	P50A	<u>OFF</u>	P50B	<u>ON</u>	P50C	<u>ON</u>	P50D <u>OFF</u>
	PZR HTR	AMPS	LC15	<u>0.</u>	LCC 16	<u>0.</u>	
(1) PCS TAVE (R)	LOOP1	(TR-0111)		<u>119</u>	F		
	LOOP2	(TR-0121)		<u>119</u>	F		
(25) REACTOR POWER LEVEL							
NI1	<u>.18E+02</u>	cps	NI3	<u>.82E-08</u>	%	NI7	<u>.12E-07</u>
NI2	<u>.18E+02</u>	cps	NI4	<u>.80E-08</u>	%	NI8	<u>.12E-07</u>
			NI-05	<u>.12E-07</u>	%	NI-09	
			NI-06	<u>.11E-07</u>	%	NI-10	

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

```

Gross MW          0.
Net MW            0.
(28) Control Rod Position
GP1      0.  GP2      0.      GP3  0.      GP4  .0
GP6(A)  0.  GP7(B)  0.
Stuck Rods      NONE      <optional># 0
Core Exit Temp      120.0F

```

Time 1145 Scenario Time 0315
Time Jump Scenario Time Jump

Message # 20

140 -

C-13

Condensate Storage Tank Level T-2	89.	%	
Instrument Air Pressure	100	psig	
(15) Containment Building Pressure	-5.	psig	
(16) S/G A Compartment Temperature	102	F	
S/G A COMPARTMENT Humidity	30.	%	
(16) S/G B Compartment Temperature	93.	F	
S/G B Humidity	30.	%	
(16) Dome Temperature	102	F	
(11) SIRW Tank Level	0.	%	
(15) WR Containment Pressure (R)	9.	psia	
(14) Containment Sump Level	585	%	
(14) Containment Water Level (R)	0.	%	
(22) SI Tank Level (%)			
A 40.	B 39.	C 39.	D 39.
SI Tank Pressure (psig)			
A 149	B 149	C 149	D 150
(21) SIAS Alarm			NO

C-12

Concentrated Boric Acid Tank Levels			
	T53A	<u>100.</u>	%
	T53B	<u>10.6</u>	%
	Reactor Vessel DP	<u>16.8</u>	psid
(12)	PORV Discharge Temperature	<u>112</u>	F
(13)	Pzr Safety Valve Discharge Temp (F)		
	RV-1039	<u>127</u>	F
	RV-1040	<u>142</u>	F
	RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)			
P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
	S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
	S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1145
Time Jump

Scenario Time 0315
Scenario Time Jump

Message # 20

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1145
Time Jump

Scenario Time 0315
Scenario Time Jump

Message # 20

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1	<u>.18E+02</u> cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2	<u>.18E+02</u> cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>
(28) Control Rod Position	
GP1	<u>0.</u>
GP2	<u>0.</u>
GP3	<u>0.</u>
GP4	<u>0.</u>
GP6(A)	<u>0.</u>
GP7(B)	<u>0.</u>
Stuck Rods	<u>NONE</u>
Core Exit Temp	<optional># <u>0</u> <u>120.0F</u>

Time 1200
Time Jump

Scenario Time 0330
Scenario Time Jump

Message # 21

140

C-13

Condensate Storage Tank Level T-2 89. %
Instrument Air Pressure 100 psig
(15) Containment Building Pressure -5. psig
(16) S/G A Compartment Temperature 102 F
S/G A COMPARTMENT Humidity 30. %
(16) S/G B Compartment Temperature 93. F
S/G B Humidity 30. %
(16) Dome Temperature 102 F
(11) SIRW Tank Level 0. %
(15) WR Containment Pressure (R) 9. psia
(14) Containment Sump Level 585 %
(14) Containment Water Level (R) 0. %
(22) SI Tank Level (%)
A 40. B 39. C 39. D 39.
SI Tank Pressure (psig)
A 149 B 149 C 149 D 150
(21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels

T53A 100. %
T53B 10.6 %
Reactor Vessel DP 16.8 psid
(12) PORV Discharge Temperature 112 F
(13) Pzr Safety Valve Discharge Temp (F)
RV-1039 127 F
RV-1040 142 F
RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
P-50C 678 P-50D 0.
(6) PCS Flow
(3) Thot (F) Loop 1 120 F
Loop 2 120 F
(2) Tcold (F) Loop 1A 119 F
Loop 2A 120 F
Loop 1B 120 F
Loop 2B 119 F
(5) Subcooling 281 F 247 PSIA
(7) PCS WR Pressure (R) 249. PSIA
(7) PCS NR Pressure (R) 249. PSIA
(30) S/G A LEVEL WR 90. %
(30) S/G A LEVEL (R) 90. %
(30) S/G A PRESS 1. psia
S/G A STM FLW (R) .0 X10**6 PPH
S/G A FD FLW (R) .0 X10**6 PPH
(30) S/G B LEVEL WR 87. %
(30) S/G B LEVEL (R) 87. %
(30) S/G B PRESS 13. psia
S/G B STM FLW (R) .0 X10**6 PPH
S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO
(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1200
Time Jump

Scenario Time 0330
Scenario Time Jump

Message # 21

141

C-01

MFP Suction Pressure	15.	psig
MFP A Discharge Pressure	15.	psig
MFP B Discharge Pressure	15.	psig
AFW Pump P-8C Amperes	0.	AMPS
AFW Discharge Pressure P-8C	18.	psig
AFW Pump P-8A Amperes	0.	AMPS
AFW Pump P-8B Steam Pressure	0.	psig
AFW Discharge Pressure P-8A & P-8B	18.	psig
Moisture SEP Drain Tank Level	26.	%
Condensor Hotwell Level	70.	%
Condensor Vacuum	.0	in Hg.
Gland Seal Condensor Vacuum	14.2	in Hg.
Atmospheric Dump Valves	CLOSED	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1200
Time Jump

Scenario Time 0330
Scenario Time Jump

Message # 21

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
		NI-05 <u>.12E-07</u> % NI-09
		NI-06 <u>.11E-07</u> % NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>
(28) Control Rod Position	
GP1 <u>0.</u>	GP2 <u>0.</u> GP3 <u>0.</u> GP4 <u>.0</u>
GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
Stuck Rods	<u>NONE</u> <optional># <u>0</u>
Core Exit Temp	<u>120.0F</u>

Time 1215
Time Jump

Scenario Time 0345
Scenario Time Jump

Message # 22

140

C-13

Condensate Storage Tank Level T-2	<u>89.</u>	%
Instrument Air Pressure	<u>100</u>	psig
(15) Containment Building Pressure	<u>-5.</u>	psig
(16) S/G A Compartment Temperature	<u>102</u>	F
S/G A COMPARTMENT Humidity	<u>30.</u>	%
(16) S/G B Compartment Temperature	<u>93.</u>	F
S/G B Humidity	<u>30.</u>	%
(16) Dome Temperature	<u>102</u>	F
(11) SIRW Tank Level	<u>0.</u>	%
(15) WR Containment Pressure (R)	<u>9.</u>	psia
(14) Containment Sump Level	<u>585</u>	%
(14) Containment Water Level (R)	<u>0.</u>	%
(22) SI Tank Level (%)		
A <u>40.</u> B <u>39.</u> C <u>39.</u> D <u>39.</u>		
SI Tank Pressure (psig)		
A <u>149</u> B <u>149</u> C <u>149</u> D <u>150</u>		
(21) SIAS Alarm	<u>NO</u>	

C-12

Concentrated Boric Acid Tank Levels		
T53A	<u>100.</u>	%
T53B	<u>10.6</u>	%
Reactor Vessel DP	<u>16.8</u>	psid
(12) PORV Discharge Temperature	<u>112</u>	F
(13) Pzr Safety Valve Discharge Temp (F)		
RV-1039	<u>127</u>	F
RV-1040	<u>142</u>	F
RV-1041	<u>177</u>	F

C-12

PCP Current (Amps)			
P-50A	<u>0.</u>	P-50B	<u>667</u>
P-50C	<u>678</u>	P-50D	<u>0.</u>
(6) PCS Flow			
(3) Thot (F)	Loop 1	<u>120</u>	F
	Loop 2	<u>120</u>	F
(2) Tcold (F)	Loop 1A	<u>119</u>	F
	Loop 2A	<u>120</u>	F
	Loop 1B	<u>120</u>	F
	Loop 2B	<u>119</u>	F
(5) Subcooling		<u>281</u>	F <u>247</u> PSIA
(7) PCS WR Pressure (R)		<u>249.</u>	PSIA
(7) PCS NR Pressure (R)		<u>249.</u>	PSIA
(30) S/G A LEVEL WR		<u>90.</u>	%
(30) S/G A LEVEL (R)		<u>90.</u>	%
(30) S/G A PRESS		<u>1.</u>	psia
	S/G A STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G A FD FLW (R)	<u>.0</u>	X10**6 PPH
(30) S/G B LEVEL WR		<u>87.</u>	%
(30) S/G B LEVEL (R)		<u>87.</u>	%
(30) S/G B PRESS		<u>13.</u>	psia
	S/G B STM FLW (R)	<u>.0</u>	X10**6 PPH
	S/G B FD FLW (R)	<u>.0</u>	X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
NO

(20) Containment High Radiation
NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1215
Time Jump

Scenario Time 0345
Scenario Time Jump

Message # 22

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1215
Time Jump

Scenario Time 0345
Scenario Time Jump

Message # 22

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A	<u>97.</u> %
	LT0103	<u>96.6</u> %
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111)	<u>119</u> F
	LOOP2 (TR-0121)	<u>119</u> F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>.0</u>
---------------	---------------	---------------	---------------

GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
------------------	------------------

Stuck Rods	<u>NONE</u>	<optional># <u>0</u>
Core Exit Temp		<u>120.0F</u>

Time 1230 Scenario Time 0400
 Time Jump Scenario Time Jump

Message # 23 140

C-13

Condensate Storage Tank Level T-2 89. %
 Instrument Air Pressure 100 psig
 (15) Containment Building Pressure -5. psig
 (16) S/G A Compartment Temperature 102 F
 S/G A COMPARTMENT Humidity 30. %
 (16) S/G B Compartment Temperature 93. F
 S/G B Humidity 30. %
 (16) Dome Temperature 102 F
 (11) SIRW Tank Level 0. %
 (15) WR Containment Pressure (R) 9. psia
 (14) Containment Sump Level 585 %
 (14) Containment Water Level (R) 0. %
 (22) SI Tank Level (%)
 A 40. B 39. C 39. D 39.
 SI Tank Pressure (psig)
 A 149 B 149 C 149 D 150
 (21) SIAS Alarm NO

C-12

Concentrated Boric Acid Tank Levels

T53A 100. %
 T53B 10.6 %
 Reactor Vessel DP 16.8 psid
 (12) PORV Discharge Temperature 112 F
 (13) Pzr Safety Valve Discharge Temp (F)
 RV-1039 127 F
 RV-1040 142 F
 RV-1041 177 F

C-12

PCP Current (Amps)

P-50A 0. P-50B 667
 P-50C 678 P-50D 0.

