

Donald C. Cook Nuclear Plant

1990

Annual Emergency Preparedness Exercise

April, 1990

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

I. INTRODUCTION

In the interest of verifying that the health and safety of Plant staff, Plant visitors and the general public are protected in the event of an accident at the Cook Nuclear Plant, the Indiana Michigan Power Company conducts an annual emergency response exercise. In accordance with the schedule prescribed by the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA), the 1990 emergency exercise will be conducted as an off-hours, unannounced exercise with participation by both State and County agencies.

Exercise events will begin at approximately 0100 on April 3, 1990 initiating the mobilization of Cook Nuclear Plant, American Electric Power Service Corporation (AEPSC) and Indiana Michigan Power Company (I&M) personnel. The scenario will progress in order to facilitate activation of State and County emergency organizations prior to 0400. Exercise termination is expected to take place at approximately 0900 on April 3, 1990.

The intent of the exercise is to demonstrate that these various emergency response organizations (EROs) are adequately trained to implement their corresponding emergency plans and procedures from their respective emergency response facilities (ERFs). It will also serve to demonstrate their ability to effectively coordinate their activities.

This scenario will prove particularly challenging to the TSC Plant Evaluation Team as well as control room operators to properly prioritize the multiple failures to determine which one is key to getting the plant under control in the quickest and safest manner. It will likewise force them to develop a well coordinated repair and recovery effort to minimize release time.

The exercise will be evaluated by assigned observers from AEPSC, the Cook Nuclear Plant, the NRC and FEMA. A critique will be conducted by the NRC following the exercise to identify any licensee response deficiencies. This critique will be held in the Plant Manager's conference room on April 4 at 1400 hours. A subsequent critique will be conducted by FEMA to identify any offsite agency deficiencies. This latter critique will be held at the _____ on April ____ at _____ hours. Licensee deficiencies identified in the critique will be documented with subsequent resolution being the responsibility of the Plant and AEPSC Emergency Planning Coordinators.

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EMERGENCY RESPONSE EXERCISE

I. INTRODUCTION (CONTINUED)

This manual has been prepared to assist exercise Controllers and Observers in the conduct and evaluation of the exercise. This manual contains all information and data necessary to conduct the exercise in a coordinated and efficient manner in the event the simulator becomes unusable. Although the use of the simulator will provide the opportunity for more free-play, it is important to remember that the timeline in Section VI may not track with the exercise activities as closely as it has with the more artificial, closely controlled timelines used in past exercises.

Finally, given that the players response should be candid and spontaneous to affect a valid evaluation, this manual must be treated as confidential material. Potential players shall not have prior knowledge of the scenario material in this manual.

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EMERGENCY RESPONSE EXERCISE

II. EXERCISE OBJECTIVES

The exercise objectives dictate the scope of the scenario. The objectives for this exercise were developed based upon the Donald C. Cook Nuclear Plant Emergency Plan Administrative Manual, and FEMA Guidance Memorandum EX-3.

Situations will be presented in the scenario to prompt the desired player response for each objective. Where appropriate, specific objectives and criteria for adequate demonstration have been included in the exercise messages for Controller/Observer use.

DONALD C. COOK NUCLEAR PLANT

1990 EMERGENCY PREPAREDNESS EXERCISE OBJECTIVES

OBJECTIVE

A. OVERALL LICENSEE OBJECTIVES

- A-1 Demonstrate the ability of the emergency response organization to implement DCCNP Emergency Plan Procedures, the IMPCo Emergency Response Manual and the AEPSC Emergency Response Manual.
- A-2 Demonstrate the ability to establish emergency management command and control, and maintain continuity of this function for the duration of the postulated event.
- A-3 Demonstrate the ability to establish communications and information flow between DCCNP emergency response facilities and participating offsite agencies.
- A-4 Demonstrate the ability to designate subsequent shifts of the emergency response organization.
- A-5 Demonstrate the ability to notify and mobilize off-duty personnel during non-working hours

B. CONTROL ROOM OBJECTIVES

- B-1 Demonstrate the ability to recognize symptoms and parameters indicative of degrading plant conditions and to classify degraded conditions as emergencies.
- B-2 Demonstrate the ability to initiate notification of off-site authorities and plant personnel.
- B-3 Demonstrate communications and information flow to and from the Technical Support Center.
- B-4 Demonstrate the ability to transfer emergency authorities and responsibilities from the on-shift emergency organization to the DCCNP emergency response organization.
- B-5 Demonstrate the ability to implement site assembly and accountability during off-hours (i.e., 1700-0600).

C. TECHNICAL SUPPORT CENTER OBJECTIVES

- C-1 Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.

OBJECTIVE

C. TECHNICAL SUPPORT CENTER OBJECTIVES (cont'd.)

- C-2 Demonstrate the ability to provide analytical assistance and operational guidance to the Control Room.
- C-3 Demonstrate the ability to coordinate on-site activities in response to the emergency.
- C-4 Demonstrate the ability to establish and maintain hard copy communications with the EOF and verbal communications with the EOF, OSA, IAG, ENC and/or JPIC.
- C-5 Demonstrate the ability to provide analytical radiological assistance to the OSA and Control Room.
- C-6 Demonstrate the ability to obtain data from the OTSC/PSSD system.
- C-7 Demonstrate the ability to request emergency response teams from the OSA.
- C-8 Demonstrate the ability to designate a second shift for TSC operation.
- C-9 Demonstrate the ability to evaluate the results of TSC/OSA habitability surveys and assess the need to evacuate these facilities.
- C-10 Demonstrate the ability to recognize degrading plant conditions and classify plant conditions as an emergency.
- C-11 Demonstrate the ability to evaluate site evacuation routes and determine an appropriate route based on indicated radiological and meteorological conditions.
- C-12 Demonstrate the actions required to be taken in the TSC if the emergency involves a breach of the reactor coolant system.
- C-13 Demonstrate the ability to determine the level of core damage based on plant parameters provided.
- C-14 Demonstrate the ability to process personnel dose extension request.
- C-15 Demonstrate the ability to assess the need for, and process request for potassium iodide administration.



OBJECTIVE

D. OPERATIONS STAGING AREA OBJECTIVES

- D-1 Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
- D-2 Demonstrate the ability to assemble, brief and dispatch the following emergency response team(s):
 - a. Damage Control Team
 - b. Post Accident Sampling Team
 - c. On-site Radiation Monitoring Team
 - d. Off-site Radiation Monitoring Team
- D-3 Demonstrate the ability to designate a second shift for OSA operation.
- D-4 Each emergency response team assembled and dispatched shall demonstrate the following actions as applicable to the team type and mission:
 - a. Assembly of tools/equipment.
 - b. Preoperation checks of equipment and communications devices.
 - c. Performance of appropriate radiological precautions.
 - d. Performance or simulation of team mission.
 - e. Post-mission debriefing and radiological controls.
- D-5 Demonstrate the ability to provide emergency radiological support. As a minimum the following activities should be demonstrated:
 - a. Establishment of emergency dosimetry and exposure tracking system.
 - b. Establishment of emergency control points.
 - c. Performance of habitability surveys prescribed by procedure.
 - d. Analysis of radiological conditions to be encountered by emergency response teams.
 - e. Specification of radiological controls and precautions for emergency response teams.
- D-6 Demonstrate the ability to perform offsite radiological monitoring. As a minimum, two teams should be dispatched and direct radiation monitoring as well as airborne radioactivity analysis should be demonstrated.

OBJECTIVE

D. OPERATIONS STAGING AREA OBJECTIVES (cont'd.)

- D-7 Demonstrate the ability to implement damage control activities in accordance with applicable Emergency Plan Procedures.
- D-8 Demonstrate the ability to perform onsite radiological monitoring in accordance with applicable Emergency Plan Procedures. This monitoring should include direct radiation surveys and analysis of airborne radioactivity samples.
- D-9 Demonstrate the ability to obtain post accident samples from the RSC Loop and complete appropriate chemical and isotopic analysis within three hours of the sample request.
- D-10 Demonstrate the ability to obtain radiological base data required to evaluate the release level from the secondary plant during a steam generator tube rupture.
- D-11 Demonstrate the ability to respond to a contaminated person. Included in this demonstration, personnel decontamination shall be simulated.
- D-12 Demonstrate the actions required for an individual to exceed the exposure limits of 10CFR20. Included in this demonstration should be a discussion of post exposure actions and limitations.
- D-13 Demonstrate the actions required to administer potassium iodide. This demonstration should include a discussion of the follow-up actions associated with KI administration.
- D-14 Demonstrate a shift turnover.
- D-15 Demonstrate the ability to obtain environmental samples in accordance with applicable Emergency Plan Procedures. The following samples should be obtained:
 - a. Vegetation
 - b. Soil

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES

- E-1 Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.

OBJECTIVE

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES (cont'd.)

- E-2 Demonstrate the ability to establish overall command and control of the DCCNP emergency response within one hour of declaration of a site area emergency or general emergency, as applicable.
- E-3 Demonstrate the ability to establish and maintain effective emergency communications with each of the following agencies and facilities:
 - a. State of Michigan
 - b. Berrien County
 - c. NRC
 - d. Technical Support Center
 - e. Joint Public Information
 - f. Initial Assessment Group
- E-4 Demonstrate the ability to establish and maintain hard copy data transmission and reception with each of the following facilities:
 - a. Technical Support Center
 - b. Joint Public Information Center
 - c. State of Michigan EOC
- E-5 Demonstrate the ability to direct Offsite Radiation Monitoring Teams in order to determine the geographical location and radiological magnitude of the postulated plume.
- E-6 Demonstrate the ability to designate a second shift for EOF operation.
- E-7 Demonstrate the ability to develop protective action recommendations based on projected dose and/or core and containment status.
- E-8 Demonstrate the ability to update the State of Michigan on the status of the emergency at 15 minute intervals.
- E-9 Demonstrate the ability to respond to inquiries from the TSC, JPIC, IAG and State of Michigan in a timely manner.
- E-10 Demonstrate emergency de-escalation and termination.
- E-11 Demonstrate the ability to project the magnitude of offsite dose using the Dose Assessment Program and the IBM Personal Computer.
- E-12 Demonstrate corporate augmentation of the EOF staff.



OBJECTIVE

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES (cont'd.)

- E-13 Demonstrate recovery planning associated with emergency termination.
- E-14 Demonstrate the ability to take compensatory action in the event of a failure of the Meteorological Data Terminal.

F. PUBLIC AFFAIRS OBJECTIVES

- F-1 Demonstrate activation of the Joint Public Information Center.
- F-2 Demonstrate the ability to conduct media briefings.
- F-3 Demonstrate the ability to respond to actual or simulated inquiries from media representatives.
- F-4 Demonstrate the ability of rumor control personnel to respond to simulated inquiries from the general public.
- F-5 Demonstrate the ability to monitor media transmissions and respond to inaccurate information being transmitted by the media.
- F-6 Demonstrate the ability to designate subsequent shifts for JPIC operations.
- F-7 Demonstrate coordination of news announcement content with State and County representatives.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

III. CONDUCT OF THE EXERCISE

A. EXERCISE PLAYER INFORMATION

This exercise is intended to satisfy the requirements for an annual emergency response exercise to demonstrate the readiness of the Plant to respond to an abnormal Plant condition. The following information should be understood by all players prior to initiation of the exercise.

1. It should be understood that the circumstances simulated for this exercise are unrealistic in certain aspects, which should not be construed as flaws in the scenario. Moreover, it is due to the reliable design and construction of nuclear power facilities that require unrealistic assumptions to be made in order to generate conditions that will affect the general public. Thus, in order to obtain a sequence of events that will result in a significant radiological hazard to the general public, the exercise scenario must contain an incredible Plant condition, an unlikely series of equipment failures, or an improbable sequence of events coupled with equipment failure.
2. The purpose of the exercise is to demonstrate actual integrated emergency response capabilities, including the use of emergency equipment and facilities. Personnel knowledge and familiarity with the Emergency Plan and Procedures are the primary aspect of the evaluation. Demonstration of detailed knowledge of plant systems, equipment and operation is of secondary importance for purposes of this evaluation. Although knowledge of the plant is not being evaluated, system evaluations should not be eliminated from discussions during the exercise since this contributes to the realism of the response.
3. All emergency communications that relate to the exercise shall be identified as part of the drill. Verbal communications should be initiated and closed by the statement, "this is a drill". Exercise extreme care to ensure that individuals who may overhear or observe exercise activities are not misled into believing that an actual emergency exists.