(6) PCS Flow
 (3) Thot (F) Loop 1 120 F
 Loop 2 120 F
 (2) Tcold (F) Loop 1A 119 F
 Loop 2A 120 F
 Loop 1B 120 F
 Loop 2B 119 F
 (5) Subcooling 281 F 247 PSIA
 (7) PCS WR Pressure (R) 249. PSIA
 (7) PCS NR Pressure (R) 249. PSIA
 (30) S/G A LEVEL WR 90. %
 (30) S/G A LEVEL (R) 90. %
 (30) S/G A PRESS 1. psia
 S/G A STM FLW (R) .0 X10**6 PPH
 S/G A FD FLW (R) .0 X10**6 PPH
 (30) S/G B LEVEL WR 87. %
 (30) S/G B LEVEL (R) 87. %
 (30) S/G B PRESS 13. psia
 S/G B STM FLW (R) .0 X10**6 PPH
 S/G B FD FLW (R) .0 X10**6 PPH

PANEL K-13

(20) CONTAINMENT HIGH PRESS
 NO
 (20) Containment High Radiation
 NO

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1230
Time Jump

Scenario Time 0400
Scenario Time Jump

Message # 23

141

C-01

MFP Suction Pressure	<u>15.</u>	psig
MFP A Discharge Pressure	<u>15.</u>	psig
MFP B Discharge Pressure	<u>15.</u>	psig
AFW Pump P-8C Amperes	<u>0.</u>	AMPS
AFW Discharge Pressure P-8C	<u>18.</u>	psig
AFW Pump P-8A Amperes	<u>0.</u>	AMPS
AFW Pump P-8B Steam Pressure	<u>0.</u>	psig
AFW Discharge Pressure P-8A & P-8B	<u>18.</u>	psig
Moisture SEP Drain Tank Level	<u>26.</u>	%
Condensor Hotwell Level	<u>70.</u>	%
Condensor Vacuum	<u>.0</u>	in Hg.
Gland Seal Condensor Vacuum	<u>14.2</u>	in Hg.
Atmospheric Dump Valves	<u>CLOSED</u>	
AFW Pump P-8A <u>OFF</u>	P-8B <u>OFF</u>	P-8C <u>OFF</u>
Heater Drain Pump	P-10A <u>OFF</u>	P-10B <u>OFF</u>
Condensate Pump	P-2A <u>OFF</u>	P-2B <u>OFF</u>

C-11

(31) AFW FLOW TO SGA		
FROM P8A, B <u>0.</u>	From P-8C <u>0.</u>	gpm
(31) AFW FLOW TO SGB		
FROM P-8A&B <u>0.</u>	From P-8C <u>0.</u>	gpm
Condensor Vacuum (R)	<u>0.</u>	IN HG.
PCP A Leak-off Flow (R)	<u>1.0</u>	
PCP B Leak-off Flow (R)	<u>1.0</u>	
PCP C Leak-off Flow (R)	<u>1.0</u>	
PCP D Leak-off Flow (R)	<u>1.0</u>	

C-04

(32) D/G Freq	1-1 <u>60.</u>	1-2 <u>.0</u>
(32) 1-C BUS VOLTS	<u>2433</u>	Amps <u>494</u>
(32) 1-D BUS VOLTS	<u>2482</u>	Amps <u>45.</u>

C-11 BACK C-11A

(17) Containment Area Monitors		
RIA-1805	<u>.2E-01</u>	R/Hr
RIA-1806	<u>.2E-01</u>	R/Hr
RIA-1807	<u>.2</u>	R/Hr
RIA-1808	<u>.8E-01</u>	R/Hr
(17) High Range Containment Monitors		
RIA-2321	<u>.1E-01</u>	R/Hr
RIA-2322	<u>.1E-01</u>	R/Hr
(19) Containment Hydrogen Concentration		
AI-2401R	<u>0.</u>	%
AI-2401L	<u>0.</u>	%
(30) Main Steam Line Gamma		
RIA-2324	<u>.3E+02</u>	CPM
RIA-2323	<u>.2E+02</u>	CPM

EQUIPMENT STATUS:

1. SIGNIFICANT EQUIP OUTAGES
(INOPERABLE EQUIPMENT)
 2. SURVEILLANCE DUE/PROGRESS
 3. ABNORMAL ELECTRICAL LINEUPS
OR OUTAGES
-
-
-
-

SHAVPAL1
PALEX 93

T S C S T A T U S P A G E

Time 1230
Time Jump

Scenario Time 0400
Scenario Time Jump

Message # 23

142

C-08

SW Pumps	P-7A <u>ON</u>	P-7B <u>ON</u>	P-7C <u>STBY</u>
CCW Pumps	P-52A <u>ON</u>	P-52B <u>ON</u>	P-52C <u>STBY</u>
FPC Pumps	P-51A <u>OFF</u>	P-51B <u>ON</u>	

CONTAINMENT COOLER RECIRC FANS

V1A <u>OFF</u>	V2A <u>OFF</u>	V3A <u>OFF</u>	V4A <u>ON</u>
V1B <u>OFF</u>	V2B <u>OFF</u>	V3B <u>ON</u>	V4B <u>ON</u>

C-03

(23) HPSI Pumps	P-66A <u>OFF</u>	P-66B <u>OFF</u>
(25) LPSI Pumps	P-67A <u>OFF</u>	P-67B <u>ON</u>
(18) Containment Spray Pumps		
	P-54A <u>OFF</u>	P-54B <u>OFF</u> P-54C <u>OFF</u>
(27) HPSIA, LPSIA, SPRAY A SUCTION		
	CV-3057 (SIRWT)	CV-3030 (Sump)
	<u>CLOSED</u>	<u>CLOSED</u>

C-02

Intermediate Press Letdown Temp	<u>98.</u>	F
Charging Line Temperature	<u>91.</u>	F
Letdown Line Temp	<u>105</u>	F
SDCS from PCS (R)	<u>120</u>	F
SDCS to PCS (R)	<u>73.</u>	F

C-02

(10) VCT Temp	<u>85.</u>	F
(10) VCT Pressure	<u>38.</u>	psi
(10) VCT Level	<u>94.</u>	%
PCP Control Bleedoff Pressure	<u>150</u>	psig
(26) Letdown Flow	<u>32.</u>	gpm
(26) Charging Flow	<u>40.</u>	gpm
(9) Quench Tank Temp	<u>102</u>	F
(9) Quench TANK Pressure	<u>-2.</u>	psig
(9) Quench TANK Level	<u>65.</u>	%
(7) Pressurizer Pressure (R)	<u>249.</u>	psia
(8) PZR Level (R)	LT0102A <u>97.</u>	%
	LT0103 <u>96.6</u>	%
(12) PORV	PRV-1042A <u>CLOSED</u>	1043B <u>CLOSED</u>
(12) BLOCK	MOV-1042A <u>OPEN</u>	1043A <u>OPEN</u>
CHARGING PUMPS		
	P55A <u>ON</u>	P55B <u>OFF</u> P55C <u>OFF</u>
(6) PCPS	P50A <u>OFF</u>	P50B <u>ON</u> P50C <u>ON</u> P50D <u>OFF</u>
PZR HTR AMPS	LC15 <u>0.</u>	LCC 16 <u>0.</u>
(1) PCS TAVE (R)	LOOP1 (TR-0111) <u>119</u>	F
	LOOP2 (TR-0121) <u>119</u>	F
(25) REACTOR POWER LEVEL		
NI1 <u>.18E+02</u>	cps	NI3 <u>.82E-08</u> % NI7 <u>.12E-07</u> %
NI2 <u>.18E+02</u>	cps	NI4 <u>.80E-08</u> % NI8 <u>.12E-07</u> %
	NI-05 <u>.12E-07</u>	% NI-09
	NI-06 <u>.11E-07</u>	% NI-10

PIP

(DEMAND LOG+CONSTANT, ROD, OR FLUX/TEMP)

Gross MW	<u>0.</u>
Net MW	<u>0.</u>

(28) Control Rod Position

GP1 <u>0.</u>	GP2 <u>0.</u>	GP3 <u>0.</u>	GP4 <u>0.</u>
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GP6(A) <u>0.</u>	GP7(B) <u>0.</u>
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Stuck Rods NONE

<optional># 0

Core Exit Temp	<u>120.0F</u>
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CFMS RADIATION DATA

SCENARIO TIME: -0030

TIME: 0800

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .020 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 60 CPM

RIA-2327 .2 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 .28 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0000

TIME: 0830

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 60 CPM

RIA-2327 .2 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS
122 CPM

*RADWASTE PLENUM
160 CPM

*EESG RAD
120 CPM

*WESG RAD
400 CPM

RADWASTE VENT
15 CPM

SFP NORTH
5709 .28 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0015

TIME: 0845

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 8000 MR/HR

SCENARIO TIME: 0030

TIME: 0900

LIQUID RADIATION
MONITORS

*COMPONENT COOLING

WATER 0915
150 CPM

SERVICE WATER
0833

600 CPM

RADWASTE DISCHG
1049

870 CPM

STM GEN BLOWDOWN
0707

1410 CPM

*MIXING BASIN

1323
120 CPM

*FAILED FUEL

0202B
10 CPM

MAIN STEAM A 2324

23 CPM

MAIN STEAM B 2323

25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD

MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH

5709 005 MR/HR

SFP SOUTH

2313 16000 MR/HR

SCENARIO TIME: 0045

TIME: 0915

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 32000 MR/HR

SCENARIO TIME: 0100

TIME: 0930

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 64000 MR/HR

SCENARIO TIME: 0115

TIME: 0945

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 3.2000 MR/HR

SCENARIO TIME: 0130

TIME: 1000

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 16000 MR/HR

SCENARIO TIME: 0145

TIME: 1015

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 4000 MR/HR

SCENARIO TIME: 0200

TIME: 1030

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 1000 MR/HR

SCENARIO TIME: 0215

TIME: 1045

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 500 MR/HR

SCENARIO TIME: 0230

TIME: 1100

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0245

TIME: 1115

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0300

TIME: 1130

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915

150 CPM

SERVICE WATER
0833

600 CPM

RADWASTE DISCHG
1049

870 CPM

STM GEN BLOWDOWN
0707

1410 CPM

*MIXING BASIN
1323

120 CPM

*FAILED FUEL
0202B

10 CPM

MAIN STEAM A 2324

23 CPM

MAIN STEAM B 2323

25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD

MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH

5709 005 MR/HR

SFP SOUTH

2313 .52 MR/HR

SCENARIO TIME: 0315

TIME: 1145

LIQUID RADIATION
MONITORS

*COMPONENT COOLING
WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS
122 CPM

*RADWASTE PLENUM
160 CPM

*EESG RAD
120 CPM

*WESG RAD
400 CPM

RADWASTE VENT
15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0330

TIME: 1200

LIQUID RADIATION
MONITORS

*COMPONENT COOLING

WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0345

TIME: 1215

LIQUID RADIATION
MONITORS

*COMPONENT COOLING

WATER 0915
150 CPM

SERVICE WATER
0833
600 CPM

RADWASTE DISCHG
1049
870 CPM

STM GEN BLOWDOWN
0707
1410 CPM

*MIXING BASIN
1323
120 CPM

*FAILED FUEL
0202B
10 CPM

MAIN STEAM A 2324
23 CPM

MAIN STEAM B 2323
25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

T-60E L 50 %

RIA-2326 005 CPM

RIA-2327 005 MR/HR

BACKUP STACK

RIA-2318 005 CPM

RIA-2319 005 CPM

CONTROL ROOM RAD
MON .1 MR/HR

COND OFF GAS

122 CPM

*RADWASTE PLENUM

160 CPM

*EESG RAD

120 CPM

*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH
5709 005 MR/HR

SFP SOUTH
2313 .52 MR/HR

SCENARIO TIME: 0400

TIME: 1230

LIQUID RADIATION
MONITORS

*COMPONENT COOLING

WATER 0915

150 CPM

SERVICE WATER

0833

600 CPM

RADWASTE DISCHG

1049

870 CPM

STM GEN BLOWDOWN

0707

1410 CPM

*MIXING BASIN

1323

120 CPM

*FAILED FUEL

0202B

10 CPM

MAIN STEAM A 2324

23 CPM

MAIN STEAM B 2323

25 CPM

*DECADE DEPENDENT
ON CR SWITCH POSITION

RADIOLOGICAL

FUEL HANDLING AREAS

MON 1 005 MR/HR

MON 2 005 MR/HR

CONTAINMENT ISOLATION

RIA-1805 .20 R/HR

RIA-1806 .019 R/HR

RIA-1807 .120 R/HR

RIA-1808 .080 R/HR

HI RANGE L 1 R/HR

HI RANGE R 1 R/HR

DIRTY WASTE DRAIN TANKS

T-60W L 50 %

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RIA-2326 005 CPM

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BACKUP STACK

RIA-2318 005 CPM

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CONTROL ROOM RAD

MON .1 MR/HR

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*WESG RAD

400 CPM

RADWASTE VENT

15 CPM

SFP NORTH

5709 005 MR/HR

SFP SOUTH

2313 .52 MR/HR

RADIATION MONITOR DATA

TIME	EAST SAFEGRDS	RH SERV CORRIDOR	RW CONTROL AREA	2.4 kV SWITCH GEAR	CONTROL'D LAB CORRIDOR	ACCESS CONTROL STATION	PERS AIRLOCK OUTSIDE	CONT PURGE UNIT RM NORTH	RW DEMIN RM FOOF	OUTSIDE CTRL RM CORRIDOR	CTRL RM MAIN ENTRANCE	EAST TURB OP FLOOR	OLD LUNCH ROOM	SPENT FUEL POOL RM
	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h
	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313
08:00 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.03	0.4	0.4	0.52
08:15 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.03	0.4	0.4	0.52
08:30 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	0.4	0.2	.03	0.4	0.4	0.52
08:45 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	8000
09:00 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	16000
09:15 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	32000
09:30 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	64000
09:45 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	32000
10:00 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	16000
10:15 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	4000
10:30 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	1000
10:45 AM	7	0.8	0.8	1	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	500
11:00 AM	7	0.8	0.8	1.5	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
11:15 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
11:30 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
11:45 AM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
12:00 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
12:15 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
12:30 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
12:45 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
01:00 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
01:15 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
01:30 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
01:45 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
02:00 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
02:15 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52
02:30 PM	7	0.8	0.8	2	0.9	0.2	.07	.11	1.0	0.2	.03	0.4	0.4	0.52

TIME	590' AIR RM	AIRLOCK INSIDE CONT	CONT RAD MON	CONT RAD MON	CONT RAD MON	CONT RAD MON
	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h
	2314	2315	1805	1806	1807	1808
08:00 AM	3.1	2.7	20	19	120	80
08:15 AM	3.1	2.7	20	19	120	80
08:30 AM	3.1	2.7	20	19	120	80
08:45 AM	3.1	2.7	20	19	120	80
09:00 AM	3.1	2.7	20	19	120	80
09:15 AM	3.1	2.7	20	19	120	80
09:30 AM	3.1	2.7	20	19	120	80
09:45 AM	3.1	2.7	20	19	120	80
10:00 AM	3.1	2.7	20	19	120	80
10:15 AM	3.1	2.7	20	19	120	80
10:30 AM	3.1	2.7	20	19	120	80
10:45 AM	3.1	2.7	20	19	120	80
11:00 AM	3.1	2.7	20	19	120	80
11:15 AM	3.1	2.7	20	19	120	80
11:30 AM	3.1	2.7	20	19	120	80
11:45 AM	3.1	2.7	20	19	120	80
12:00 PM	3.1	2.7	20	19	120	80
12:15 PM	3.1	2.7	20	19	120	80
12:30 PM	3.1	2.7	20	19	120	80
12:45 PM	3.1	2.7	20	19	120	80
01:00 PM	3.1	2.7	20	19	120	80
01:15 PM	3.1	2.7	20	19	120	80
01:30 PM	3.1	2.7	20	19	120	80
01:45 PM	3.1	2.7	20	19	120	80
02:00 PM	3.1	2.7	20	19	120	80
02:15 PM	3.1	2.7	20	19	120	80
02:30 PM	3.1	2.7	20	19	120	80

TIME	DECON ROOM	EVAP A	EVAP B	EVAP CONTROL PANEL	RW DECAY TANKS	CONTROL'D LAB CORRIDOR	RW PACKAGING AREA NO	RW PACKAGING AREA WEST	SPENT FUEL POOL CRITICALITY	EXHAUST FAN DUCT	RW ADDITION VENT	FUEL HANDLING RM VENT
	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	mR/h	cpm	cpm
	5701	5702	5703	5704	5705	5706	5707	5708	5709	5710	5711	5712
08:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.28	.1	15	75
08:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.28	.1	15	75
08:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	0.28	.1	15	00S
08:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
09:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
09:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
09:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
09:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
10:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
10:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
10:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
10:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
11:00 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
11:15 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
11:30 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
11:45 AM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
12:00 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
12:15 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
12:30 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
12:45 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
01:00 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
01:15 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
01:30 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
01:45 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
02:00 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
02:15 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S
02:30 PM	0.3	0.35	10	.13	0.2	0.9	.25	.01	00S	.1	00S	00S

TIME	SERVICE WATER DISCHARGE	STEAM GENERATOR BLOWDOWN	COMPONENT COOLING WATER	CIRC WATER DISCHARGE	LIQUID RW MONITOR	TURB BLDG SUMP
	cpm	cpm	cpm	cpm	cpm	cpm
	0833	0707	0915	1323	1049	5211
08:00 AM	600	1410	150	120	870	150
08:15 AM	600	1410	150	120	870	150
08:30 AM	600	1410	150	120	870	150
08:45 AM	600	1410	150	120	870	150
09:00 AM	600	1410	150	120	870	150
09:15 AM	600	1410	150	120	870	150
09:30 AM	600	1410	150	120	870	150
09:45 AM	600	1410	150	120	870	150
10:00 AM	600	1410	150	120	870	150
10:15 AM	600	1410	150	120	870	150
10:30 AM	600	1410	150	120	870	150
10:45 AM	600	1410	150	120	870	150
11:00 AM	600	1410	150	120	870	150
11:15 AM	600	1410	150	120	870	150
11:30 AM	600	1410	150	120	870	150
11:45 AM	600	1410	150	120	870	150
12:00 PM	600	1410	150	120	870	150
12:15 PM	600	1410	150	120	870	150
12:30 PM	600	1410	150	120	870	150
12:45 PM	600	1410	150	120	870	150
01:00 PM	600	1410	150	120	870	150
01:15 PM	600	1410	150	120	870	150
01:30 PM	600	1410	150	120	870	150
01:45 PM	600	1410	150	120	870	150
02:00 PM	600	1410	150	120	870	510
02:15 PM	600	1410	150	120	870	150
02:30 PM	600	1410	150	120	870	150

TIME	IODINE/ PART GAS EFF	NORMAL NOBLE GAS EFFLUENT	HIGH RANGE NOBLE GAS	MAIN STEAM GAMMA B	MAIN STEAM GAMMA A	CONT HIGH RANGE	CONT HIGH RANGE	FAILED FUEL MONITOR	HIGH RANGE EFFLUENT MONITOR
	cpm	cpm	mR/h	cpm	cpm	R/h	R/h	%	mR/h
	2325	2326	2327	2323	2324	2321	2322	0202	(RAD GUN)
08:00 AM	300	60	0.2	25	23	1	1	10	BKG
08:15 AM	300	60	0.2	25	23	1	1	10	BKG
08:30 AM	300	60	0.2	25	23	1	1	10	BKG
08:45 AM	00S	00S	00S	25	23	1	1	10	BKG
09:00 AM	00S	00S	00S	25	23	1	1	10	BKG
09:15 AM	00S	00S	00S	25	23	1	1	10	BKG
09:30 AM	00S	00S	00S	25	23	1	1	10	BKG
09:45 AM	00S	00S	00S	25	23	1	1	10	BKG
10:00 AM	00S	00S	00S	25	23	1	1	10	BKG
10:15 AM	00S	00S	00S	25	23	1	1	10	BKG
10:30 AM	00S	00S	00S	25	23	1	1	10	BKG
10:45 AM	00S	00S	00S	25	23	1	1	10	BKG
11:00 AM	00S	00S	00S	25	23	1	1	10	BKG
11:15 AM	00S	00S	00S	25	23	1	1	10	BKG
11:30 AM	00S	00S	00S	25	23	1	1	10	BKG
11:45 AM	00S	00S	00S	25	23	1	1	10	BKG
12:00 PM	00S	00S	00S	25	23	1	1	10	BKG
12:15 PM	00S	00S	00S	25	23	1	1	10	BKG
12:30 PM	00S	00S	00S	25	23	1	1	10	BKG
12:45 PM	00S	00S	00S	25	23	1	1	10	BKG
01:00 PM	00S	00S	00S	25	23	1	1	10	BKG
01:15 PM	00S	00S	00S	25	23	1	1	10	BKG
01:30 PM	00S	00S	00S	25	23	1	1	10	BKG
01:45 PM	00S	00S	00S	25	23	1	1	10	BKG
02:00 PM	00S	00S	00S	25	23	1	1	10	BKG
02:15 PM	00S	00S	00S	25	23	1	1	10	BKG
02:30 PM	00S	00S	00S	25	23	1	1	10	BKG

	STACK GAS GROSS ACTIVITY	STACK GAS SINGLE ISOTOPE	RW VENT	EAST SAFEGRDS VENT	WEST SAFEGRDS VENT	CONT BLDG GAS MONITOR	WASTE GAS MONITOR	CONDENSER OFFGAS	BLOWDOWN TANK VENT MONITOR
	cpm	cpm	cpm	cpm	cpm	cpm	cpm	cpm	cpm
TIME	2318	2319	1809	1810	1811	1817	1113	0631	2320
08:00 AM	00S	00S	160	120	400	3900	<100	122	400
08:15 AM	00S	00S	160	120	400	3900	<100	122	400
08:30 AM	00S	00S	160	120	400	3900	<100	122	400
08:45 AM	00S	00S	160	120	400	3900	<100	122	400
09:00 AM	00S	00S	160	120	400	3900	<100	122	400
09:15 AM	00S	00S	160	120	400	3900	,100	122	400
09:30 AM	00S	00S	160	120	400	3900	<100	122	400
09:45 AM	00S	00S	160	120	400	3900	<100	122	400
10:00 AM	00S	00S	160	120	400	3900	<100	122	400
10:15 AM	00S	00S	160	120	400	3900	<100	122	400
10:30 AM	00S	00S	160	120	400	3900	<100	122	400
10:45 AM	00S	00S	160	120	400	3900	<100	122	400
11:00 AM	00S	00S	160	120	400	3900	<100	122	400
11:15 AM	00S	00S	160	120	400	3900	<100	122	400
11:30 AM	00S	00S	160	120	400	3900	<100	122	400
11:45 AM	00S	00S	160	120	400	3900	<100	122	400
12:00 PM	00S	00S	160	120	400	3900	<100	122	400
12:15 PM	00S	00S	160	120	400	3900	<100	122	400
12:30 PM	00S	00S	160	120	400	3900	<100	122	400
12:45 PM	00S	00S	160	120	400	3900	<100	122	400
01:00 PM	00S	00S	160	120	400	3900	<100	122	400
01:15 PM	00S	00S	160	120	400	3900	<100	122	400
01:30 PM	00S	00S	160	120	400	3900	<100	122	400
01:45 PM	00S	00S	160	120	400	3900	<100	122	400
02:00 PM	00S	00S	160	120	400	3900	<100	122	400
02:15 PM	00S	00S	160	120	400	3900	<100	122	400
02:30 PM	00S	00S	160	120	400	3900	<100	122	400

INPLANT RADIATION DATA

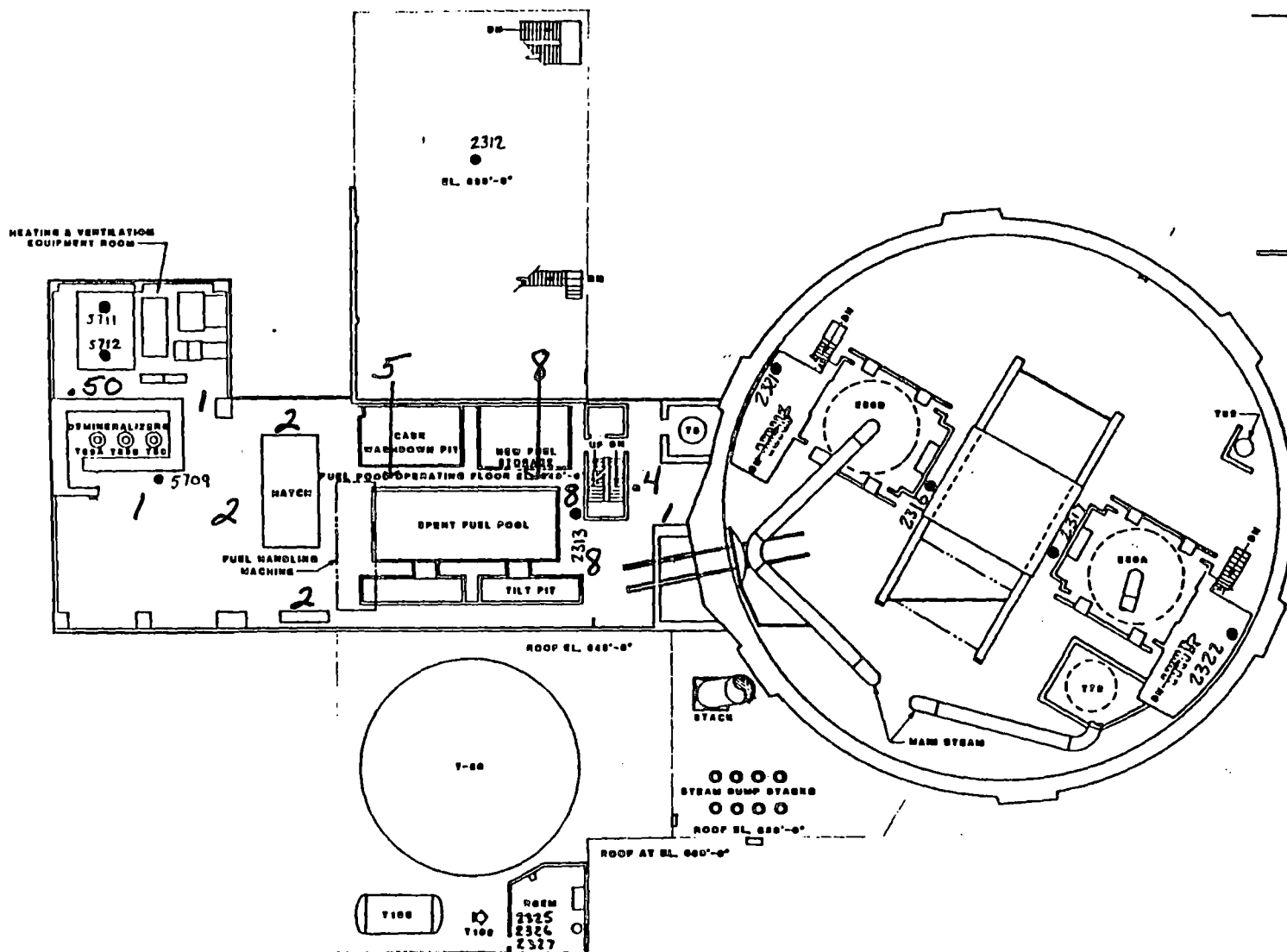
INPLANT RADIATION DATA

The following plant drawings contain developed radiation data to support the scenario:

<u>Elevation 647'</u>	<u>Scenario Time</u>	<u>Time</u>
	0015	0845
	0030	0900
	0045	0915
	0100	0930
	0115	0945
	0130	1000
	0145	1015
	0200	1030
	0215	1045

<u>Elevation 590'</u>	<u>Scenario Time</u>	<u>Time</u>
	0230	1100
	0245	1115
	0300	1130
	0315	1145
	0330	1200
	0345	1215
	0400	1230

ALL OTHER AREA READINGS NOT LISTED ABOVE OR INCLUDED WILL BE REPORTED AS 'AS FOUND.'