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EMERGENCY RESPONSE EXERCISE

III. CONDUCT OF THE EXERCISE (CONTINUED)

4. Manipulation of any plant operating system, valves, breakers or controls in response to this exercise are to be simulated. There are to be no alternation of plant equipment, systems or circuits in response to this exercise.
5. Any motor vehicle response to this exercise, whether it be ambulance, fire fighting equipment, security or field monitoring vehicle should observe all normal motor vehicle operating laws including posted speed limits, stop lights/signs, one-way streets, etc.
6. Should any on-site security actions be required in response to this exercise, exercise participants are to cooperate as directed, and security representatives are to be prudent and tolerant in their actions.
7. Participants should inject as much realism into the exercise as is compatible with the safe performance of the exercise.
8. Play out all actions, as much as possible, in accordance with the Emergency Plan Procedures. Unless specifically instructed by the controller, you should not simulate your actions. If instructed to simulate an activity, tell the observer/controller how and when you would actually perform the activity.
9. Periodically speak out loud, verbalizing your key actions and decisions to the controller and federal evaluator. This may seem artificial, but it will assist in the evaluation process and is to your benefit.
10. If ever in doubt, ask your controller for clarification. The controller will not provide prompting or coaching information.
11. Periodically the controller may issue messages or instructions designed to initiate response actions. You must accept these messages immediately.

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EMERGENCY RESPONSE EXERCISE

III. CONDUCT OF THE EXERCISE (CONTINUED)

12. You must not accept any messages or instructions from federal evaluators. If they desire to initiate some action, they must work through the controller.
13. If entering radiologically controlled areas, observe all rules and procedures governing access and egress. Do not enter high radiation areas for purpose of exercise response. Follow normal ALARA principles and guidelines.
14. Utilize status boards, log books, three-part message forms, etc., as much as possible to document and record your actions, instructions and reports to co-players.

REMEMBER - PUT IT IN WRITING



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EMERGENCY RESPONSE EXERCISE

IV. CONTROLLERS/OBSERVERS INFORMATION

The Controller/Observer group is essential to the successful implementation of the exercise. Controllers are responsible for ensuring the scenario proceeds on schedule by disseminating timely information and maintaining scenario integrity. Observers are responsible for observing, documenting and analyzing players actions. Observers may assume the function of Controller if identified in the scenario or directed by the facilities lead controller.

A. Control Room

- | | |
|---------------------------------|--------------|
| 1. Control Room Lead Controller | R. Stephens |
| 2. Control Room Observer | I. Fleetwood |
| 3. EOP Controller | G. Arent |
| 4. EOP Observer | D. Draper |

B. Technical Support Center

- | | |
|-----------------------------|------------|
| 1. Exercise Lead Controller | M. Barfelz |
| 2. TSC Observer | R. Ptacek |
| 3. Radiological Controller | B. Jepkema |

C. Operations Staging Area

- | | |
|---------------------------------------|--------------|
| 1. OSA Lead Controller | G. Griffin |
| 2. I&C Controller | T. Walsh |
| 3. DCT Controller | T. Johnson |
| 4. DCT Controller | J. Moline |
| 5. DCT Controller | D. Londot |
| 6. DCT Controller | W. Lee |
| 7. RRT/Onsite RMT Controller | H. Springer |
| 8. RRT/Onstie RMT Controller | D. Gallagher |
| 9. RP Lead Controller | K. Scherer |
| 10. Offsite RMT Controller (Counting) | M. Schafer |
| 11. Offsite RMT Controller (Survey) | J. Paris |
| 12. Offsite RMT Controller (Survey) | J. Hoss |
| 13. PASS Team Controller | G. Cook |

D. Emergency Operations Facility

- | | |
|--|---------------|
| 1. EOF Lead Controller | R. Heydenburg |
| 2. Communications Observer | K. Umphrey |
| 3. Environmental Assessment Controller | D. Noble |

E. Joint Public Information Center

- | | |
|-------------------------|--------------|
| 1. JPIC Lead Controller | K. Pinkowski |
|-------------------------|--------------|

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EMERGENCY RESPONSE EXERCISE

IV. CONTROLLERS/OBSERVERS INFORMATION (CONTINUED)

E. Controller/Observer Functions

Controllers and Observers are utilized in this exercise to provide exercise information to the participants and to observe players response. In doing so, the Controllers and Observers should allow players to make, and correct, their own mistakes, while the Controller or Observer identifies the items to improve Plant emergency response capability. However, situations may arise where complete freedom of player response and success of the overall exercise are conflicting objectives. In such cases, the Controller or Observer must ensure proper continuity of the scenario, while identifying problem areas in sufficient detail to allow corrections. Generally, the following rules apply to control of the exercise:

1. Keep the reaction and emergency response going according to the time element established in the scenario.
2. Provide command messages to key personnel as a mechanism to prevent deviation from the scenario.
3. Observe player procedural discipline.
4. Provide prepared input data to players to stimulate response actions.
5. Observe and critique the participants actions, procedure effectiveness, equipment capability and general emergency response.

F. Exercise Controller/Observer Instructions

1. Each Controller/Observer shall participate in exercise briefings and critiques scheduled as follows:
 - Exercise Walkthrough - March 30, 1990, 0800
Location to be announced
 - Exercise Facility Critique - Immediately upon exercise termination in each emergency response facility
 - NRC Critique - April 4, 1990, 1400
Plant Managers Conference Room

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 1

APPLICABLE STATION: CONTROL ROOM

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATORS ASSIGNED: _____

LEAD CONTROLLER: _____
CR OBSERVER: _____
EOP CONTROLLER: _____

A. EMERGENCY CLASSIFICATION

	SCENARIO PROJECTED		ACTUAL	
CLASSIFICATION	ECC/EAL	TIME	ECC/EAL	TIME
UNUSUAL EVENT	_____	_____	_____	_____
ALERT	_____	_____	_____	_____
SITE AREA EMERG.	_____	_____	_____	_____
GENERAL EMERG.	_____	_____	_____	_____

B. NOTIFICATIONS

	YES	NO	N/A
1. Were the State and County notified within 15 minutes of emergency declaration?	_____	_____	_____
(Attach completed EXHIBIT-B of PMP 2080 EPP.106)			
2. Was the NRC notified promptly following State/County notification?	_____	_____	_____
3. Was Security notified of the declaration?	_____	_____	_____
4. Was the STA notified and in the Control Room within 10 minutes?	_____	_____	_____
5. Was PMP 2080 EPP.107, Notification of Plant Personnel, implemented within twenty minutes of declaration?	_____	_____	_____



C. COMMUNICATIONS

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Were the State and County provided 15 minute updates using the Nuclear Plant Accident Notification Form? (attach copies of completed forms)	—	—	—
2. Was communication with the TSC established within one hour of the emergency declaration?	—	—	—

D. PROCEDURAL COMPLIANCE

1: Were one or more of the following implementing procedures referred to as appropriate for the classification?	—	—	—
a. PMP 2080 EPP.102, Unusual Event	—	—	—
b. PMP 2080 EPP.103, Alert	—	—	—
c. PMP 2080 EPP.104, Site Area Emergency	—	—	—
d. PMP 2080 EPP.105, General Emergency	—	—	—
... Compliance was judged to be adequate/inadequate ... (if inadequate, identify deficiencies in the ... comments section).	—	—	—
2. Was PMP 2080 EPP.108, Initial Dose Assessment, implemented?	—	—	—
a. Were results consistent with scenario projections?	—	—	—
b. Was a protective action recommendation developed based on projected dose?	—	—	—
c. Was the State notified of dose projection results and/or protective action recommendation within 15 minutes?	—	—	—

Compliance was judged to be adequate/inadequate (if inadequate, identify deficiencies in the comments section).

3. Were any of the following EPPs implemented?

a. PMP 2080 EPP.109, Fire Emergency Guidelines

b. PMP 2080 EPP.110, Toxic Gas Release Guidelines

c. PMP 2080 EPP.111, Natural Emergency Guidelines

d. PMP 2080 EPP.112, Personnel Injury

e. PMP 2080 EPP.113, Transportation Accident Involving Radioactive Material

Compliance was judged to be; (list as appropriate)

ADEQUATE

INADEQUATE

(If inadequate, identify deficiencies in comment section).

E. GENERAL ITEMS

1. Emergency kits in the Control Room were adequately equipped?

2. Turnover from SS to oncoming SEC was thorough and documented.

3. Communications and interface with the TSC was adequate.

4. TSC support of Control Room activities was adequate?

5. Operator familiarity with plant procedures (abnormal and EOP's) was adequate?



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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 2

APPLICABLE STATION: TSC LEAD CONTROLLER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

1. Were each of the following actions completed?

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
a. Turn on lights	_____	_____	_____
b. Turn on CAM	_____	_____	_____
c. Turn on ARM	_____	_____	_____
d. Unlock supply cabinets	_____	_____	_____
e. Turn on remote TV monitors	_____	_____	_____
f. Prepare OTSC/PSSD	_____	_____	_____
g. Prepare RDDS	_____	_____	_____
h. Update TSC STAFF status board	_____	_____	_____
i. Establish communications	_____	_____	_____
j. SEC turnover completed	_____	_____	_____
k. TSC staff briefed	_____	_____	_____
l. PMP 2081 EPP.101, EXHIBIT-B criteria satisfied	_____	_____	_____
2. Was the TSC operational within one hour of the emergency declaration?	_____	_____	_____

B. GENERAL OPERATION

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Did the Technical Director establish and maintain command and control of TSC activities?	___	___	___
2. Did the Technical Director consider and/or direct implementation of the following EPP's when appropriate?			
a. PMP 2081 EPP.102, TSC Emergency Communications	___	___	___
b. PMP 2081 EPP.106, On-site Radiological Assessment	___	___	___
c. PMP 2081 EPP.103, Evacuation of Plant Personnel	___	___	___
d. PMP 2081 EPP.216, Barring of the PABX	___	___	___
3. Did the Technical Director, in coordination with the PET, maintain an awareness of emergency conditions and assess the need for re-classification of the emergency periodically?	___	___	___
4. Did the TSC respond to Control Room requests in a timely manner?	___	___	___
5. Were emergency response teams requested in accordance with step 4.6 of PMP 2081 EPP.101?	___	___	___
6. Was the TSC ventilation system operated in accordance with section 4.8 of PMP 2081 EPP.101?	___	___	___
7. If appropriate, was TSC evacuation evaluated in accordance with section 4.9 of PMP 2081 EPP.101?	___	___	___
8. Was the OTSC/PSSD utilized by the TSC staff?	___	___	___
9. Were subsequent shift(s) designated in accordance with section 4.10 of PMP 2081 EPP.101?	___	___	___
10. Did the Technical Director periodically brief the TSC staff on emergency conditions? (A minimum of once per hour is adequate).	___	___	___

C. PLANT EVALUATION TEAM

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| 1. Were all members of the PET aware of emergency conditions at all times? | ___ | ___ | ___ |
| 2. Did the PET-Operations and STA personnel follow Control Room progress in the EOPs? | ___ | ___ | ___ |
| 3. Did the PET-Chemistry and Nuclear personnel assess the core status continually? | ___ | ___ | ___ |
| 4. Did the PET evaluate overall plant conditions and develop appropriate mitigating and/or corrective actions? | ___ | ___ | ___ |
| 5. Was interface of the PET with the Control Room and IAG adequate? | ___ | ___ | ___ |

D. GENERAL ITEMS

- | | | | |
|---|-----|-----|-----|
| 1. Were materials and equipment in the TSC adequate to facilitate an effective emergency response? | ___ | ___ | ___ |
| 2. Were communications and interface with the OSA adequate? | ___ | ___ | ___ |
| 3. Were communications and interface with the EOF adequate? | ___ | ___ | ___ |
| 4. If the postulated events had actually occurred, would the actions taken by the TSC been adequate to protect the health and safety of plant personnel and the general public? | ___ | ___ | ___ |

E. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

[illegible]

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F. COMMENTS

[illegible]

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EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 3

APPLICABLE STATION: TSC COMMUNICATIONS OBSERVER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

YES NO N/A

1. Were the following positions staffed within one hour of emergency declaration?

a. TSC Administrative Coordinator	___	___	___
b. TSC Boardwriter	___	___	___
c. Telecopy Operator	___	___	___
d. OSA Communicator	___	___	___
e. IAG Communicator	___	___	___
f. Public Affairs Liaison	___	___	___
g. Runners (2)	___	___	___