COMPONENT DESIGNATIONS	
EL. 640'-0"	
Y68	SHIELD COOLING SURGE TANK
FUEL POOL OPERATING FLOOR	
TS	COMPONENT COOLING WATER SURGE TANK
DEMINERALIZER RW & ACCESS TO	
T100	SPENT RESIN STORAGE TANK
Y68A & B	WATER DEMINERALIZERS
Y68	POLISHING DEMINERALIZER
EL. 643'-0"	
ROOF	
Y68	SAFETY INJECTION
Y68	RECKLING WATER TANK
Y68	IN REMOVAL MAKEUP H2O TANK
Y68	IN REMOVAL H2O TANK
ROOF	RADIOACTIVE GASEOUS EFFLUENT
MONITORING SYSTEM	

ALL FIGURES ARE R/HR unless specified otherwise.

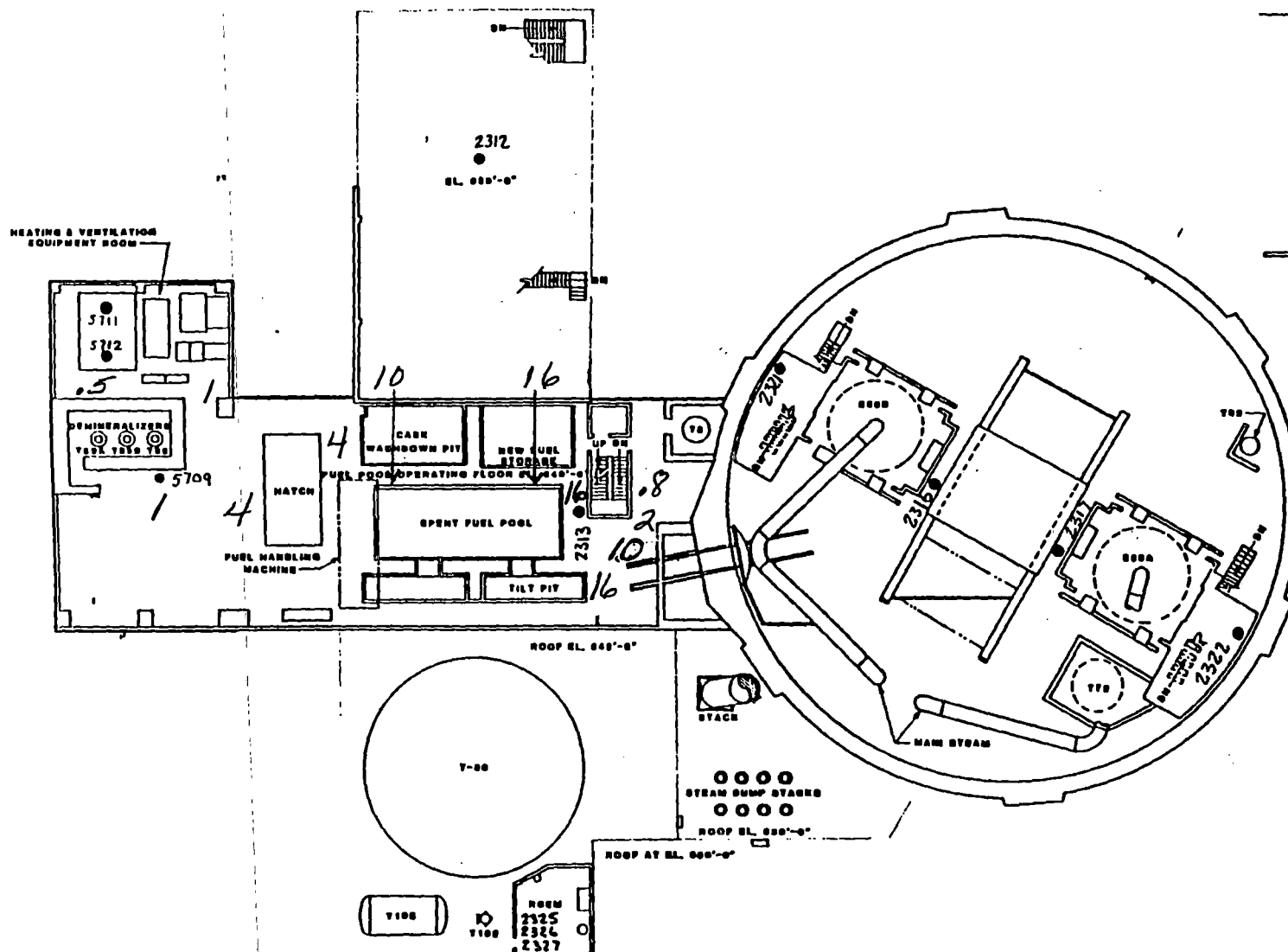
Scenario Time: 0015

Time: 0845

CONSUMERS POWER COMPANY

PALISADES PLANT

647'



COMPONENT DESIGNATIONS	
EL. 645'-0"	
T20	SHIELD COOLING SURGE TANK
FUEL POOL OPERATING FLOOR	
T2	COMPONENT COOLING WATER SURGE TANK
DEMINERALIZER RM & ACCESS YD	
T100	SPENT RESIN STORAGE TANK
T204 & T205	WIDE WATER DEMINERALIZERS
T20	POLISHING DEMINERALIZER
EL. 643'-0"	
ROOF	
T20	SAFETY INJECTION
T20	REFRESHING WATER TANK
T100	W REMOVAL MAKEUP ROOM TANK
T100	W REMOVAL ROOM TANK
ROOM	HAZARDOUS WASTE EFFLUENT MONITORING AVAIL

ALL FIGURES ARE R/HR unless specified otherwise.

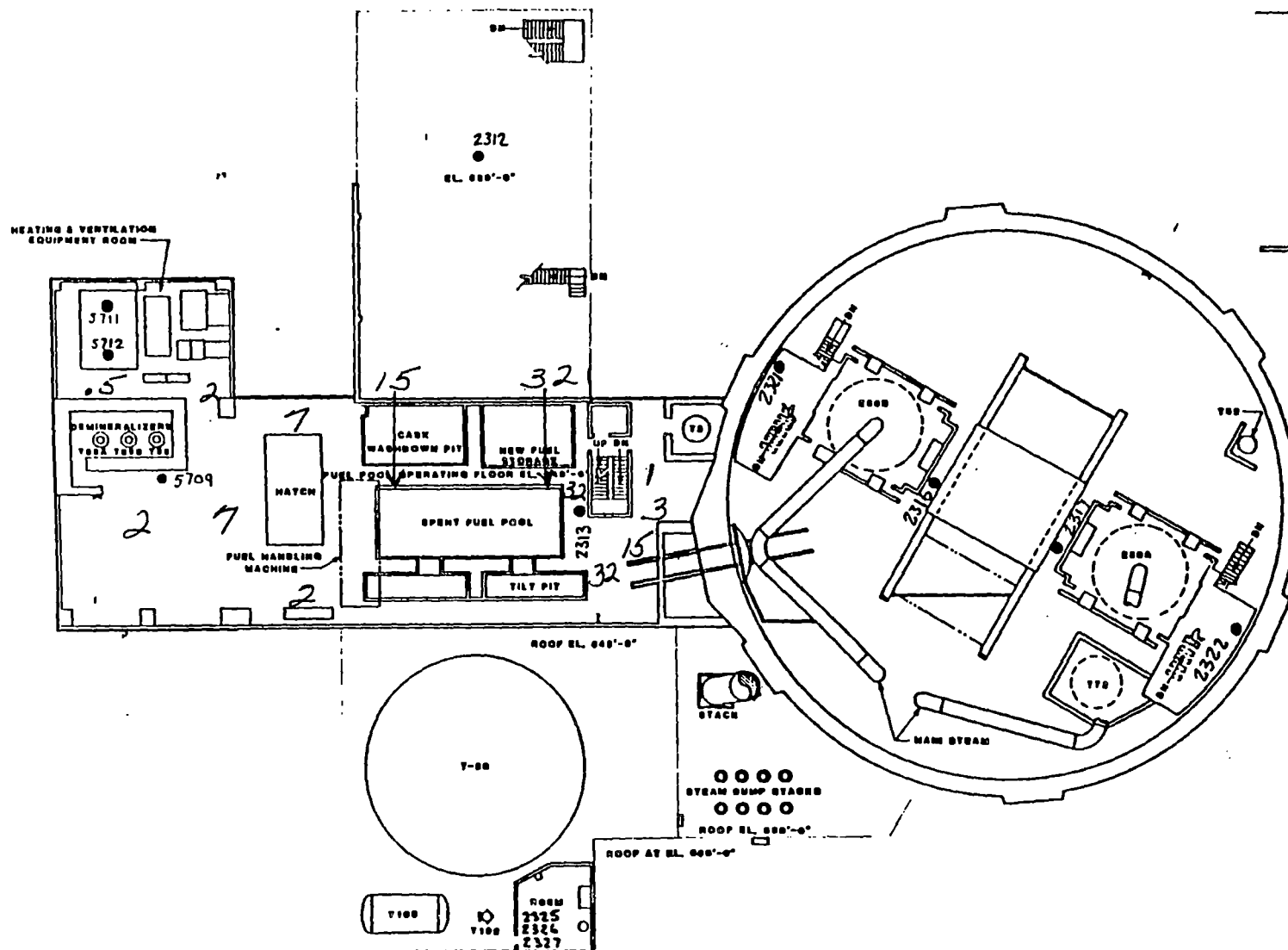
Scenario Time: 0030

Time: 0900

CONSUMERS POWER COMPANY

PALISADES PLANT

647'



COMPONENT DESIGNATIONS	
	EL. 640'-0"
Y88	SHIELD COOLING SURGE TANK
	FUEL POOL OPERATING FLOOR
TS	COMPONENT COOLING WATER SURGE TANK
	DEMINEALIZER RM & ACCESS TO
Y100	SPENT RESIN STORAGE TANK
Y89A & B	WMS WATER DEMINEALIZERS
Y89	POLISHING DEMINEALIZER
	EL. 645'-0"
	ROOF
Y89	SAFETY INJECTION
	DEMINEALIZER WATER TANK
Y105	W REMOVAL MAKEUP H ₂ O TANK
Y106	W REMOVAL H ₂ O TANK
ROOM	RADIOACTIVE GASEOUS EFFLUENT
	MONITORING SYSTEM

ALL FIGURES ARE R/HR unless specified otherwise.

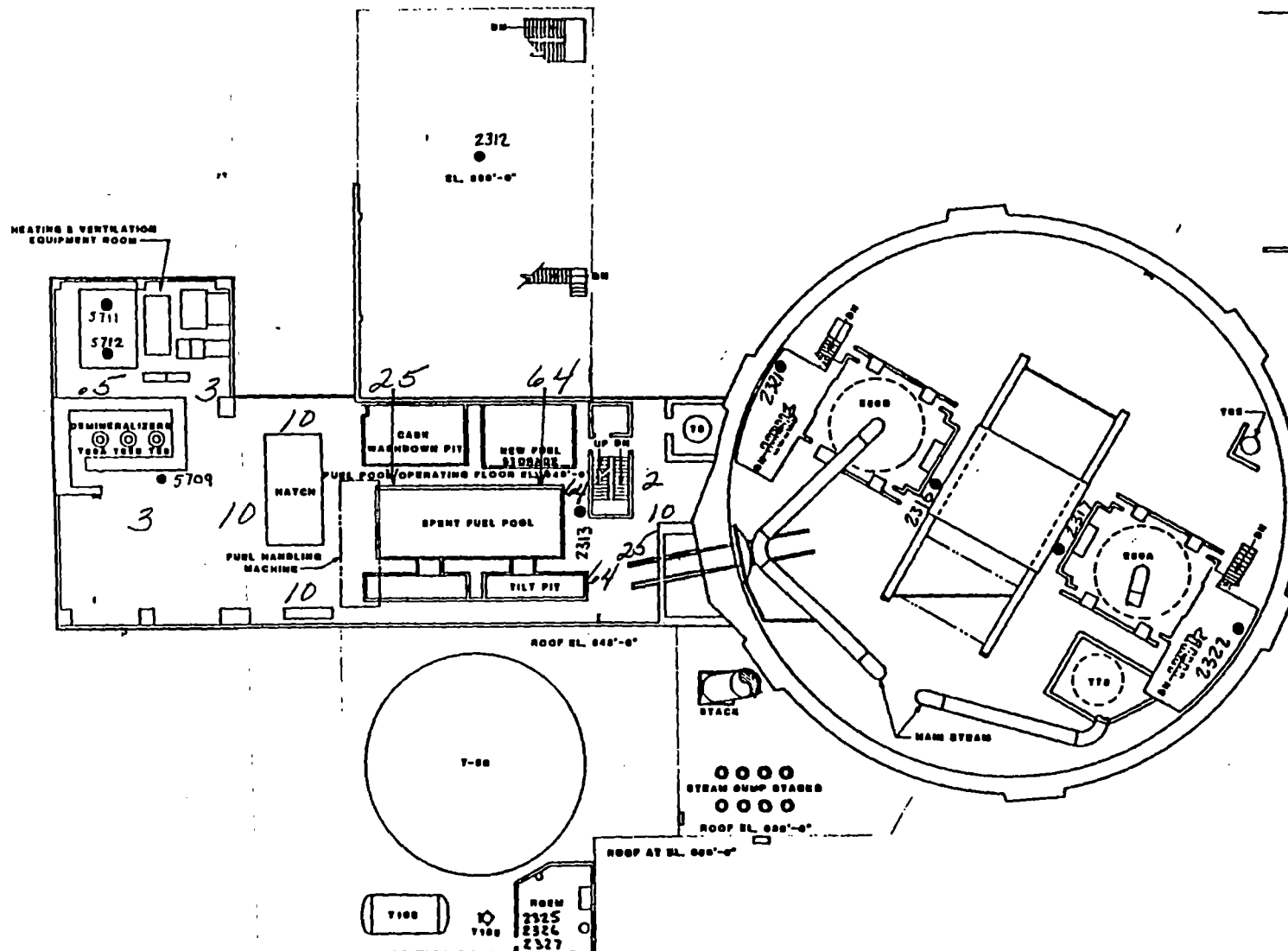
Scenario Time: 0045

Time: 0915

CONSUMERS POWER COMPANY

PALISADES PLANT

647'



COMPONENT DESIGNATIONS	
	EL. 645'-0"
Y00	SHIELD COOLING SURGE TANK
	FUEL POOL OPERATING FLOOR
Y0	COMPONENT COOLING WATER SURGE TANK
	DEMINEALIZER RM & ACCESS Y0
Y100	SPENT RESIN STORAGE TANK
Y00A & B	WMS WATER DEMINEALIZERS
Y00	POLISHING DEMINEALIZER
	EL. 645'-0"
	ROOF
Y00	SAFETY INJECTION
Y00	REFUELING WATER TANK
Y100	1/2 REMOVAL MAKEUP ROOM TANK
Y100	1/2 REMOVAL ROOM TANK
ROOM	RADIOACTIVE GASEOUS EFFLUENT MONITORING SYSTEM

ALL FIGURES ARE R/HR unless specified otherwise.

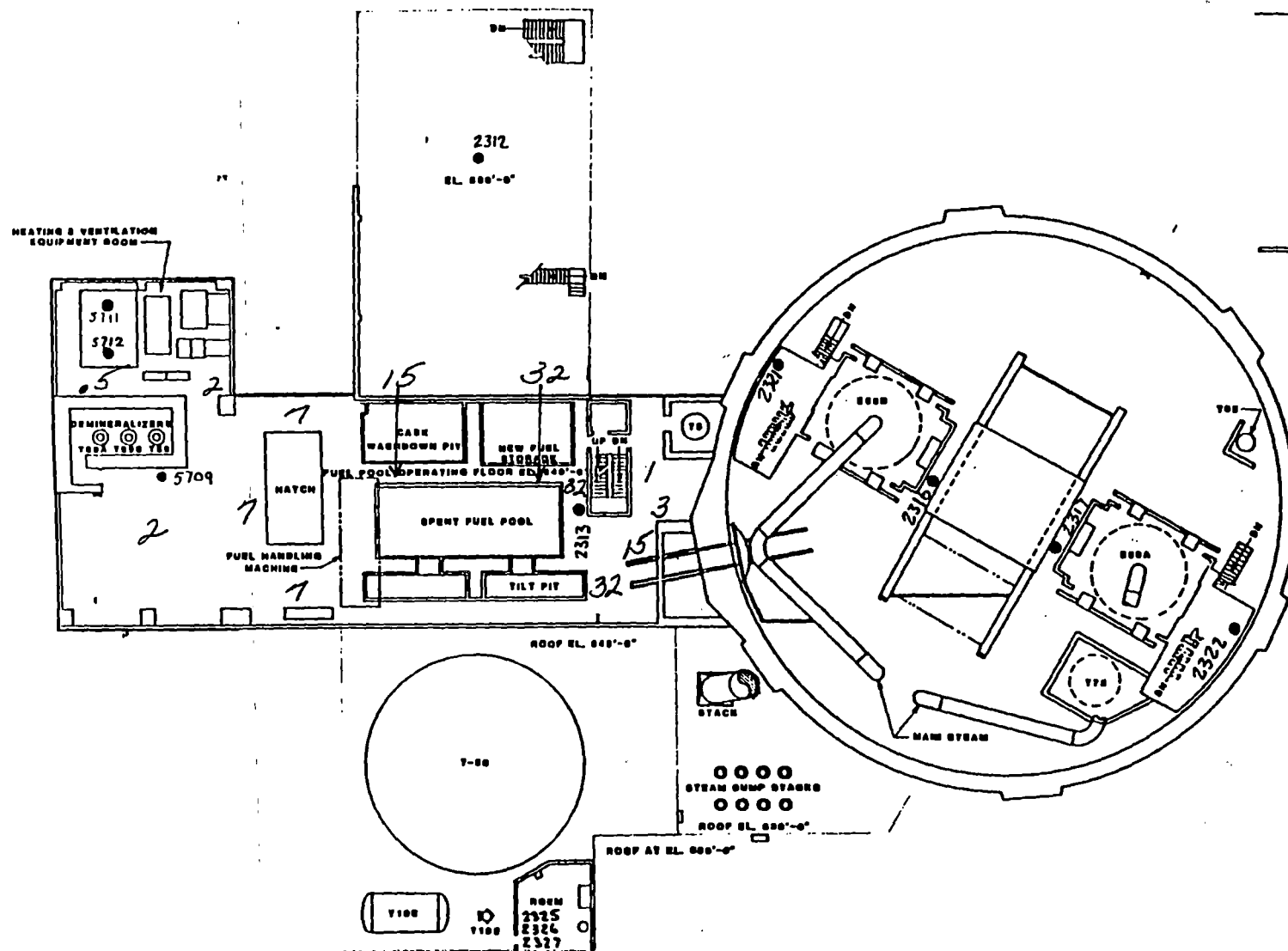
Scenario Time: 0100

Time: 0930

CONSUMERS POWER COMPANY

PALISADES PLANT

647'



COMPONENT DESIGNATIONS	
EL. 646'-0"	
700	SHIELD COOLING SURGE TANK
FUEL POOL OPERATING FLOOR	
70	COMPONENT COOLING WATER SURGE TANK
DEMINEALIZER RM & ACCESS TO	
7100	SPENT RESIN STORAGE TANK
700A & C	WASH WATER DEMINEALIZERS
700	POLISHING DEMINEALIZER
EL. 645'-0"	
ROOF	
700	SAFETY INJECTION
7100	DECONTAMINATING WATER TANK
7100	W REMOVAL MAKEUP ROOM TANK
7100	W REMOVAL ROOM TANK
7100	RADIOACTIVE WASTEWATER EFFLUENT
ROOM	MONITORING SYSTEM

ALL FIGURES ARE R/HR unless specified otherwise.

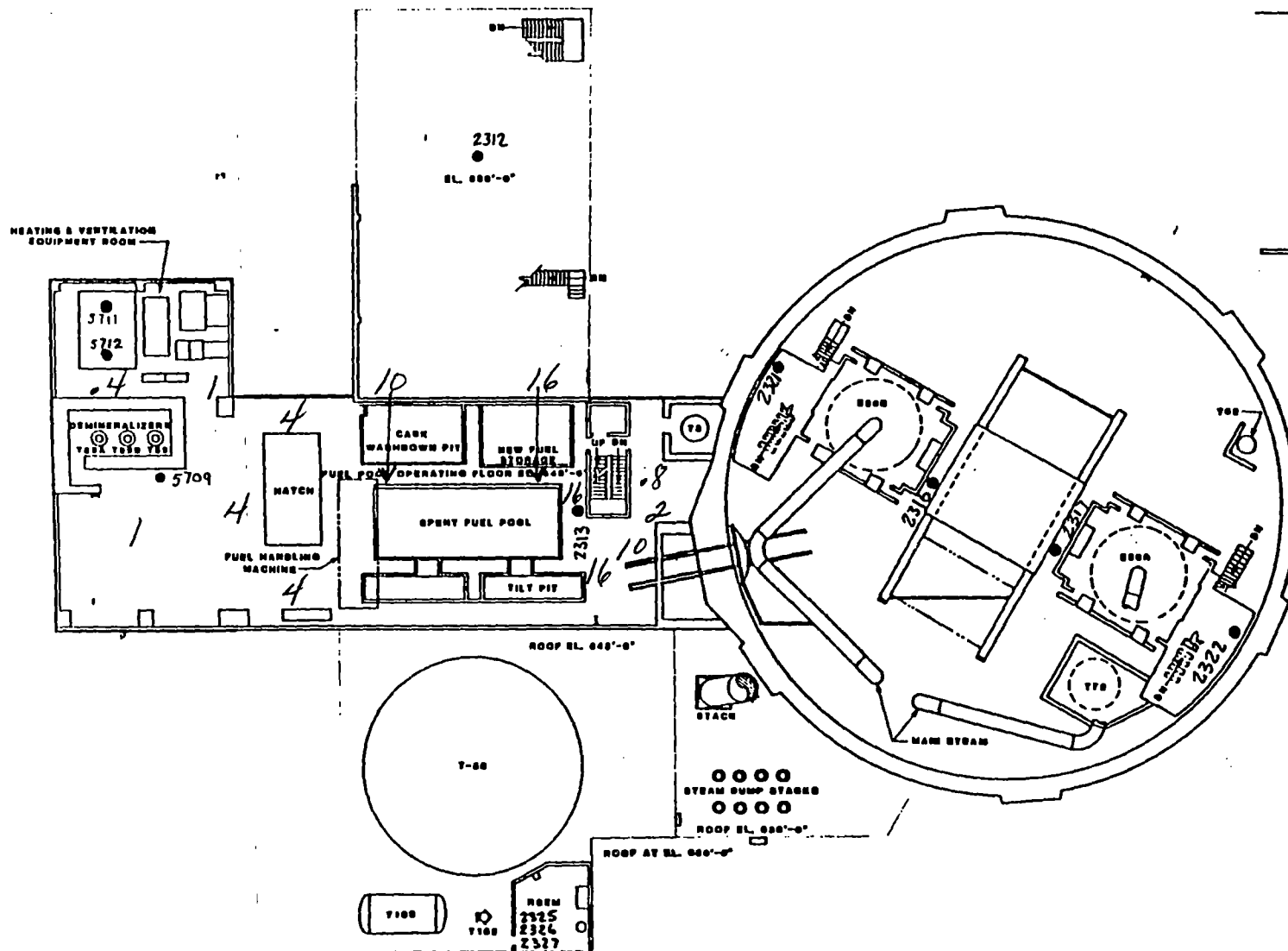
Scenario Time: 0115

Time: 0945

CONSUMERS POWER COMPANY

PALISADES PLANT

647'



COMPONENT DESIGNATIONS	
EL. 640'-0"	
T-500	SHIELD COOLING SURGE TANK
FUEL POOL OPERATING FLOOR	
T-501	COMPONENT COOLING WATER SURGE TANK
DEMINERALIZER RM & ACCESS TO	
T-500	SPENT RESIN STORAGE TANK
T-500 & B	WASTE WATER DEMINERALIZER
T-500	POLISHING DEMINERALIZER
EL. 643'-0"	
ROOF	
T-500	SAFETY INJECTION
T-500	REFUELING WATER TANK
T-500	REMOVAL MAKEUP TANK
T-500	REMOVAL MAKEUP TANK
ROOM	RADIOACTIVE WASTE EFFLUENT
MONITORING SYSTEM	