If these positions were not staffed,
was compensatory action taken to ensure
the function was performed? ___ ___ ___

2. Did the Boardwriter establish communications with the Control Room and initiate status board update on arrival? ___ ___ ___

B. GENERAL COMMUNICATIONS ACTIVITIES

1. Did the Administrative Coordinator implement PMP 2081 EPP.102, TSC Emergency Communications? ___ ___ ___



2. Did each communicator follow the general guidance provided in the respective attachment of PMP 2081 EPP.102?
- | | | | |
|--------------------------------------|-----|-----|-----|
| a. Boardwriter - Attachment 2 | ___ | ___ | ___ |
| b. Telecopy Operator-Attachment 3 | ___ | ___ | ___ |
| c. TSC Runner-Attachment 4 | ___ | ___ | ___ |
| d. IAG Communicator-Attachment 6 | ___ | ___ | ___ |
| e. TSC OSA Communicator-Attachment 6 | ___ | ___ | ___ |
| f. Pub. Affairs Liaison-Attachment 8 | ___ | ___ | ___ |
3. Was document transmission completed in accordance with Attachment 1 of PMP 2081 EPP.102? ___ ___ ___
4. Did each of the following communicators appear familiar with applicable EPP's and communications equipment?
- | | | | |
|---------------------------|-----|-----|-----|
| a. Boardwriter | ___ | ___ | ___ |
| b. IAG Communicator | ___ | ___ | ___ |
| c. OSA Communicator | ___ | ___ | ___ |
| d. TSC Scribe | ___ | ___ | ___ |
| e. Public Affairs Liaison | ___ | ___ | ___ |
| f. TSC Runners | ___ | ___ | ___ |
| g. Telecopy Operator | ___ | ___ | ___ |
5. Were inquiries received by communicators from other facilities documented and processed in a timely manner? ___ ___ ___

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 4

APPLICABLE STATION: TSC RADIOLOGICAL CONTROLLER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

- | | <u>YES</u> | <u>NO</u> | <u>N/A</u> |
|--|------------|-----------|------------|
| 1. Was the position of Radiological Assessment Coordinator staffed within one hour of emergency declaration? | _____ | _____ | _____ |
| 2. Was the RDDS system prepared for operation (i.e. energized and appropriate program loaded)? | _____ | _____ | _____ |
| 3. Were the TSC CAM and ARM energized and verified to be in proper working order? | _____ | _____ | _____ |

B. RAC IMMEDIATE ACTIONS

- | | | | |
|--|-------|-------|-------|
| 1. Did the RAC conduct a review of RDDS monitor indications in accordance with step 4.4.2 of PMP 2081 EPP.106? | _____ | _____ | _____ |
| 2. Did the RAC conduct a review of Westinghouse radiation monitor indications in accordance with step 4.4.3 of PMP 2081 EPP.106? | _____ | _____ | _____ |

C. RAC SUBSEQUENT ACTIONS

- | | | | |
|--|-------|-------|-------|
| 1. Was the necessity for site evacuation based on site radiological conditions evaluated? | _____ | _____ | _____ |
| a. If evacuation from item 1 was directed, was PMP 2081 EPP.103 implemented? | _____ | _____ | _____ |
| b. Were the provisions of PMP 2081 EPP.103 followed for implementation of the evacuation? | _____ | _____ | _____ |
| 2. Did the RAC provide adequate support to the RPD in determining adequate response team protective actions? | _____ | _____ | _____ |

3. Were appropriate correction factors applied to post-accident samples in accordance with steps 4.5.7 and 4.5.9 of PMP 2081 EPP.106?

D. KI DETERMINATION

1. Was KI considered for application to an emergency response team?
2. Was compliance with PMP 2081 EPP.106, Section 4.6, Potassium Iodide Determination, adequate?
3. Was EXHIBIT-B of PMP 2081 EPP.106 completed?

E. VOLUNTARY OVER-EXPOSURES

1. Was EXHIBIT-D of PMP 2081 EPP.106, completed?
2. Was compliance with PMP 2081 EPP.106, Section 4.7, Voluntary Over-Exposure, adequate?
3. Did the SEC approve the over-exposure request?

F. ALTERNATE RELEASE LEVEL DETERMINATIONS

1. Was compliance with PMP 2081 EPP.107 adequate?
2. Were calculated results in close proximity to scenario predictions?

<u>EFFLUENT</u>	<u>SCENARIO PREDICTIONS</u>	<u>CALCULATED RESULTS</u>



YES NO N/A

H. "SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

1. 1. The first part of the document is a title page.
 2. 2. The second part of the document is a table of contents.
 3. 3. The third part of the document is a list of figures.
 4. 4. The fourth part of the document is a list of tables.
 5. 5. The fifth part of the document is a list of references.
 6. 6. The sixth part of the document is a list of appendices.
 7. 7. The seventh part of the document is a list of footnotes.
 8. 8. The eighth part of the document is a list of glossary.
 9. 9. The ninth part of the document is a list of index.
 10. 10. The tenth part of the document is a list of bibliography.



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I. COMMENTS

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 5

APPLICABLE STATION: OSA LEAD CONTROLLER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Was the OSA operational within one hour of the emergency declaration?	_____	_____	_____
2. Were each of the following activities completed?			
a. Turn on North and South Classroom lights	_____	_____	_____
b. Arrange tables and chairs	_____	_____	_____
c. Establish communications	_____	_____	_____
d. Unlock cabinets and offices	_____	_____	_____
e. Control points established at North and South access points	_____	_____	_____
f. PMP 2081 EPP.201, EXHIBIT-B criteria satisfied	_____	_____	_____

B. GENERAL OPERATION

1. Did the OSA Manager establish and maintain command and control of OSA activities?	_____	_____	_____
2. Did the OSA Manager consider and/or direct implementation of the following EPP's when appropriate?	_____	_____	_____
a. PMP 2081 EPP.202, Operation of the Operations Staging Area	_____	_____	_____

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
b. PMP 2081 EPP.203, Activation of Emergency Response Teams	___	___	___
c. PMP 2081 EPP.208, Emergency Radiation Protection	___	___	___
3. Did the OSA Manager maintain an awareness of emergency conditions and brief the OSA staff at least once per hour?	___	___	___
4. Were the following records maintained accurately and expeditiously?			
a. Classroom Board	___	___	___
b. OSA Manager Office Status Board	___	___	___
c. OSA Manager Log	___	___	___
5. If the Nuclear Emergency Alarm sounded, were the OSA staff badge numbers and color recorded?	___	___	___
6. Were subsequent shifts designated in accordance with PMP 2081 EPP.202, Step 4.5.5?	___	___	___
7. Did the OSA Manager complete PMP 2081 EPP.203, EXHIBIT-D and provide a copy to the RPD and the Skills Supervisor?	___	___	___
8. Did the OSA Manager provide a copy of EXHIBIT-E of PMP 2081 EPP.203 to the Skills Supervisor.	___	___	___
9. Were team briefings adequate to establish the team objective, communications, procedures and methods, and equipment involved?	___	___	___
10. Did the OSA Manager notify the facility that requested the team upon dispatch?	___	___	___

C. GENERAL ITEMS

YES NO N/A

1. Were material and equipment in the OSA adequate to facilitate an effective emergency response? ___
2. Were communications and interface with the TSC adequate? ___
3. Were Communications and interface with dispatched teams adequate. ___
4. If the postulated events had actually occurred, would the actions taken by the OSA have been adequate to protect the health and safety of plant personnel and the general public? ___

D. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

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Page 4 of 4



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 6

APPLICABLE STATION: DCT CONTROLLER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATORS ASSIGNED: _____

A.	<u>ACTIVATION</u>	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1.	Did the RPD brief the DCT on protective measures?	_____	_____	_____
2.	Did the skills Supervisor brief the DCT on the task method?	_____	_____	_____
3.	Were the following forms completed for each team? (PMP 2081 EPP.203)?			
	a. EXHIBIT-D, Response Team Request Form	_____	_____	_____
	b. EXHIBIT-E, Team Briefing Form	_____	_____	_____
4.	Was EXHIBIT-F of PMP 2081 EPP.203 consulted for team staffing?	_____	_____	_____
5.	Was the OSA Manager's Log completed?	_____	_____	_____
6.	If applicable, did the RPD consult PMP 2081 EPP.208?	_____	_____	_____
7.	Did the OSA Manager or Skills Supervisor notify the appropriate facility upon team dispatch?	_____	_____	_____



B. GENERAL OPERATION

YES NO N/A

- | | | | | |
|----|---|-----|-----|-----|
| 1. | Did the team inform the OSA of unexpected conditions during enroute, assignment performance, and egress activities? | ___ | ___ | ___ |
| 2. | Did the team update the OSA on assignment progress? | ___ | ___ | ___ |
| 3. | Did the team report any injured personnel to the OSA? | ___ | ___ | ___ |
| 4. | Did the team carefully monitor radiological conditions at all times? | ___ | ___ | ___ |
| 5. | Were appropriate emergency actions performed for any of the following: | | | |
| | a. Turn back dose rate | ___ | ___ | ___ |
| | b. Turn back dose | ___ | ___ | ___ |
| | c. Personnel contamination | ___ | ___ | ___ |
| 6. | Was personal contamination monitoring performed in low count rate areas? | ___ | ___ | ___ |
| 7. | Were contaminated equipment and anti-C's properly disposed? | ___ | ___ | ___ |

C. GENERAL ITEMS

- | | | | | |
|----|--|-----|-----|-----|
| 1. | Were adequate supplies and equipment conveniently located for each team? | ___ | ___ | ___ |
| 2. | Were all briefings adequate? | ___ | ___ | ___ |
| 3. | Were all procedures adequate? | ___ | ___ | ___ |
| 4. | Did the OSA respond to the TSC and EOF requests in a timely manner? | ___ | ___ | ___ |

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D. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

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DONALD C. COOK NUCLEAR LANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 7

APPLICABLE STATION: REENTRY AND RESCUE TEAM

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATORS ASSIGNED: _____

A. ACTIVATION

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Did the RPD brief the RRT on protective measures?	_____	_____	_____
2. Did the Skills Supervisor brief the RRT on the task method?	_____	_____	_____
3. Were the following forms completed for each team? (PMP 2081 EPP.203)			
a. EXHIBIT-D, Response Team Request Form	_____	_____	_____
b. EXHIBIT-E, Team Briefing Form	_____	_____	_____
4. Was EXHIBIT-F of PMP 2081 EPP.203 consulted for team staffing?	_____	_____	_____
5. Was the OSA Manager's Log completed?	_____	_____	_____
6. If applicable, did the RPD consult PMP 2081 EPP.208?	_____	_____	_____
7. Did the OSA Manager or Skills Supervisor notify the appropriate facility upon team dispatch?	_____	_____	_____



B. GENERAL OPERATION

YES NO N/A

- | | | | | |
|----|--|-----|-----|-----|
| 1. | Did the team inform the OSA of unexpected conditions while enroute, during assignment performance, and egress? | ___ | ___ | ___ |
| 2. | Did the team update the OSA on assignment progress? | ___ | ___ | ___ |
| 3. | Did the team report any injured personnel to the OSA? | ___ | ___ | ___ |
| 4. | Did the team carefully monitor radiological conditions at all times? | ___ | ___ | ___ |
| 5. | Were appropriate Emergency Actions performed for any of the following: | | | |
| | a. Turn back dose rate | ___ | ___ | ___ |
| | b. Turn back dose | ___ | ___ | ___ |
| | c. Personnel contamination | ___ | ___ | ___ |
| 6. | Was personal contamination monitoring performed in low count rate areas? | ___ | ___ | ___ |
| 7. | Were contaminated equipment and anti-C's properly disposed? | ___ | ___ | ___ |

C. GENERAL ITEMS

- | | | | | |
|----|--|-----|-----|-----|
| 1. | Were adequate supplies and equipment conveniently located for each team? | ___ | ___ | ___ |
| 2. | Were all briefings adequate? | ___ | ___ | ___ |
| 3. | Were all procedures adequate? | ___ | ___ | ___ |
| 4. | Did the OSA respond to TSC and EOF requests in a timely manner? | ___ | ___ | ___ |



D. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

This image shows a single sheet of white paper with horizontal black ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slightly textured appearance, and there are some small dark specks scattered across the surface, possibly dust or imperfections in the paper. The edges of the paper are slightly irregular.