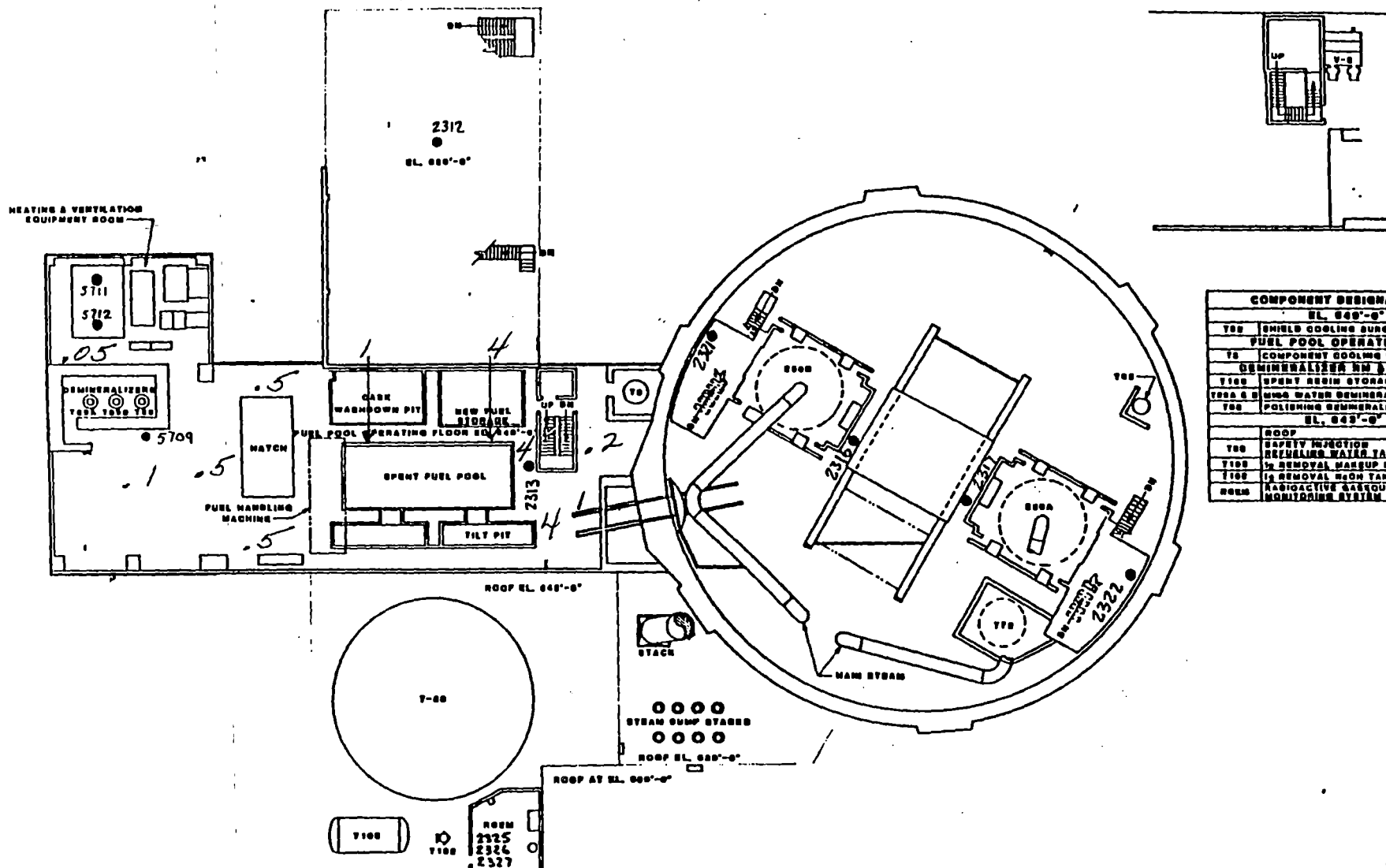
ALL FIGURES ARE R/HR unless specified otherwise.

Scenario Time: 0130

Time: 1000

CONSUMERS POWER COMPANY

PALISADES PLANT
647'



COMPONENT DESIGNATIONS	
EL. 840'-0"	
Y00	SHIELD COOLING SURGE TANK
FUEL POOL OPERATING FLOOR	
Y0	COMPONENT COOLING WATER SURGE TANK
DEMINEALIZER RM & ACCESS TO	
Y100	SPENT RESIN STORAGE TANK
Y00A & B	WMS WATER DEMINEALIZERS
Y00	POLISHING DEMINEALIZER
EL. 845'-0"	
ROOF	
Y00	SAFETY INSPECTION
Y100	REFRESHING WATER TANK
Y100	IN REMOVAL WASHUP ROOM TANK
Y100	IN REMOVAL WASH TANK
Y000	RADIOACTIVE GASEOUS EFFLUENT MONITORING SYSTEM

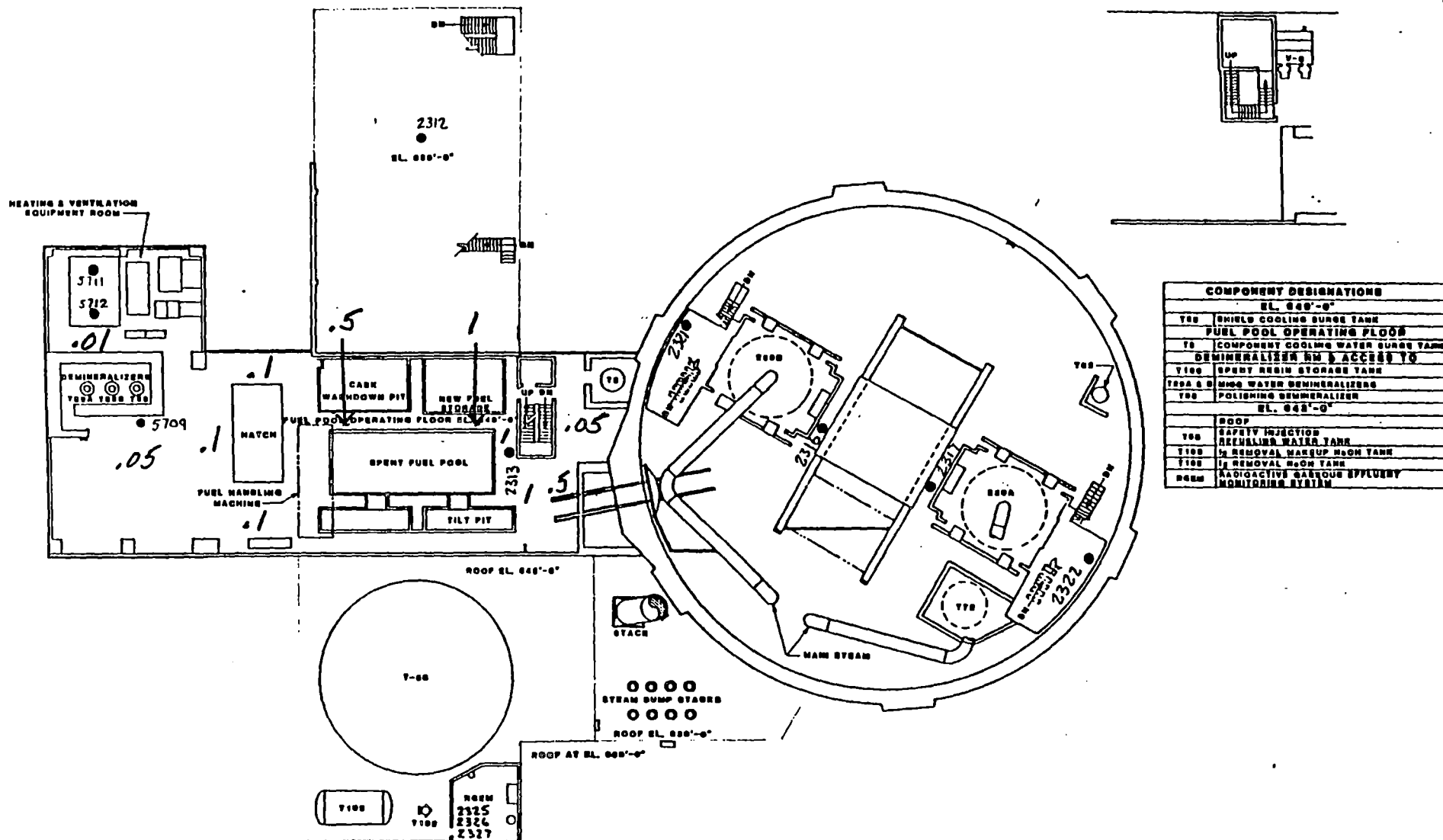
ALL FIGURES ARE R/HR unless specified otherwise.

Scenario Time: 0145

Time: 1015

CONSUMERS POWER COMPANY

PALISADES PLANT
647'



ALL FIGURES ARE R/HR unless specified otherwise.

Scenario Time: 0200

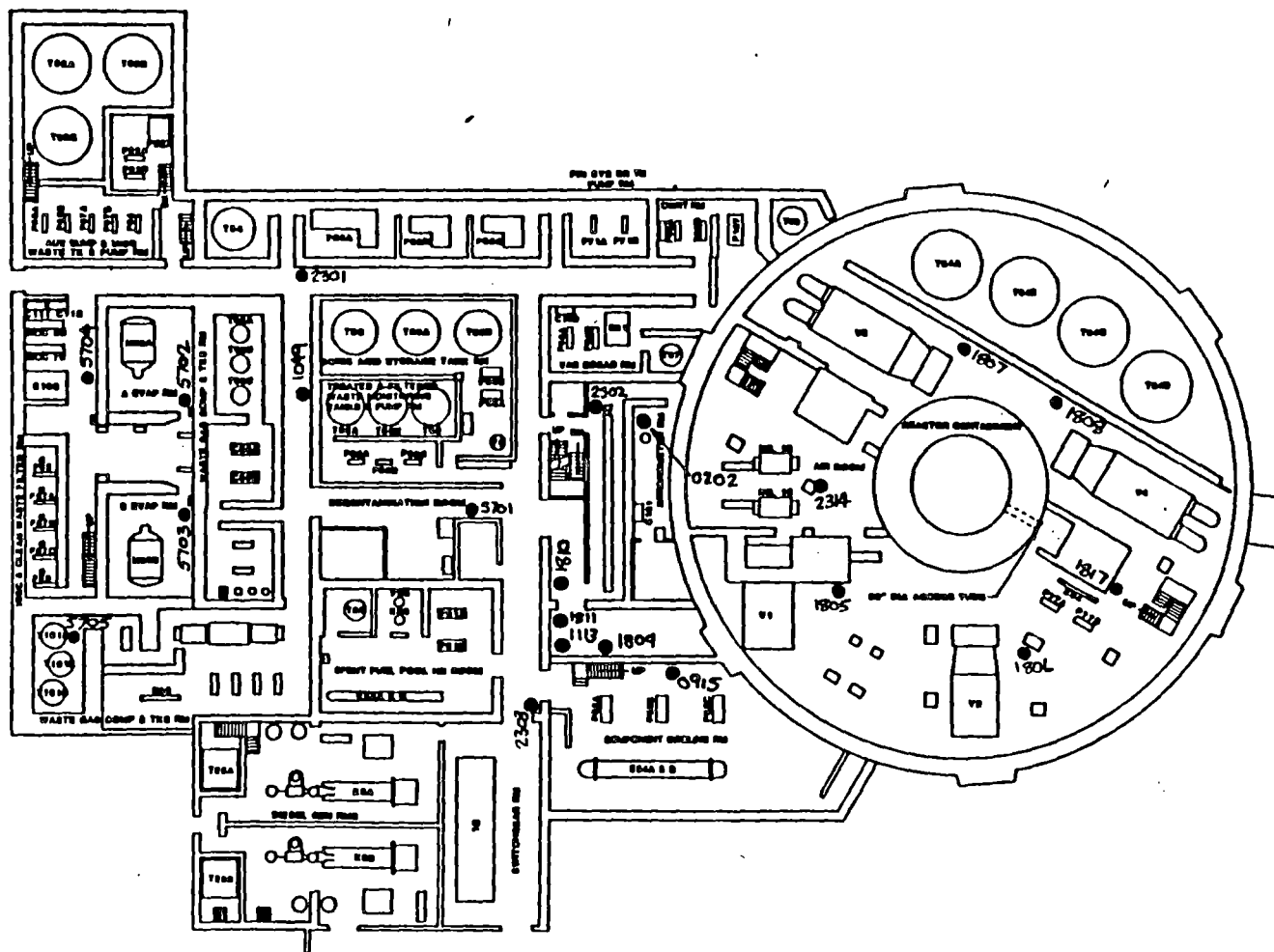
Time: 1030

CONSUMERS POWER COMPANY

PALISADES PLANT

647'

COMPONENT DESIGNATIONS (CONTINUED)	
WASTE GAS COMP & TIE	
C&A	WASTE GAS COMP
101A&B	WASTE GAS DECAZ TIE
A EVAP	
W&G	W&G WASTE EVAP
B EVAP	
W&G	W&G WASTE EVAP
FILTER RM	
F&S	MISC WASTE FILTER
PT&A,B,C	CLEAR WASTE FILTERS
F&S	EVAP CORE FILTER
AUX	SUMP & MISC WASTE TIE & PUMP RM
PUMP PUMPS	
PO&A&B	MISC WASTE TRANSFER PUMPS
PO&A	CLEAR WASTE TRANSFER PUMP
PT&A&B	CLEAR WASTE DISTILLATE PUMPS
PO&A&B	MISC WASTE DISTILLATE PUMPS
101A&B	MISC WASTE HOLDUP TIE