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 8

APPLICABLE STATION: ONSITE RMT CONTROLLER/OBSERVER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Did the RPD brief the RMT on protective measures?	_____	_____	_____
2. Did the Skills Supervisor brief the RMT on the task method?	_____	_____	_____
3. Were the following forms completed for each team? (PMP 2081 EPP.203)			
a. EXHIBIT-D, Response Team Request Form	_____	_____	_____
b. EXHIBIT-E, Team Briefing Form	_____	_____	_____
4. Was EXHIBIT-F of PMP 2081 EPP.203 consulted for team staffing?	_____	_____	_____
5. Was the OSA Manager's Log completed?	_____	_____	_____
6. If applicable, did the RPD consult PMP 2081 EPP.208? (KI assessment or dose extension)	_____	_____	_____
7. Did the OSA Manager or Skills Supervisor notify the appropriate facility upon team dispatch?	_____	_____	_____

B. GENERAL OPERATION

YES NO N/A

1. Did the team inform the OSA of unexpected conditions while enroute, during assignment performance and egress? ___
2. Did the team update the OSA on assignment progress? ___
3. Did the team report any injured personnel to the OSA? ___
4. Did the team carefully monitor radiological conditions at all times? ___
5. Were appropriate Emergency Actions performed for any of the following:
 - a. Turn back dose rate ___
 - b. Turn back dose ___
 - c. Personnel contamination ___
6. Was personal contamination monitoring performed in low count rate areas? ___
7. Were contaminated equipment and anti-C's properly disposed? ___

C. MISSION DETAILS

Answer each of the following questions as applicable to the mission.

1. Was PMP 2081 EPP.210, Unit Vent Sampling, adequately implemented? ___
2. Was PMP 2081 EPP.211, Secondary Systems Sampling, adequately implemented? ___
3. Was PMP 2081 EPP.212, Containment Atmosphere Sampling, adequately implemented? ___
4. Were prescribed surveys performed and documented in accordance with normal RP procedures? ___

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 9

APPLICABLE STATION: POST ACCIDENT SAMPLING TEAM CONT/OBS

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Did the RPD brief the PAST on protective measures?	_____	_____	_____
2. Did the Skills Supervisor brief the PAST on the task method?	_____	_____	_____
3. Were the following forms completed for each team? (PMP 2081 EPP.203)	_____	_____	_____
a. EXHIBIT-D, Response Team Request Form	_____	_____	_____
b. EXHIBIT-E, Team Briefing Form	_____	_____	_____
4. Was EXHIBIT-F of PMP 2081 EPP.203 consulted for team staffing?	_____	_____	_____
5. Was the OSA Manager's Log completed?	_____	_____	_____
6. If applicable, did the RPD consult PMP 2081 EPP.208? (KI assessment and dose extension).	_____	_____	_____
7. Did the OSA Manager or Skills Supervisor notify the appropriate facility upon team dispatch?	_____	_____	_____



B. GENERAL OPERATION

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Did the team inform the OSA of unexpected conditions while enroute, during assignment performance, and egress?	___	___	___
2. Did the team update the OSA on assignment progress?	___	___	___
3. Did the team report any injured personnel to the OSA?	___	___	___
4. Did the team carefully monitor radiological conditions at all times?	___	___	___
5. Were appropriate Emergency Actions performed for any of the following:			
a. Turn back dose rate	___	___	___
b. Turn back dose	___	___	___
c. Personnel contamination	___	___	___
6. Was personnel contamination monitoring performed in low count rate areas?	___	___	___
7. Were contaminated equipment and anti-C's properly disposed?	___	___	___

C. SAMPLING ACTIVITY EVALUATION

1. What form of sample was requested?			
a. RCS Loop _____			
b. CTMT Sump _____			
c. CTMT Atm. _____			
2. Was the sample obtained in accordance with applicable Chemistry procedures?	___	___	___
3. Was the technician familiar with the post-accident sampling system and its operation?	___	___	___



YES NO N/A

4. Were sample results available within three hours of the request for sample?

REQUEST TIME:
TIME RESULTS AVAILABLE:

5. Were dose rates evaluated in the area of the sample panel periodically?

6. Were radiation surveys performed in the hot lab during sample analysis?

7. Did the technician analyzing the sample practice adequate contamination control techniques?

8. Was sample analysis performed adequately?

D. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 10

APPLICABLE STATION: EMERGENCY OPERATIONS FACILITY- LEAD CONTROLLER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
1. Were each of the following actions completed?			
a. North gate open	_____	_____	_____
b. EOF unlocked	_____	_____	_____
c. Cook security notified	_____	_____	_____
d. Area radiation monitor on	_____	_____	_____
e. Lights on	_____	_____	_____
f. Copier on	_____	_____	_____
g. OTSC/PSSD operational	_____	_____	_____
h. RDDS and IBM terminal operational	_____	_____	_____
i. Chronological event board being updated	_____	_____	_____
j. EOF Manager briefing and staff briefing completed	_____	_____	_____
k. Time designated to establish EOF communications	_____	_____	_____
l. PMP 2081 EPP.301 EXHIBIT-A requirements satisfied	_____	_____	_____

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
2. Was the EOF operational within one hour of the emergency declaration? /.	___	___	___

B. GENERAL OPERATION

1. Did the EOF Manager establish and maintain command and control of EOF activities?	___	___	___
2. Did the EOF Manager consider and/or direct implementation of the following EPP's when appropriate?			
a. PMP 2081 EPP.303, Off-site Radiological Assessment	___	___	___
b. PMP 2081 EPP.302, EOF Emergency Communications	___	___	___
3. Was the State Notification Form completed and transmitted every 15 minutes according to the requirements of PMP 2081 EPP.301, Section 4.6?	___	___	___
4. Did the SEC/Recovery Control Manager approve initial or changed Protective Action Recommendations?	___	___	___
5. Did the EOF Manager brief the EOF staff on emergency conditions at least once per hour?	___	___	___
6. Were subsequent shift(s) designated in accordance with PMP 2081 EPP.301, Section 4.7?	___	___	___

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C. GENERAL ITEMS

- | | <u>Yes</u> | <u>No</u> | <u>N/.</u> |
|---|------------|-----------|------------|
| 1. Were materials and equipment in the EOF adequate to facilitate an effective emergency response? | _____ | _____ | _____ |
| 2. Were communications and interface with the TSC adequate? | _____ | _____ | _____ |
| 3. Were communications and interface with government agencies adequate? | _____ | _____ | _____ |
| 4. If the postulated events had actually occurred, would the actions taken by the EOF been adequate to protect the health and safety of plant personnel and the general public? | _____ | _____ | _____ |

D. INITIAL RECOVERY ACTIVITIES

1. Were any emergency radiation exposure limit controls terminated and 10CFR20 radiation control measures re-established? _____
2. Was a preliminary damage evaluation compiled and priority repairs identified for maintaining a safe shutdown condition? _____
3. Was a preliminary assessment made of the scope of decontamination and disposal requirements? _____
4. Was the status and disposition of the uneffected unit examined? _____

E. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO 11

APPLICABLE STATION: EOF COMMUNICATIONS OBSERVER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
1. Were the following positions staffed within one hour of emergency declaration?			
a. EOF Communications Director	___	___	___
b. EOF Boardwriter	___	___	___
c. Telecopy Operator	___	___	___
d. EOF Scribe	___	___	___
e. JPIC Communicator	___	___	___
f. NRC HPN Communicator	___	___	___
g. Runners (2)	___	___	___
h. BCSD Communicator	___	___	___
i. MSP Communicator	___	___	___
j. NRC ENS Communicator	___	___	___
If these positions were not staffed, was compensatory action taken to ensure the function was performed?	___	___	___
2. Did the Boardwriter establish communications with the Control Room and initiate status board update on arrival?	___	___	___



Yes No N/A

B. GENERAL COMMUNICATIONS ACTIVITIES

- | | | | | |
|----|--|-----|-----|-----|
| 1. | Did the Communications Director implement PMP 2081 EPP.101 TSC Emergency Communications? | ___ | ___ | ___ |
| 2. | Did each communicator follow the general guidance provided in the respective attachment of PMP 2081 EPP.302? | | | |
| a. | Boardwriter - Attachment 2 | ___ | ___ | ___ |
| b. | Telecopy Operator-Attachment 3 | ___ | ___ | ___ |
| c. | EOF Runner-Attachment 4 | ___ | ___ | ___ |
| d. | BCSD Communicator-Attachment 6 | ___ | ___ | ___ |
| e. | AEPCS Communicator - Attachment 5 | ___ | ___ | ___ |
| f. | MSP Communicator-Attachment 7 | ___ | ___ | ___ |
| g. | NRC ENS Communicator-Attachment 8 | ___ | ___ | ___ |
| h. | NRC HPN Communicator-Attachment 9 | ___ | ___ | ___ |
| i. | JPIC Communicator-Attachment 10 | ___ | ___ | ___ |
| j. | EOF Scribe-Attachment 11 | ___ | ___ | ___ |
| 3. | Was document transmission completed in accordance with Attachment 1 of PMP 2081 EPP.302? | ___ | ___ | ___ |
| 4. | Did each of the following communicators appear familiar with applicable EPP's and communications equipment? | | | |
| a. | Boardwriter | ___ | ___ | ___ |
| b. | AEPCS Communicator | ___ | ___ | ___ |
| c. | MSP Communicator | ___ | ___ | ___ |
| d. | BCSD Communicator | ___ | ___ | ___ |
| e. | JPIC Communicator | ___ | ___ | ___ |
| f. | EOF Scribe | ___ | ___ | ___ |

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
g. NRC ENS Communicator	—	—	—
h. NRC HPN Communicator	—	—	—
i. Runners	—	—	—
j. Telecopy Operator	—	—	—
5. Were inquiries received by communicators from other facilities documented and processed in a timely manner?	—	—	—
6. Was the Nuclear Plant Accident Notification Form completed accurately every 15 minutes?	—	—	—
7. Was the Nuclear Plant Accident Notification Form transmitted to the MSP every 15 minutes?	—	—	—

C. COMMUNICATIONS EQUIPMENT

Document the operability of the following communications equipment. Spot-check telephones and document operability in OTHER section. It may be necessary to question communicators on equipment operability.

EQUIPMENT	OPERABLE	INOPERABLE	PROBLEM NOTED
TELECOPIER			
PHOTO-COPY MACHINE			
TEST-TELE HEADSET			
AEFSC COMM. PHONE			
BCSD COMM. PHONE			
MSP COMM. PHONE			
COMM. DIR. PHONE			
RADIOS			
JPIC COMM. PHONE			
OTSC/PSSD TERMS			
RDDS TERMINAL			
NRC ENS COMM. PHONE			
NRC HPN COMM. PHONE			
OTHER			

1

2

3

4

5

6

7

8

9

10

D. COMMENTS

COMMENT NO.	CHECKLIST REFERENCE	COMMENT



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

CHECKLIST NO. 12

APPLICABLE STATION: EOF ENVIRONMENTAL ASSESSMENT CONTROLLER

DATE OF EXERCISE: _____ TIME INITIATED: _____

EVALUATOR: _____

A. ACTIVATION

- | | <u>Yes</u> | <u>No</u> | <u>N</u> |
|---|------------|-----------|----------|
| 1. Were the following positions staffed within one hour of emergency declaration? | | | |
| a. Environmental Assessment Director | ___ | ___ | ___ |
| b. Environmental Assessment Coordinator | ___ | ___ | ___ |
| 3. Was the EOF ARM energized and verified to be in proper working order? | ___ | ___ | ___ |

B. IMMEDIATE ACTIONS

- | | | | |
|--|-----|-----|-----|
| 1. Did the EAD/EAC conduct a review of RDDS monitor indications in accordance with Step 4.4.4 of PMP 2081 EPP.303? | ___ | ___ | ___ |
| 2. Was a meteorological forecast obtained in accordance with Step 4.4.1 of PMP 2081 EPP.303? | ___ | ___ | ___ |
| 3. Was a dose projection performed in accordance with PMP 2081 EPP.304, Dose Projection? | ___ | ___ | ___ |
| 4. Were Off-site Radiation Monitoring Teams requested from the OSA? | ___ | ___ | ___ |

C. SUBSEQUENT ACTIONS

- | | | | |
|---|-----|-----|-----|
| 1. Did the EAC provide adequate support to the EAD in determining adequate off-site dose projections and protective action recommendations? | ___ | ___ | ___ |
|---|-----|-----|-----|



- | | <u>Yes</u> | <u>No</u> | <u>N</u> |
|--|------------|-----------|----------|
| 2. Was the State Notification Form completed and transmitted every 15 minutes in accordance with PMP 2081 EPP.303, Attachment 1? | — | — | — |
| 3. Were Off-site RMT's dispatched to confirm off-site radiation levels? | — | — | — |
| 4. Did EAD turnover include the following? | | | |
| a. Verbal turnover | — | — | — |
| b. PMP 2081 EPP.303, EXHIBIT-D, Off-site Radiological Assessment Turnover Checklist | — | — | — |
| 5. Was potassium iodide administration considered for Off-site RMT's in accordance with PMP 2081 EPP.212? | — | — | — |

D. OFFSITE DOSE ASSESSMENT

- | | | | |
|---|---|---|---|
| 1. Was a dose projection calculated in accordance with PMP 2081 EPP.304? | — | — | — |
| 2. Did the EAC perform dose assessment in accordance with Section 4.5.3 of PMP 2081 EPP.303 for unmonitored releases? | — | — | — |
| 3. Were the field teams prepositioned for possible escalation of classification? | — | — | — |
| 4. Was the containment LOCA sequence considered for dose projections? | — | — | — |
| 5. Were dose calculations verified by field data? | — | — | — |
| 6. Were dose projections recomputed for every change in meteorological or radiation release data? | — | — | — |
| 7. Did the emergency DAP sign-on procedure work properly? | — | — | — |

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- | | <u>Yes</u> | <u>No</u> | <u>N</u> |
|--|------------|-----------|----------|
| 8. Were communications and interface with the Canton Computer Center effective? | ___ | ___ | ___ |
| 9. Did dose assessment personnel fill out the Accident Notification Form in accordance with EXHIBIT-A of PMP 2081 EPP.304? | ___ | ___ | ___ |
| 10. Were calculated results in close proximity to scenario predictions? | ___ | ___ | ___ |

TIME	SCENARIO PREDICTIONS	CALCULATED RESULTS

- | | | | |
|---|-----|-----|-----|
| 11. Did a protective action recommendation accompany initial notification of general emergency? | ___ | ___ | ___ |
| 12. Were release duration predictions properly incorporated into dose assessment? | ___ | ___ | ___ |

E. FIELD MONITORING

- | | | | |
|---|-----|-----|-----|
| 1. Was FMT prepositioning performed in accordance with section 4.7.2 of PMP 2081 EPP.303? | ___ | ___ | ___ |
| 2. Was the counting team positioned outside of the plume? | ___ | ___ | ___ |
| 3. Was plume tracking planning effective? | ___ | ___ | ___ |



4. Was plume definition performed in accordance with Section 4.7 of PMP 2081 EPP.303?

Yes No

— — —

F. PROTECTIVE ACTION RECOMMENDATIONS

1. Was the dose-saving effectiveness of protective actions considered by the EAD?
2. Was a protective action recommended to the State within 15 minutes of general emergency declaration?
3. Was the Protective Action Worksheet (Attachment 1, PMP 2081 EPP.305) completed in accordance with section 4.4 of PMP 2081 EPP.305?
4. Was the basis for protective action recommendation included on the State Notification Form?
5. If applicable, was the Core/Containment Status Worksheet completed in accordance with Section 4.5 of PMP 2081 EPP.305?

— — —

— — —

— — —

— — —

— — —

G. GENERAL ITEMS

1. Did the EAC provide adequate support to each of the following groups?
 - a. Field Monitoring Teams
 - b. OSA-Radiation Protection Director
 - c. EOF-Environmental Assessment Director
2. Did the following procedures provide adequate information to the EAC for performance of activities?
 - a. PMP 2081 EPP.301, Activation and Operation of the Emergency Operation Facility
 - b. PMP 2081 EPP.304, Off-site Radiological Assessment
 - c. PMP 2081 EPP.305, Protective Action Recommendations
3. Were adequate supplies, equipment and reference documentation available to perform the EAC function?

— — —

— — —

— — —

— — —

— — —

— — —

— — —

H. SCENARIO DEFICIENCIES

The following deficiencies in scenario content were noted:

[illegible]

101

102

103

104

105

106

107

I. COMMENTS

COMMENT NO.	CHECKLIST REFERENCE	COMMENT



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

V. OFF-SITE AGENCY PARTICIPATION

This exercise will be an unannounced, off-hours exercise as required by NUREG-0654/FEMA-REP-1, Rev. 1 and will include partial participation by the State of Michigan and full participation by Berrien County.



DONALD .C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VI.

EXERCISE NARRATIVE SUMMARY

INITIAL CONDITIONS:

- Unit 2 at 100% Power
- RCS Boron = 61 ppm
- EOL - 17,500 MWD/MTU
- Days on line = 184
- Power History
 - 100% for 20 days
 - 55% for 2 days
 - 100% for 32 days
- Emergency power out of service due to lightning strike 12 hours earlier
- NRV-151 isolated due to leakby
- NRV-152 isolated due to NMO-152 being stuck closed

NARRATIVE:

The simulated events take place at the Unit 2 end-of-cycle (17,500 MWD/MTU) and begin to unfold in the early hours of April 3, 1990. Shortly after 0100 with initial plant conditions basically unremarkable (with the exception of emergency power being out of service due to lightning) an acoustical monitoring system (DMIMS) alarm is received in the Unit 2 Control Room. The audible "clanging" sounds picked up in three different locations in the Reactor Coolant System (RCS) reasonably indicate the presence of multiple, loose, solid objects ("loose parts") in the RCS that could, and in fact do, prove to be damaging to the system.

Almost simultaneous with that alarm number 4 reactor coolant pump begins to vibrate with ever increasing intensity until an alarm is received for that condition also. Shortly after 0130 secondary system radiation levels increase prompting a decision to begin a 10%/hr. controlled shutdown with a subsequent decision to declare an UNUSUAL EVENT at approximately 0147. All necessary notifications are made.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VI. EXERCISE NARRATIVE SUMMARY (CONTINUED)

The primary to secondary leakage rate continues to increase and at approximately 0208 the operators are aware that it has become significant and trip the unit at 0210. An ALERT is immediately declared followed by notification of emergency personnel.

Upon unit trip, safety injection occurs, plus reserve feed trips resulting in loss of offsite power. AB diesel generator indicates an incomplete start but CD diesel does start and load.

Shortly thereafter (0223) control air valve XCR-102 will not open, effectively eliminating the ability to depressurize.

When the TSC, OSA and EOF become operational, teams are dispatched to monitor onsite and offsite radiation levels (none as of yet) and coolant system activity; repair valve XCR-102 and AB diesel generator and; investigate reserve feed problems and a leaking #4 steam generator stop valve.

At approximately 0445 a significant release starts because the #4 Power Operated Relief Valve (PORV) opens. An alarm is immediately received from the PORV radiation monitor.

EOF dose assessment projections indicate Protective Action Recommendations (PAR) leading to a GENERAL EMERGENCY declaration.

During the next two hours electrical power is restored and XCR-102 is repaired. The release rate decreases as the stuck open #4 PORV and restored equipment depressurizes the system. This diminishing release rate is such that ALERT level PARs are reached shortly after 0700 and recovery planning and operations can begin.

The exercise will terminate at approximately 0800.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VI. EXERCISE NARRATIVE SUMMARY (CONTINUED)

TIMELINE:

<u>REAL TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT/CONDITION</u>
0100	00:00	Initial Conditions
0115	00:15	DMIMS alarm and #24 RCP vibrations indicating above normal levels (2.4 mils)
0117	00:17	#24 vibrations trending upwards-now at 2.7 mils.
0119	00:19	#24 vibration at 3.2 mils
0122	00:22	#24 vibrations at 5.0 mils. Call is placed to J.R. Sampson, OPS Superintendent informing him of the situation.
0127	00:27	#24 vibration reach 7.0 mils and alarm is received.
0133	00:33	Steam Jet Air Ejector (SJAE), Gland Steam Leak-off (GSLO) and blowdown RMS alarms are received. Crew begins checking steam generator for signs of leakage.
0135	00:35	Lab sample of secondary side is requested.
0138	00:38	Operations Superintendent is called again and a decision is made to begin controlled shutdown at 10%/hr. unless the situation worsens.
0144	00:44	Increased shutdown rate initiated by indications of increasing primary to secondary leakage.
0147	00:47	SS declares UNUSUAL EVENT based on ECC-14 and 17.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VI. EXERCISE NARRATIVE SUMMARY (CONTINUED)

<u>REAL TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT/CONDITION</u>
0150	00:50	SS calls Unit 1 to request initial notifications be made and to call him back when they are completed. He also requests additional manpower from Unit 1.
0156	00:56	Chem Lab reports that secondary samples have high activity.
0208	01:08	Leak rate now \geq 500 gpm.
0210	01:10	Unit manually tripped; safety injections started and #24 Reactor Coolant Pump is stopped.
0210	01:10	SS declares <u>ALERT</u> based ECC-14 and ECC-17.
0211	01:11	Blackout occurs, train B is lost and AB diesel fails to start.
0223	01:23	Control air valve XCR-102 fails to open resulting in loss of control air to containment.
0217	01:17	Emergency Response Organization call out begins.
0230	01:30	Contingency for declaring ALERT.
0313	02:13	All Emergency Response Facilities activated.
0320	02:20	On-site and off-site radiation monitoring teams dispatched.
0330	02:30	PASS team dispatched.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VI. EXERCISE NARRATIVE SUMMARY (CONTINUED)

<u>REAL TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT/CONDITION</u>
0345	02:45	Teams dispatched from OSA to: Repair XCR-102 Repair AB diesel Find out why #4 S/G stop valve is leaking
0445	03:45	#4 PORV opens.
0446	03:46	PORV radiation monitor MRA-2602 alarms.
0455	03:55	EOF declares <u>GENERAL EMERGENCY</u> based on site boundary dose projections.
0505	04:05	Team dispatched to see if PORV can be closed.
0515	04:15	Contingency - EOF declares <u>GENERAL EMERGENCY</u> if not done at 0455.
0515	04:15	XCR-102 is repaired.
0532	04:32	PORV team encounters turn-back dose.
0540	04:40	AB Diesel is restored.
0550	04:50	RHR is aligned.
0605	05:05	PASS Team returns with results.
0642	05:42	RHR is in service.
0656	05:56	Reserve power is restored.
0715	06:15	Dose projections indicate rad levels below alert PARs. De-escalate to <u>ALERT</u> .
0720	06:20	Begin recovery operations.
0800	07:00	TERMINATE EXERCISE.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VII. EXERCISE MESSAGES AND PLANT DATA SHEETS

- A. PLANT DATA CURVES
- B. CONTROLLERS MESSAGES
- C. PLANT OPERATING DATA
- D. THERMOCOUPLE MAPS

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VII. A. PLANT DATA CURVES

This section provides Control Room and TSC Controllers with selected primary and secondary plant parameters in graphic format. Controllers will provide time specific data upon request from participants.