COMPONENT DESIGNATIONS	
850'-0"	
REACTOR BLDG	
101A&B	CLEAR WASTE RECEIVING TIE
101A&B	CONTAINMENT BUILDING
PT&A	SHIELD BUILDING PUMPS
RM	SHIELD BUILDING RM
101, 102, 103	ADV. LAB. SYSTEM PRESSURE/TEMP. MONITORING
AUX BLDG	
C&W PUMP ROOM	
P107	CONDENSATION PUMP
PO&A&B	CLEAR WASTE RECEIVING TIE PUMPS
PT&S	RECEIVING TIE CONDENSATION PUMP
T&S	EMPTY REACTOR STORAGE TANK
	VAC. DEGAZ. RM
107	SAF. BLDG. RM
PO&A&B	RECEIVING PUMPS
CS1	STANDARD PUMPS
C100	STYRENE MONITOR
C&A PUMPS	SAFETY MONITORING PUMPS
C&S	SAFE OPER. PUMPS
C100	
C&A&B	
B&C BLDG	
C100	STYRENE MONITOR
	B&C MONITORING
	PROCESS RM MONITORING
850'-0" COMPONENT COOLING	
PO&A&B	COMP. COOL. RM
PO&A&B	COMP. COOL. PUMPS
	SPENT FUEL POOL ICE RM
RM	
PO&S	FUEL POOL FILTERS
T&S	EMPTY SAFETY PUMPS
T&S	MONITORING
PT&A&B	
PO&S	
B&C ACID STORAGE TIE RM	
PO	PT TIE
PO&A&B	ACID PUMPS
PO&S	MONITORING ACID PUMP
101A&B	ACID TIE
T&S	MONITORING ACID STORAGE TIE
C&W&S	ACID CONTROL PUMPS
	TREATMENT & FILTERED WASTE
PO&A&B	MONITORING TANKS & PUMPS
101A&B	T & P TIE
T&S	
CHARGING PUMP RM	
PO&A&B	CHARGING PUMPS
T&S	VOL. CONT. TIE
WASTE GAS COMP & TIE RM	
PO&A&B	WASTE GAS COMPENSATION
101A&B	WASTE GAS DECAZ TIE
	CH&S & LAUNCH TIE & PUMP RM
PO&S	LAUNCH DRAIN PUMP
PO&S	STYRENE CH&S LAB OR PUMP
PO1A&B	
S P&S	
P&W AREA	
PO&A&B	PREP. DRAINAGE PUMPS
PO1A&B	UTILITY WATER PUMPS
S&A100	

Scenario Time: 0230

Time: 1100

MULTIPLY ALL 'AS FOUND' READINGS IN
SPENT FUEL POOL HEAT EXCHANGER ROOM BY 2.

CONSUMERS POWER COMPANY

PALISADES PLANT

590'

CONSUMERS POWER COMPANY

PALISADES PLANT

590'

Time: 1115

**MULTIPLY ALL 'AS FOUND' READINGS IN
SPENT FUEL POOL HEAT EXCHANGER ROOM BY 5**

[illegible]

Time: 1130

**MULTIPLY ALL 'AS FOUND' READINGS IN
SPENT FUEL POOL HEAT EXCHANGER ROOM BY 10**

CONSUMERS POWER COMPANY

PALISADED PLANT

590'

The floor plan of the Mirnor 1000 space station is a complex layout. The central circular area contains the 'REACTOR CORE' and is surrounded by various rooms and corridors. Key areas include:

- Central Area:** A large circular space with a central 'REACTOR CORE' and surrounding rooms like 'AIR LOCK', 'WASTE HANDLING', and 'CARGO BAY'.
- Left Side:** A series of rectangular rooms, including 'WASTE HANDLING', 'CARGO BAY', and 'REACTOR CORE'.
- Right Side:** A large circular structure, possibly a docking bay or observation deck, with a central circular area labeled 'REACTOR CORE'.
- Bottom:** A series of rectangular rooms, including 'WASTE HANDLING', 'CARGO BAY', and 'REACTOR CORE'.

The plan also shows various corridors, doors, and structural elements, providing a comprehensive view of the station's interior layout.

CONSUMERS POWER COMPANY

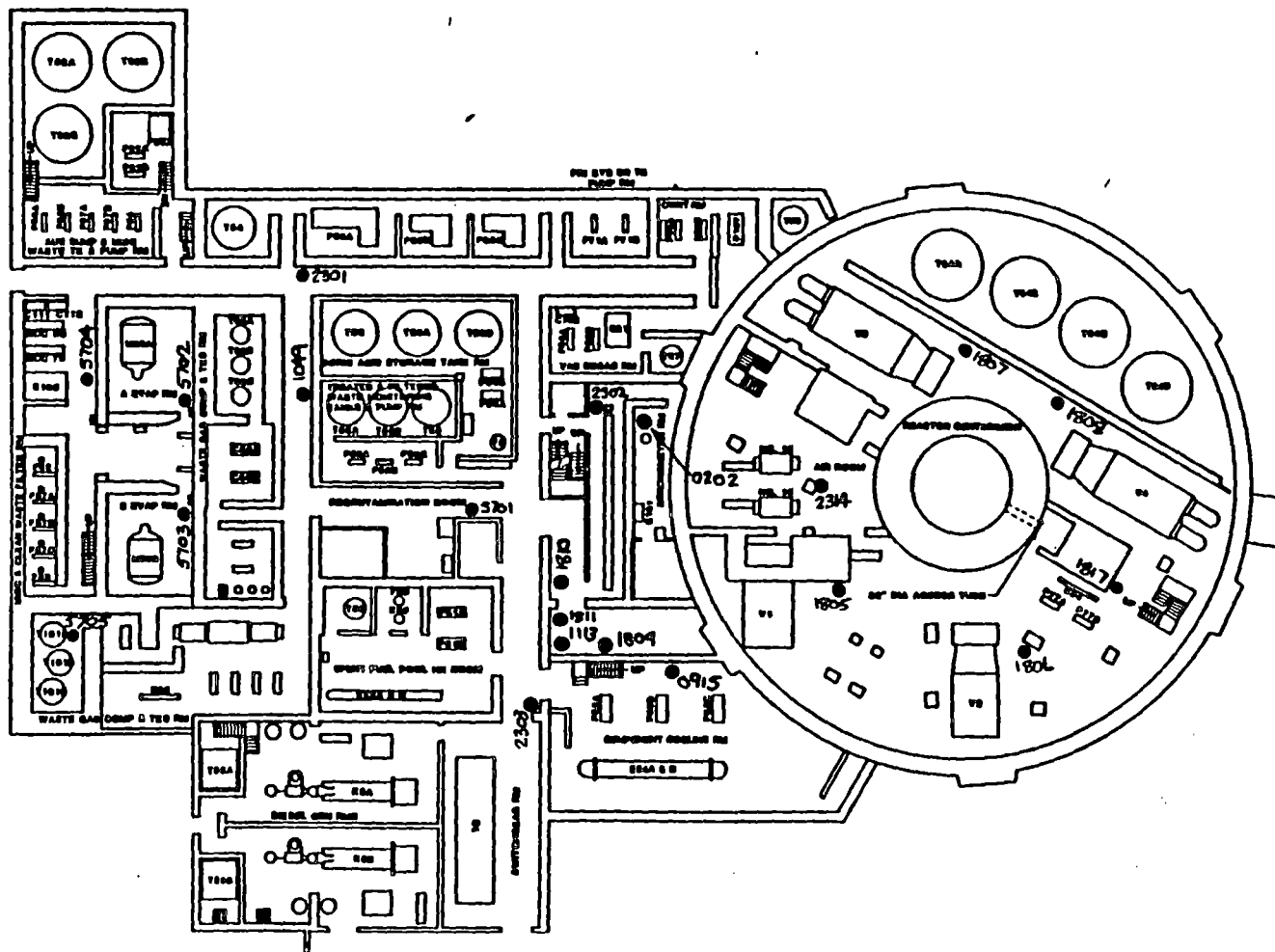
PALISADES PLANT

590'

Time: 1200

**MULTIPLY ALL 'AS FOUND' READINGS IN
SPENT FUEL POOL HEAT EXCHANGER ROOM BY 10**

COMPONENT DESIGNATIONS (CONTINUED)	
WASTE GAS COMP & TRS	
CSA	WASTE GAS COMP
FTSA,AC	WASTE GAS BREAK TRS
A EVAP	
MSA	RADIOWASTE EVAP
B EVAP	
MSB	RADIOWASTE EVAP
FILT. TRS	
FTS	MISC WASTE FILTR
FTSA,AC	CLEAN WASTE FILTR
FTB	EVAP CONC FILTR
AIR SLURP & MISC WASTE TR & PUMP RM	
PSA,AS	SLURP PUMPS
PSA,AS	MISC WASTE TRANSFER PUMP
PSA	CLEAN WASTE TRANSFER PUMP
PSA,AS	CLEAN WASTE DISTILLATE PUMPS
PSA,AS	MISC WASTE DISTILLATE PUMPS
THA,AS	MISC WASTE HOLDUP TRS



COMPONENT DESIGNATIONS	
180'-0"	
REACTOR BLDG	
THA,AS	CLEAN WASTE RECEIVERS TRS
THA,AS	CONTAINMENT BUILDING
FTSA,AC	WASTE GAS BREAK TRS
MSA	RADIOWASTE EVAP
MSB	RADIOWASTE EVAP
FTS	MISC WASTE FILTR
FTSA,AC	CLEAN WASTE FILTR
FTB	EVAP CONC FILTR
AIR SLURP & MISC WASTE TR & PUMP RM	
PSA,AS	SLURP PUMPS
PSA,AS	MISC WASTE TRANSFER PUMP
PSA	CLEAN WASTE TRANSFER PUMP
PSA,AS	CLEAN WASTE DISTILLATE PUMPS
PSA,AS	MISC WASTE DISTILLATE PUMPS
THA,AS	MISC WASTE HOLDUP TRS
180'-0" COMPONENT COOLING	
CSA	WASTE GAS COMP
FTSA,AC	WASTE GAS BREAK TRS
A EVAP	
MSA	RADIOWASTE EVAP
B EVAP	
MSB	RADIOWASTE EVAP
FILT. TRS	
FTS	MISC WASTE FILTR
FTSA,AC	CLEAN WASTE FILTR
FTB	EVAP CONC FILTR
AIR SLURP & MISC WASTE TR & PUMP RM	
PSA,AS	SLURP PUMPS
PSA,AS	MISC WASTE TRANSFER PUMP
PSA	CLEAN WASTE TRANSFER PUMP
PSA,AS	CLEAN WASTE DISTILLATE PUMPS
PSA,AS	MISC WASTE DISTILLATE PUMPS
THA,AS	MISC WASTE HOLDUP TRS

Scenario Time: 0400

Time: 1230

MULTIPLY ALL 'AS FOUND' READINGS IN
SPENT FUEL POOL HEAT EXCHANGER ROOM BY 10

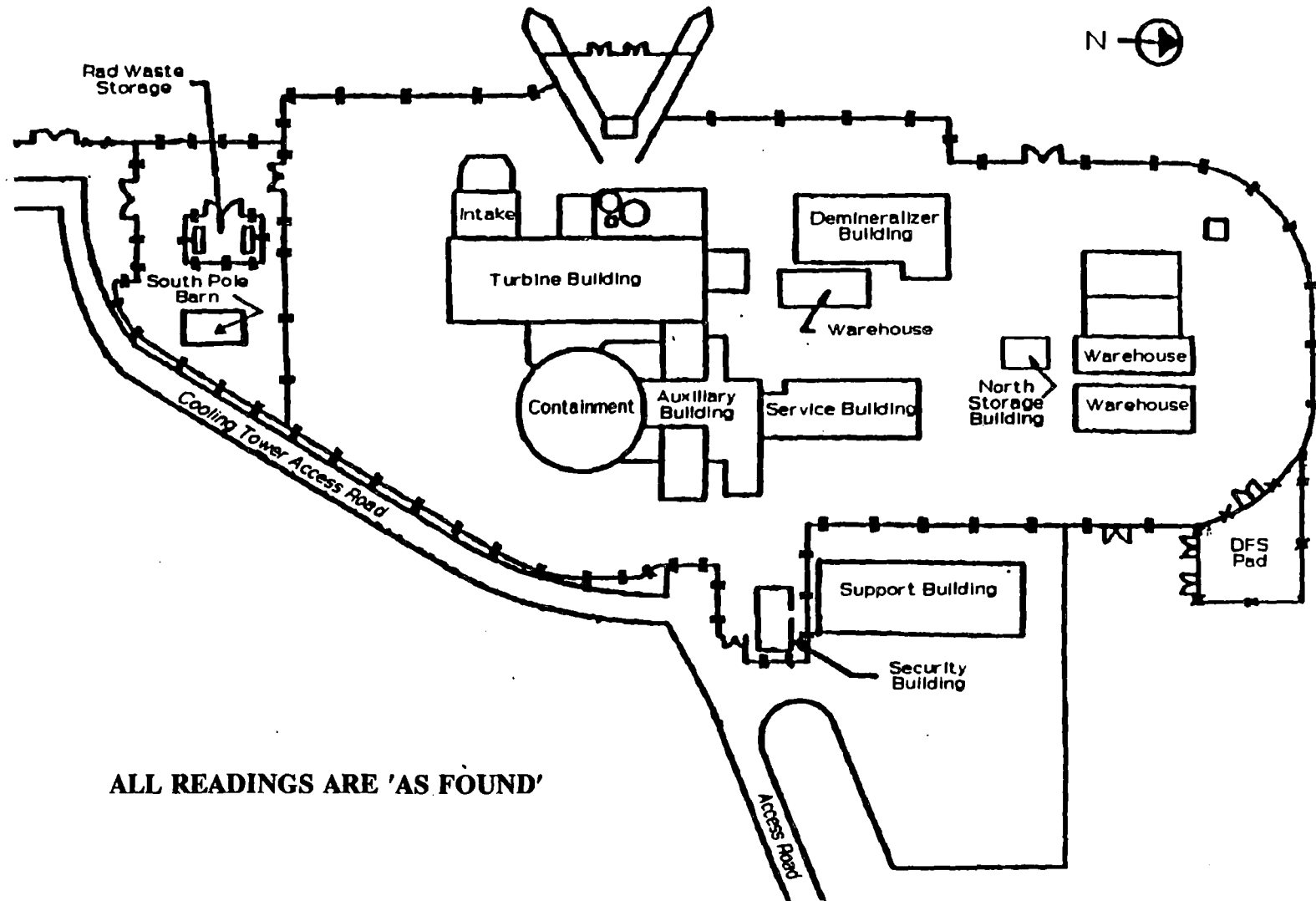
CONSUMERS POWER COMPANY

PALISADES PLANT

590'