TABLE OF CONTENTS

<u>GRAPH</u>	<u>PARAMETER</u>
1	Containment Temperature
2	Containment Hydrogen Concentration
3	RWST Level
4	Source Range Indication
5	Intermediate Range Indication
6	Containment Pressure
7	Containment Sump Level
8	Containment Level
9	CTS Pump Status
10	RHR Spray Flow
11	Safety Injection Pump Flow
12	Boron Injection Flow
13	Accumulator Pressure
14	RHR Injection Flow
15	Reactor Coolant Pump Status
16	Reactor Coolant System Pressure (WR)
17	Charging Flow
18	Pressurizer Liquid Temperature

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

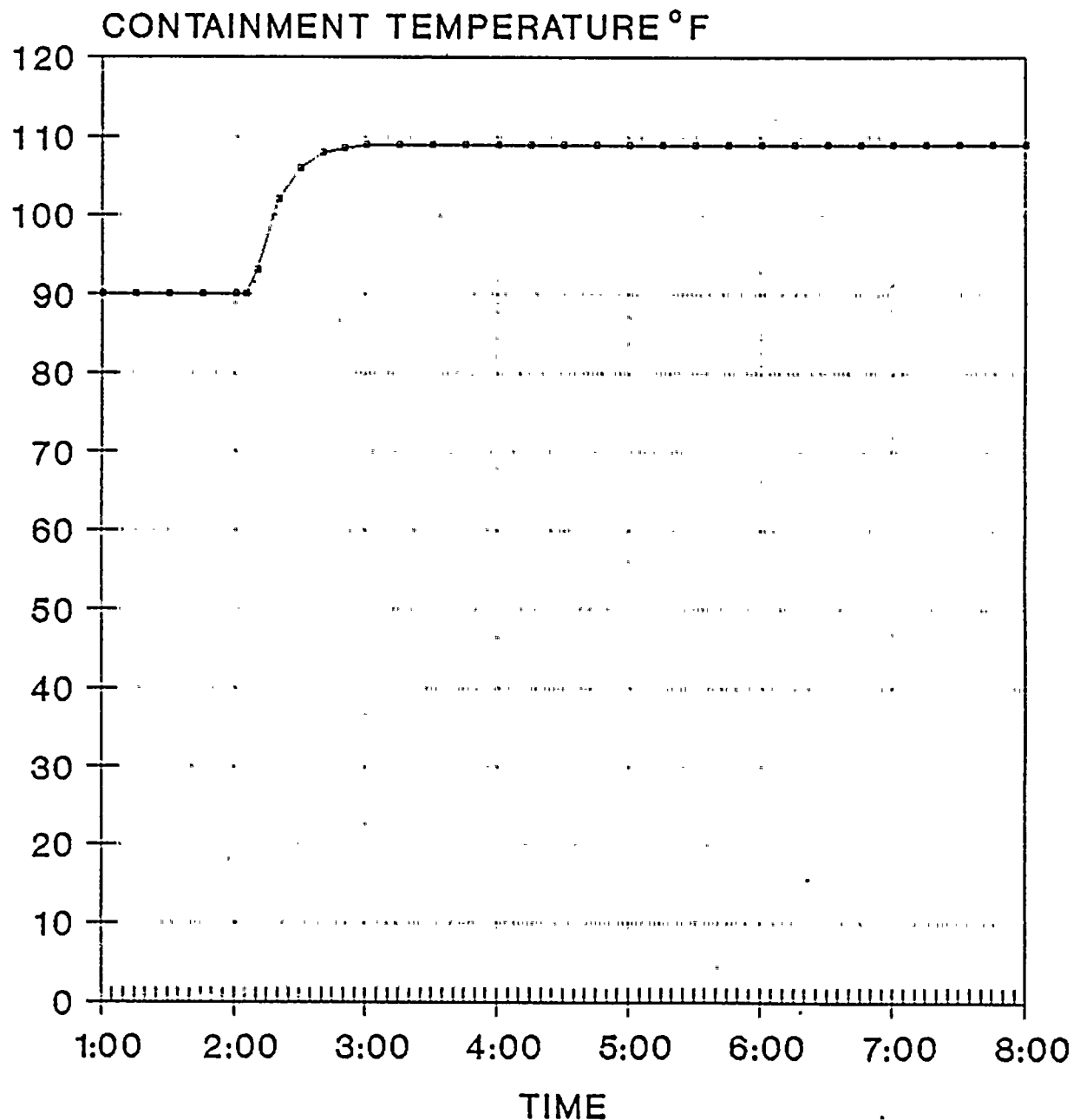
VII. A. PLANT DATA CURVES (CONTINUED)

<u>GRAPH</u>	<u>PARAMETER</u>
19	Pressurizer Steam Temperature
20	Pressurizer Level
21/22/23	PRT Temperature, Level & Pressure
24/25	Pressurizer Heater Status
26	Letdown Flow
27	Saturation Margin
28	T-HOT, Wide Range
29	T-COLD, Wide Range
30	Steam Generator Pressure
31	Steam Generator Level, (NR)
32	Steam Generator Level, (WR)
33	Steam Flow
34	Feed Flow
35	Auxiliary Feed Flow
36/38	Steam Flowpath, Atmos/Dump
37	Condensate Storage Tank Level

Parameters not addressed graphically, but which are significant to the scenario are given in appropriate messages.



CONTAINMENT TEMPERATURE VS. TIME

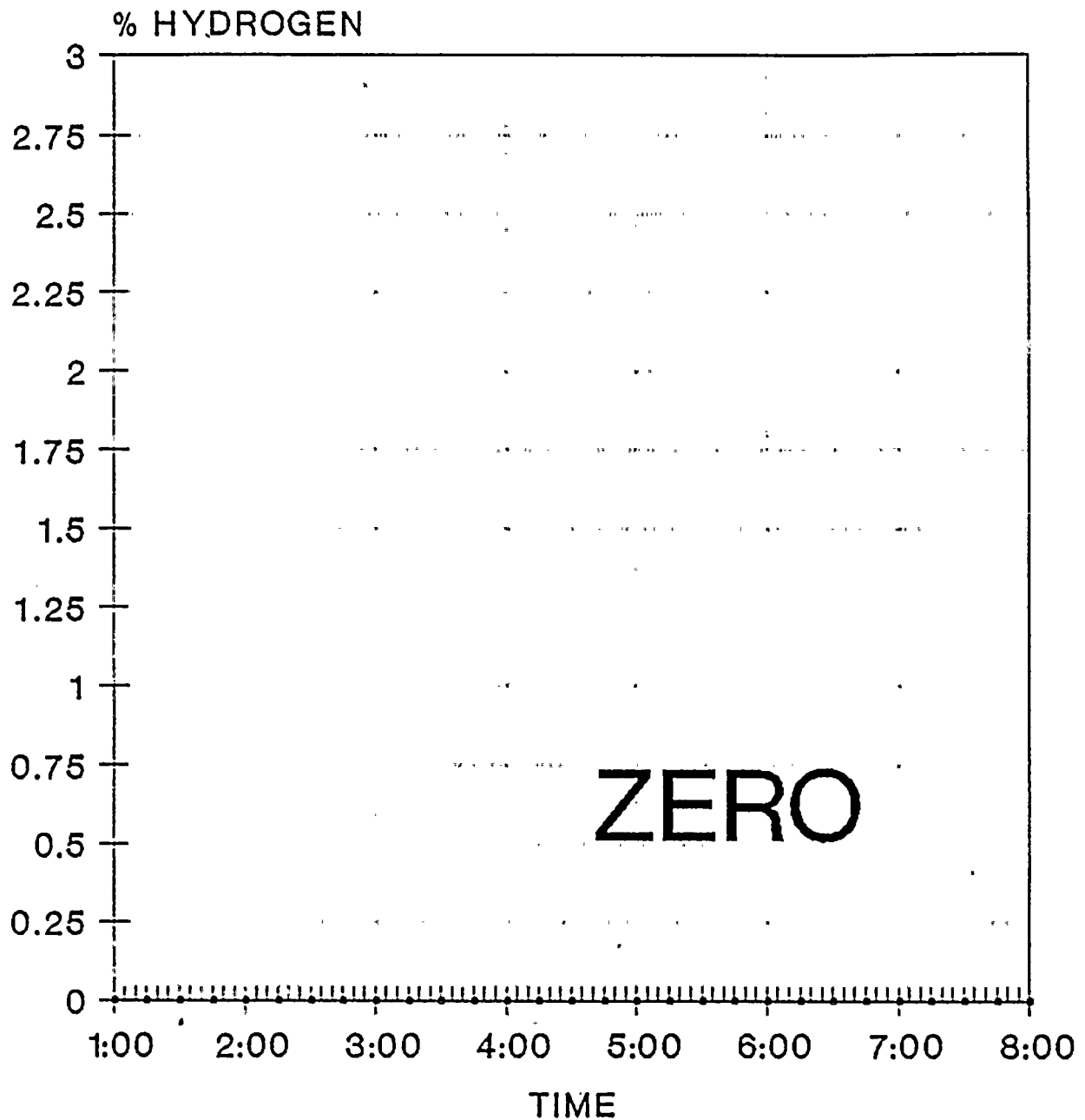


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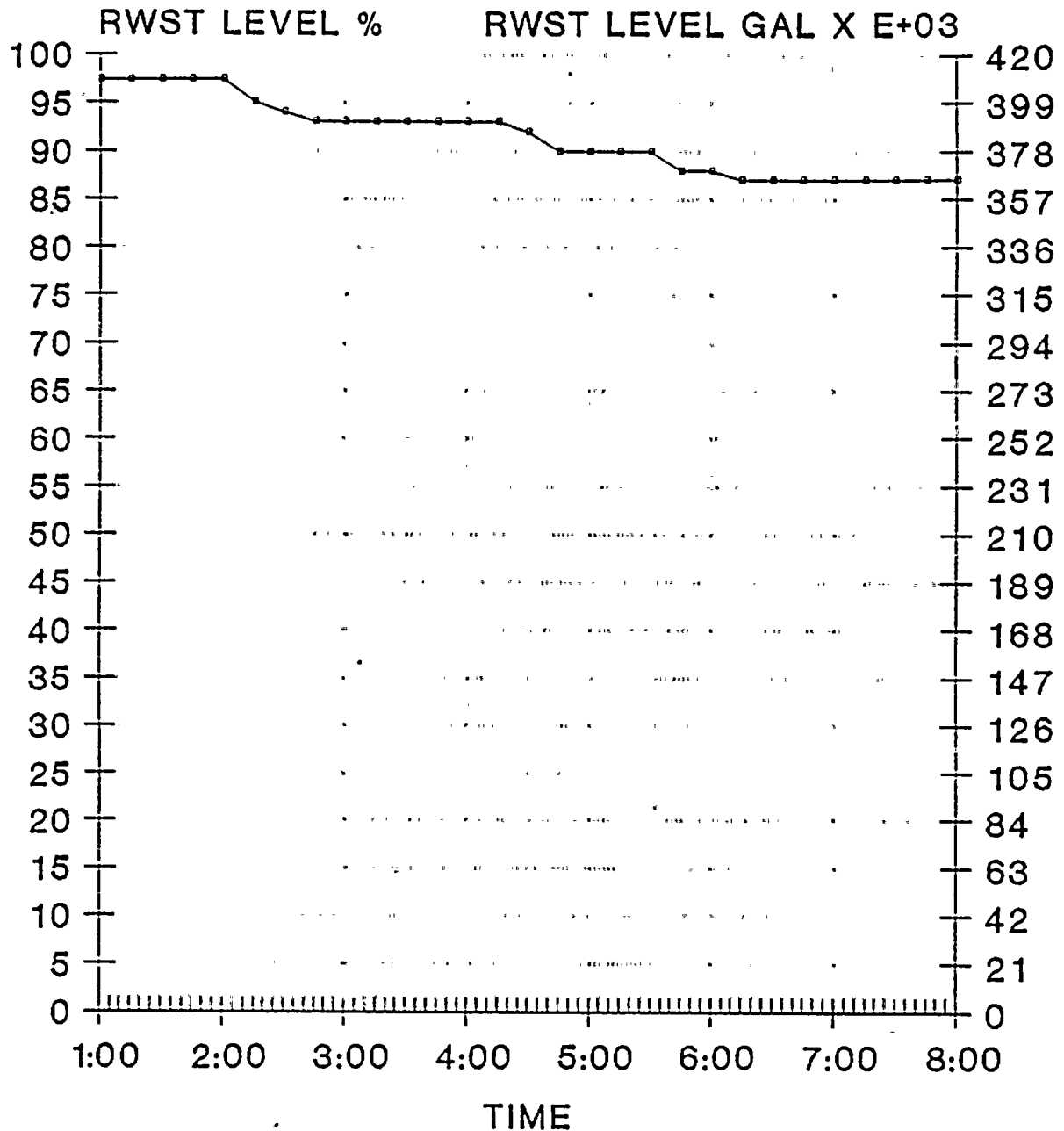
CONTAINMENT H₂ CONC.
VS.
TIME



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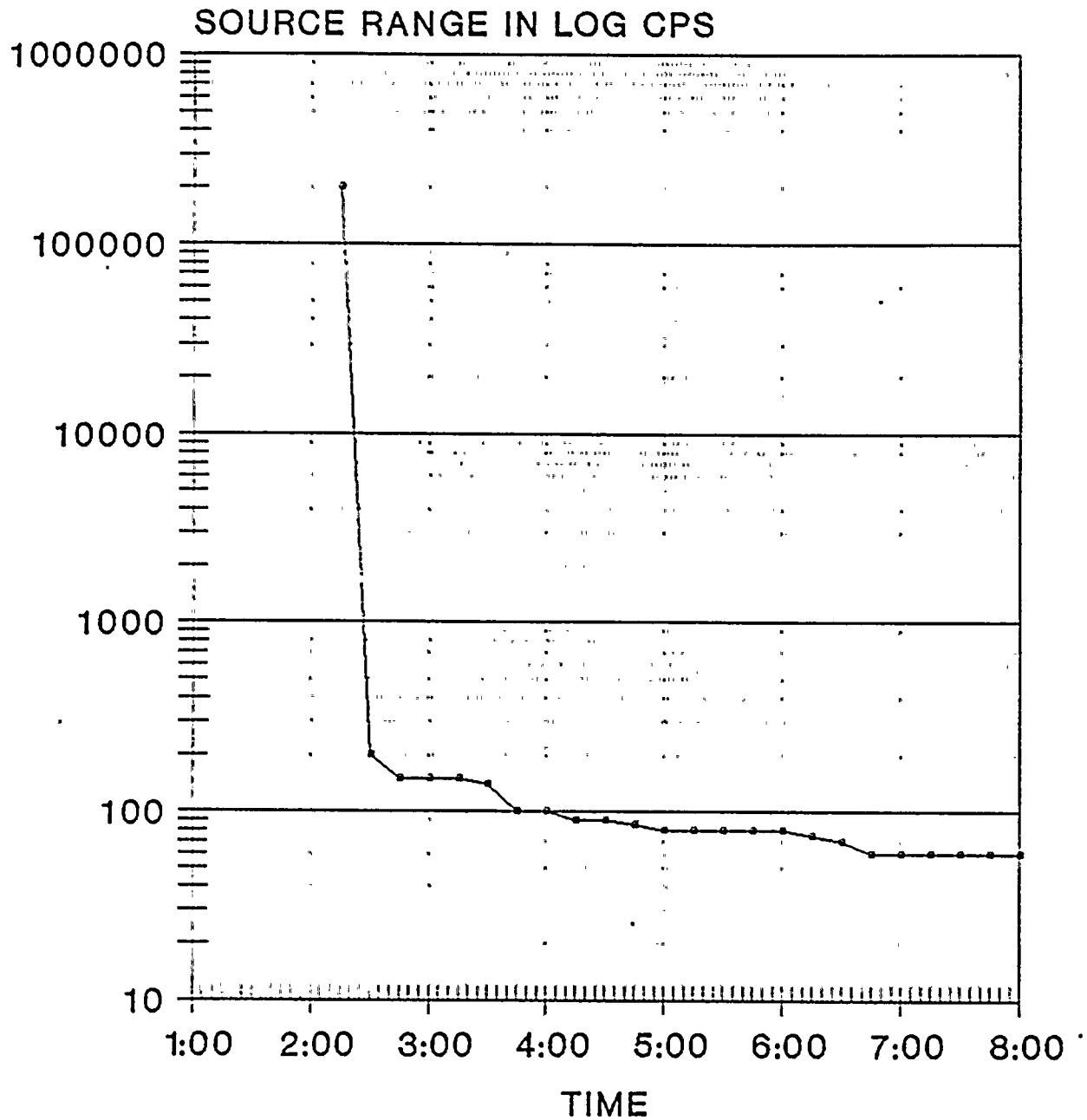
REFUELING WATER STORAGE TANK (RWST) LEVEL VS. TIME



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SOURCE RANGE VS. TIME

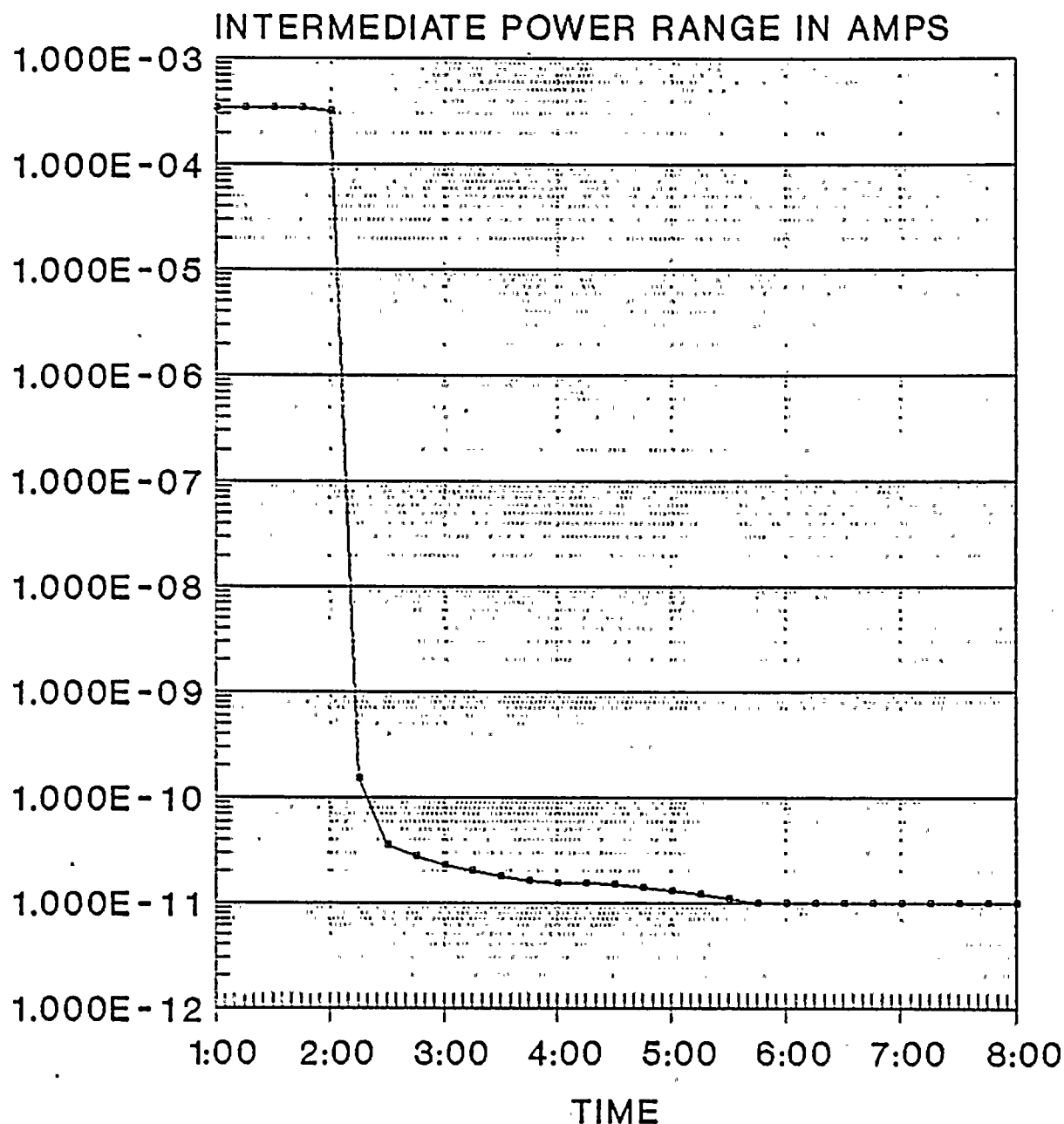


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INTERMEDIATE POWER RANGE VS. TIME

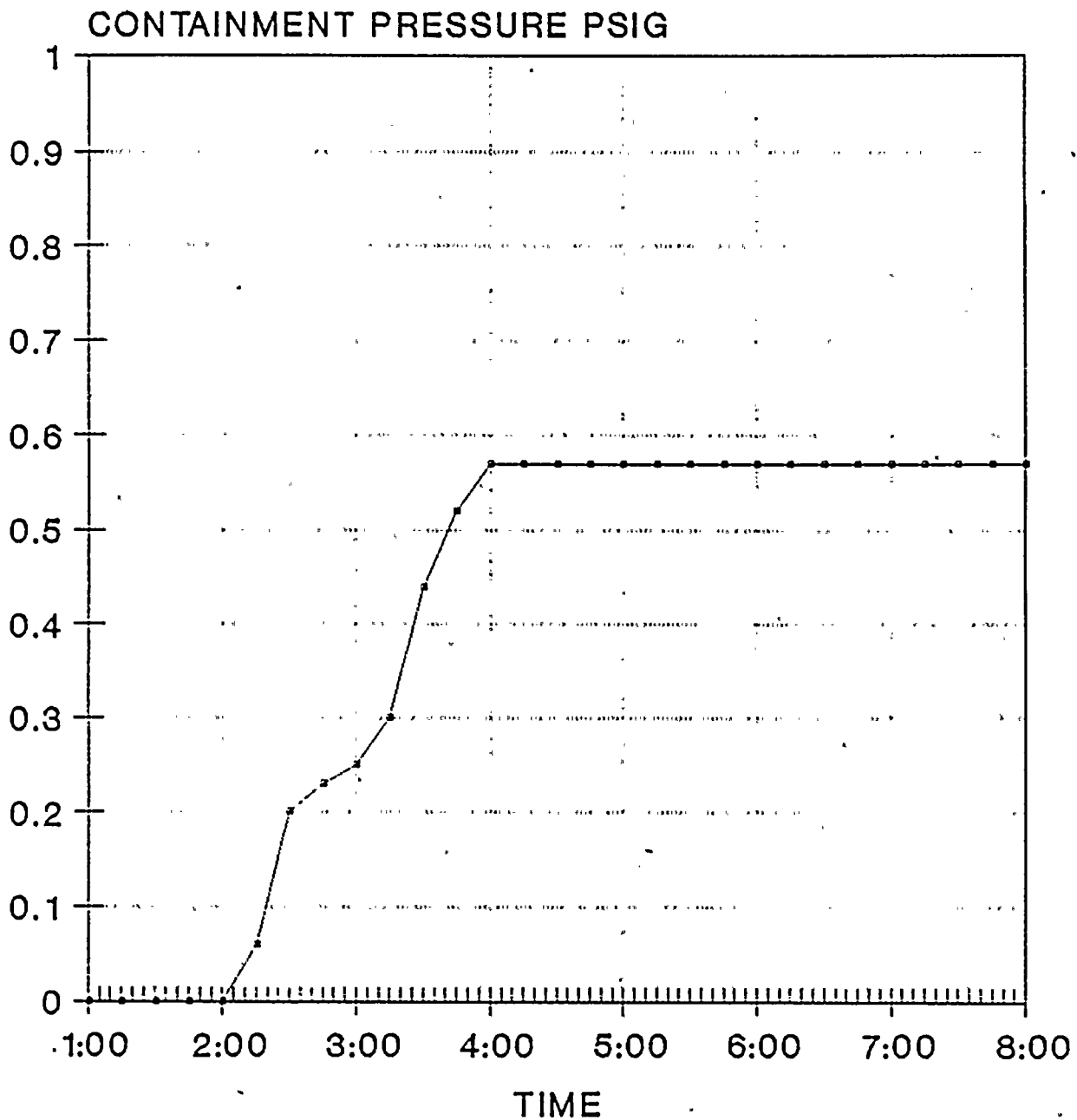


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CONTAINMENT PRESSURE VS. TIME