ONSITE RADIATION DATA

LAKE MICHIGAN

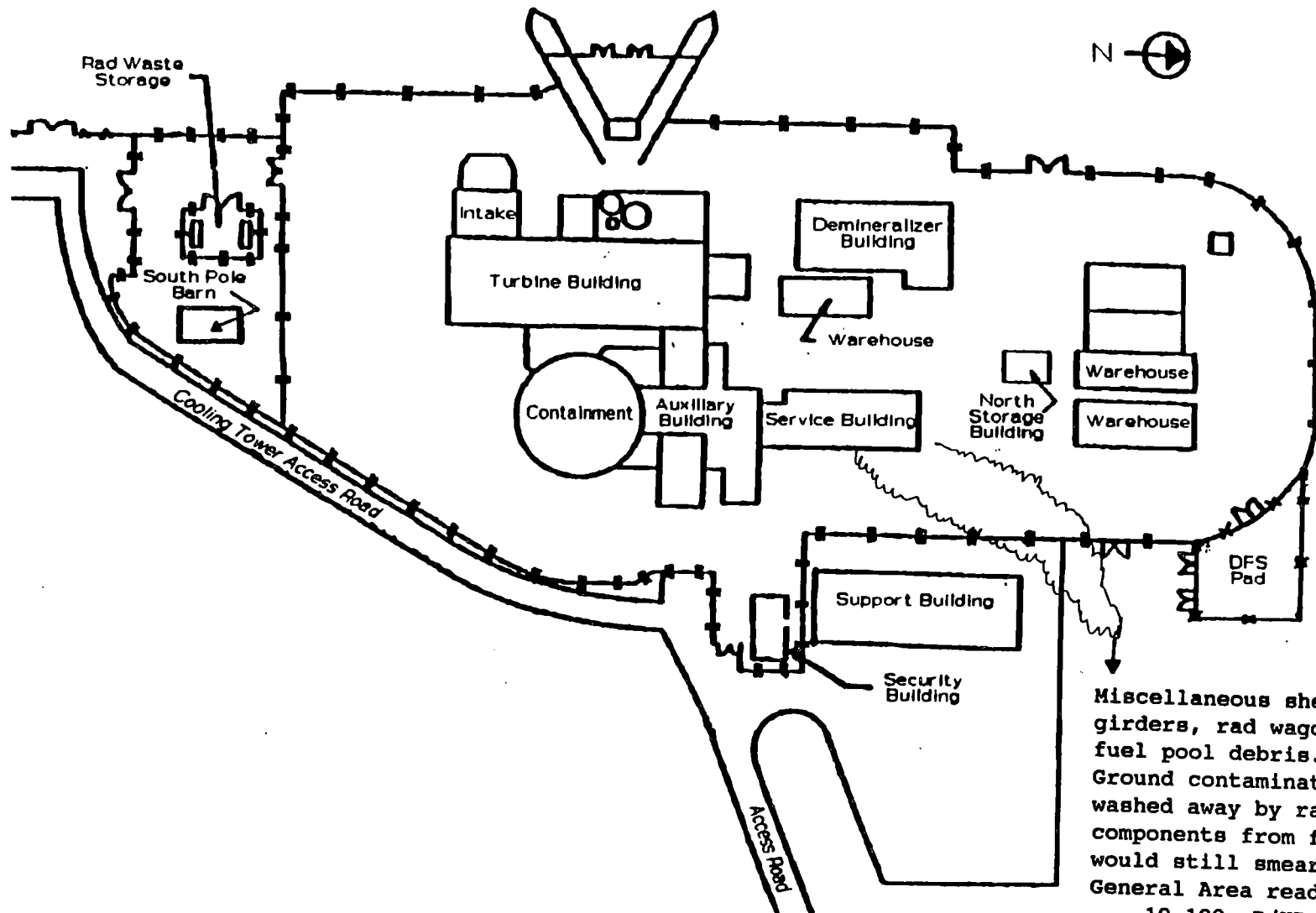


ALL READINGS ARE 'AS FOUND'

Scenario Time: 0000

Time: 0830

LAKE MICHIGAN



Miscellaneous sheet metal, girders, rad wagon, fuel pool debris. Ground contamination was washed away by rain. Some components from fuel pool would still smear 100K. General Area readings: 10-100 mR/HR. Some components up to: 10 R/HR.

Scenario Time: 0015

Time: 0845

CFMS METEOROLOGICAL DATA

METEOROLOGICAL

Scenario Time: -0030

Time: 0800

TEMPERATURE

29.8

STABILITY

A

STABILITY CHART

1 = A
2 = B
3 = C
4 = D
5 = E
6 = F
7 = G



HEIGHT 60 METERS

WIND DIRECTION 232 CIRCULAR DEGREES

STD DEVIATION 20.9 CIRCULAR DEGREES

WIND SPEED 23.81 MPH

HEIGHT 10 METERS

WIND DIRECTION 226 CIRCULAR DEGREES

STD DEVIATION 23.2 CIRCULAR DEGREES

WIND SPEED 18.03 MPH

METEOROLOGICAL

Scenario Time: -0015

Time: 0815

TEMPERATURE

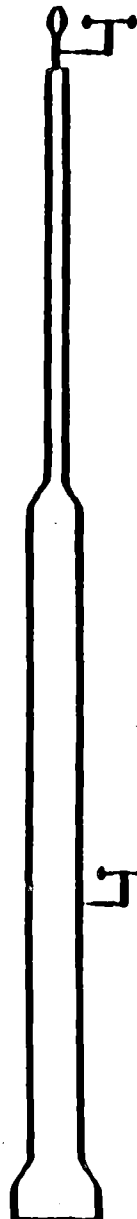
26.0

STABILITY

B

STABILITY CHART

1 = A
2 = B
3 = C
4 = D
5 = E
6 = F
7 = G



HEIGHT 60 METERS

WIND DIRECTION 236 CIRCULAR DEGREES
STD DEVIATION 20.8 CIRCULAR DEGREES
WIND SPEED 26.37 MPH

HEIGHT 10 METERS

WIND DIRECTION 227 CIRCULAR DEGREES
STD DEVIATION 19.4 CIRCULAR DEGREES
WIND SPEED 19.35 MPH

METEOROLOGICAL

Scenario Time: 0000

Time: 0830

TEMPERATURE

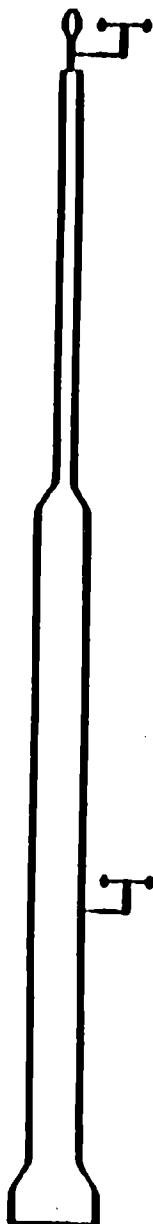
23.9

STABILITY

C

STABILITY CHART

1 = A
2 = B
3 = C
4 = D
5 = E
6 = F
7 = G



HEIGHT 60 METERS

WIND DIRECTION 240 CIRCULAR DEGREES

STD DEVIATION 18.6 CIRCULAR DEGREES

WIND SPEED 34.13 MPH

HEIGHT 10 METERS

WIND DIRECTION 234 CIRCULAR DEGREES

STD DEVIATION 15.3 CIRCULAR DEGREES

WIND SPEED 23.72 MPH

METEOROLOGICAL

Scenario Time: 0015

Time: 0845

TEMPERATURE

21.0

STABILITY

C

STABILITY CHART

- 1 = A
- 2 = B
- 3 = C
- 4 = D
- 5 = E
- 6 = F
- 7 = G

HEIGHT 60 METERS

WIND DIRECTION 217 CIRCULAR DEGREES

STD DEVIATION 47.6 CIRCULAR DEGREES

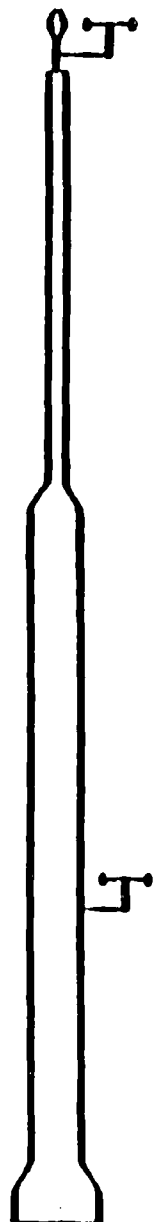
WIND SPEED 49.46 MPH

HEIGHT 10 METERS

WIND DIRECTION 215 CIRCULAR DEGREES

STD DEVIATION 46.7 CIRCULAR DEGREES

WIND SPEED 43.64 MPH



WSI FORECAST

The information presented on the following page provides the Palisades meteorological forecast that is available through the Weather Services International (WSI) service. The first forecast should be provided to the players if they access WSI and request a weather forecast prior to 9:00 AM. The second forecast should be REAL-TIME FORECAST anytime after 9:00 AM.

METEOROLOGICAL FORECAST DATA

AVAILABLE BEFORE 9:00 AM ON 10/26/93

INTERPOLATED MOS FOR PAL(4219N,8619W) USING ORD,SBN,GRR:

DY/HR	26/06	26/12	26/18	27/00	27/06	27/12	27/18	27/00	GMT
DY/HR	26/01	26/07	26/13	26/19	27/01	27/07	27/13	27/19	EST
WIND-MP	2210	2115	2810	3010	2905	2003	2403	1205	
CLDS-.1	5	8	10	7	3	7	5	9	
HGT-FT	10000	3000	2700	3750	5150	4700	4250	5500	
PAS	E	D	D	E	F	E	D	D	

AVAILABLE AFTER 9:00 AM ON 10/26/93

USE REAL-TIME FORECAST DATA

WSI HOURLY MET DATA

The information presented on the following page provides hourly National Weather Service data available through the Weather Services International (WSI) service. This information should only be provided to the players if they access the WSI system and request hourly meteorological data for Benton Harbor and/or Muskegon. If the Players do not access the WSI system and request this data then the data should not be given to the players.

NATIONAL WEATHER SERVICE DATA
WSI SYSTEM

Observations for 8AM(01Z) 26-OCT-93

Station Name	Wind	PS
.....		
Benton harbor, MI	2218	B
Muskegon, MI	2715	D

Observations for 9AM(02Z) 26-OCT-93

BEGIN USING REAL-TIME WSI HOURLY MET DATA

ONSITE MET TOWER

The meteorological data presented on the following page provides the primary meteorological data for PALEX-93. This data should be provided by controllers whenever, the players access the onsite meteorological monitoring system from either the Control Room, Technical Support Center, or Emergency Operations Facility. This data should only be provided to the players if they actually go through the process of accessing and displaying data from the onsite meteorological monitoring system.

PARAMETER UNITS	TEMP C	STAB PASQ	DT C	WS10 MPH	WD10 DEG	SIG1 DEG	WS60 MPH	WD60 DEG	SIG6 DEG
10/26/93 08:00	29.8	A	-1.81	18.03	226	23.2	23.81	232	20.9
10/26/93 08:15	26.0	B	-0.93	19.35	227	19.4	26.37	236	20.8
10/26/93 08:30	23.9	C	-0.81	23.72	234	15.3	34.13	240	18.6
10/26/93 08:45	21.0	C	-0.77	43.64	215	46.7	49.46	217	47.6
10/26/93 09:00	BEGIN LIVE MET DATA								