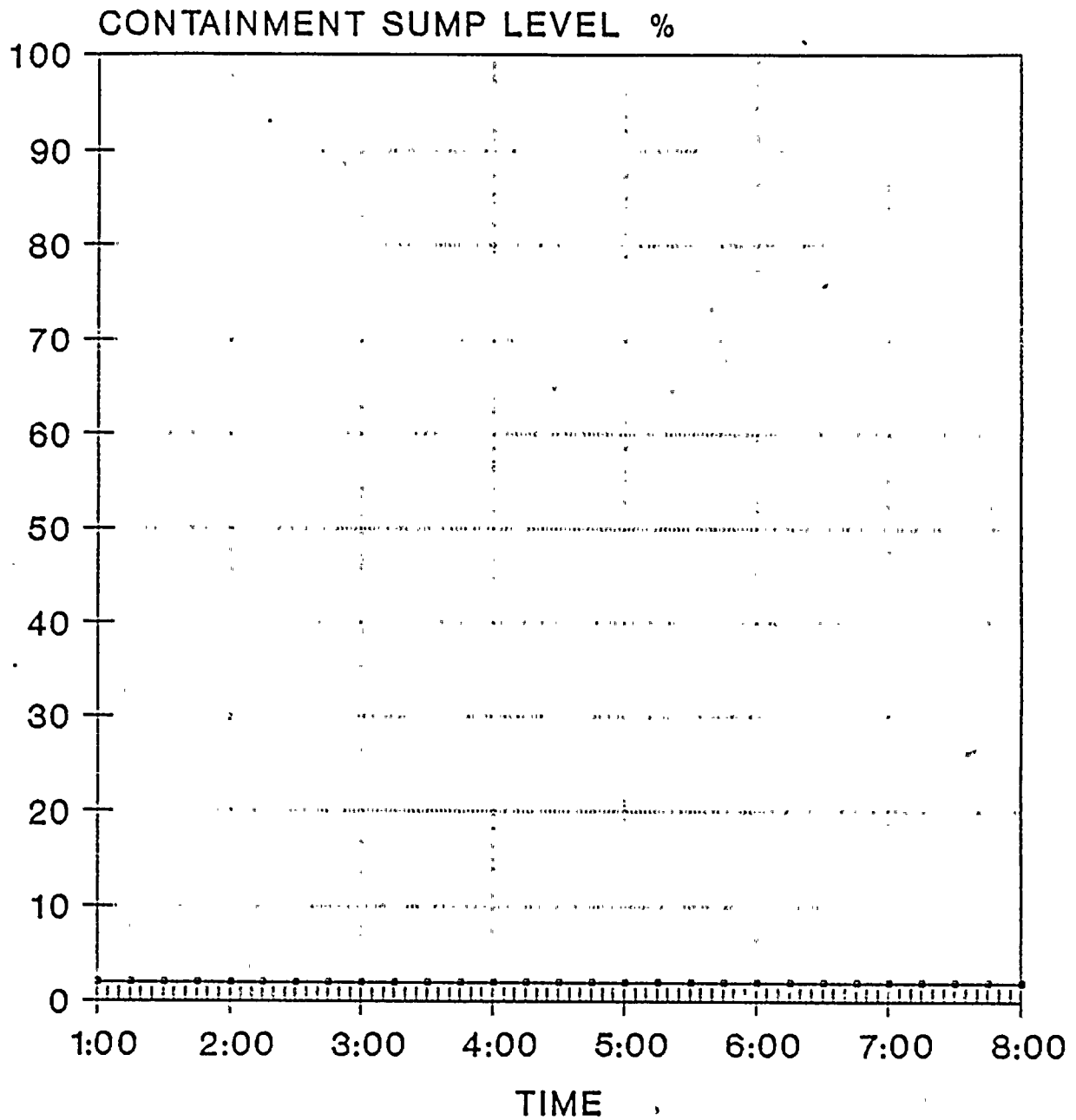


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CONTAINMENT SUMP LEVEL VS. TIME

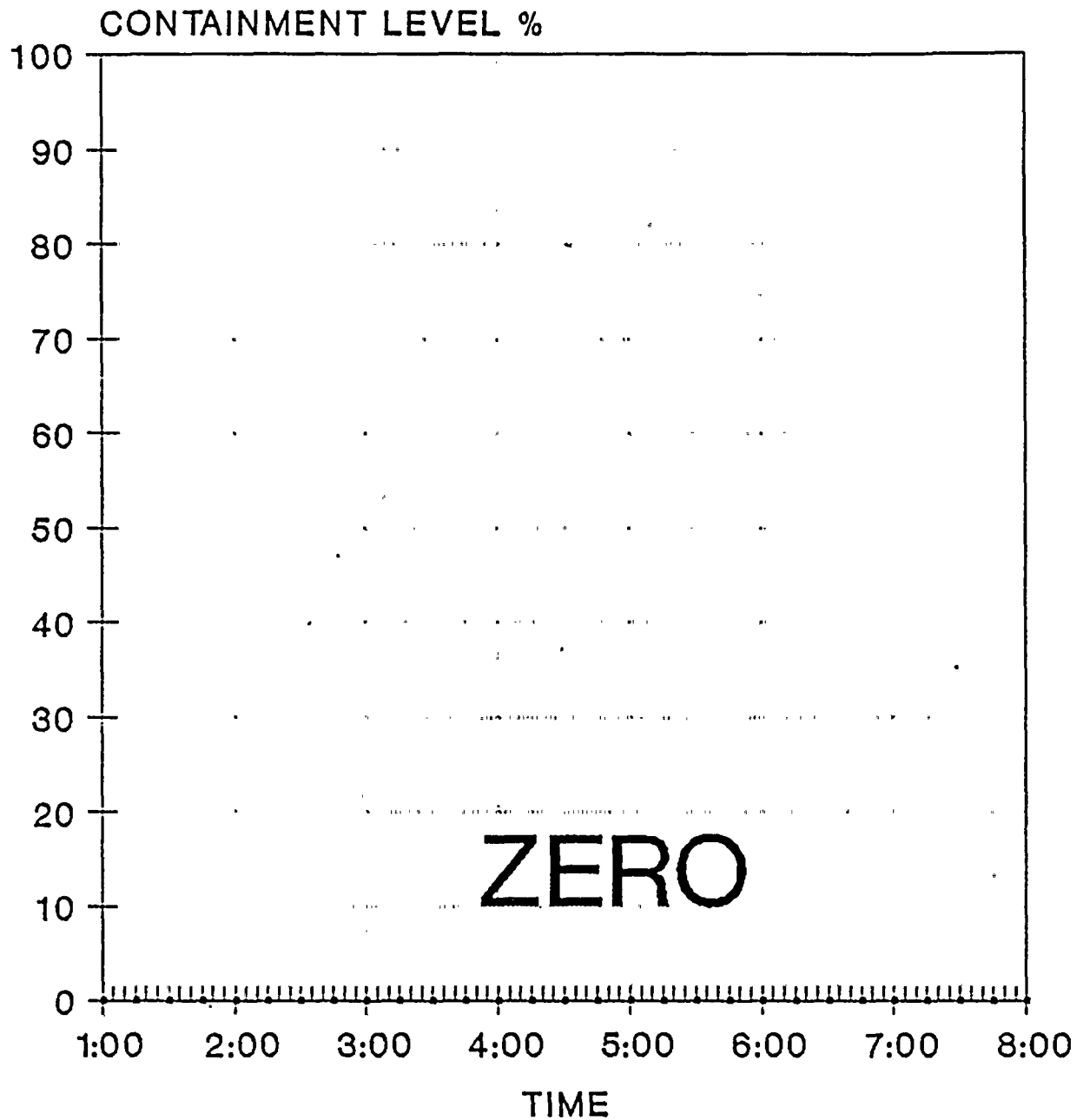


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CONTAINMENT LEVEL VS. TIME

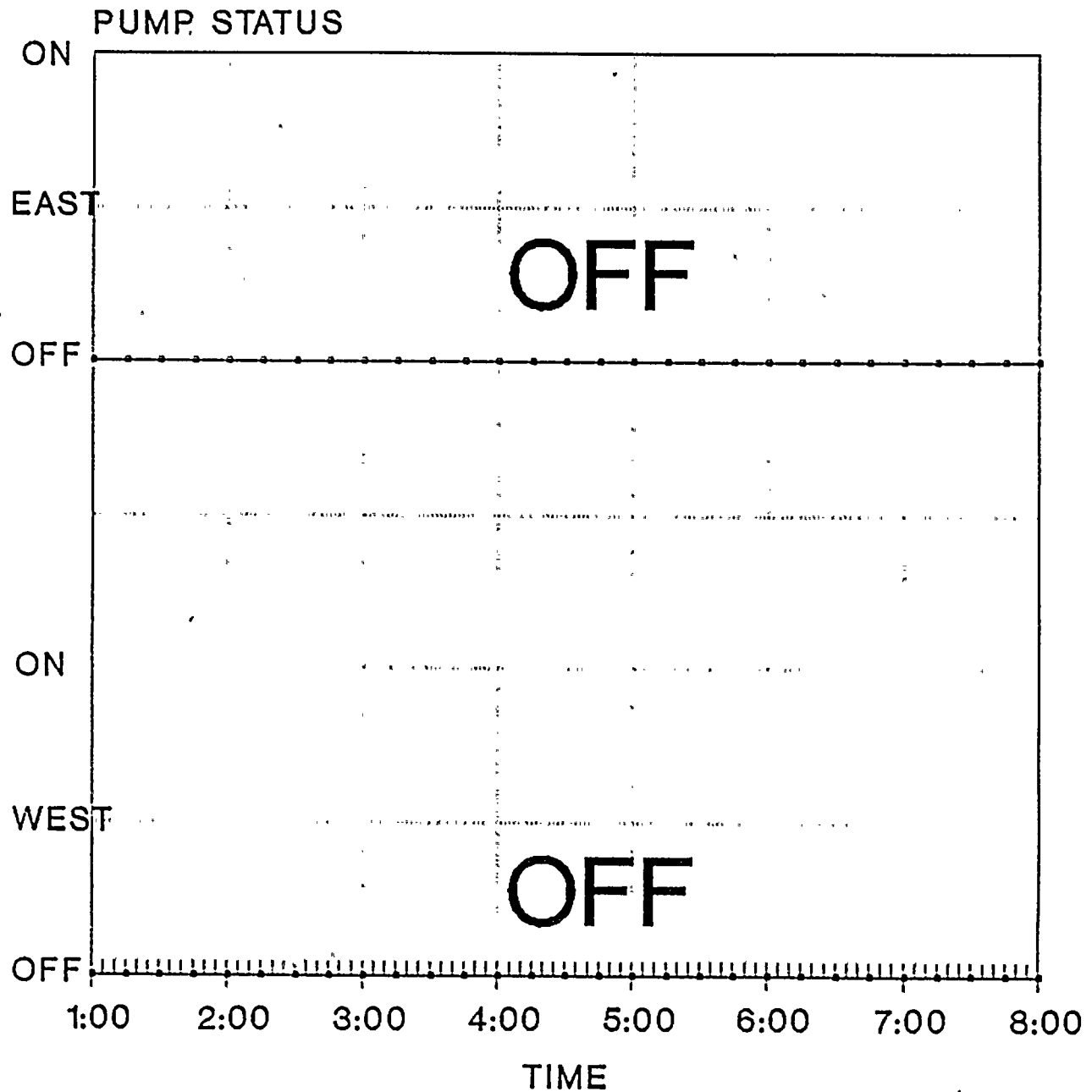


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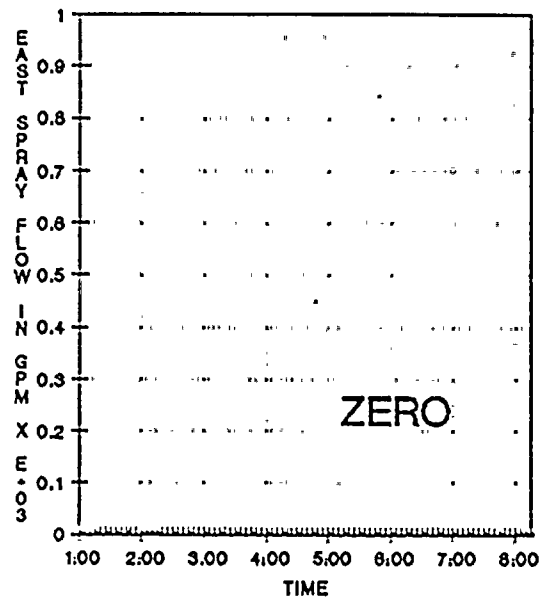
CTS PUMP STATUS VS. TIME



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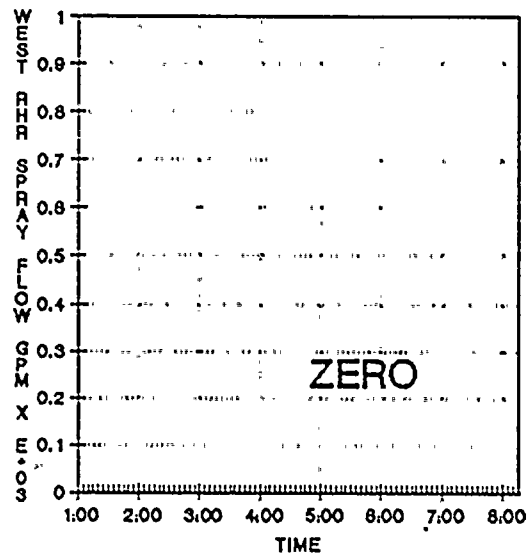
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EAST RHR SPRAY FLOW VS. TIME



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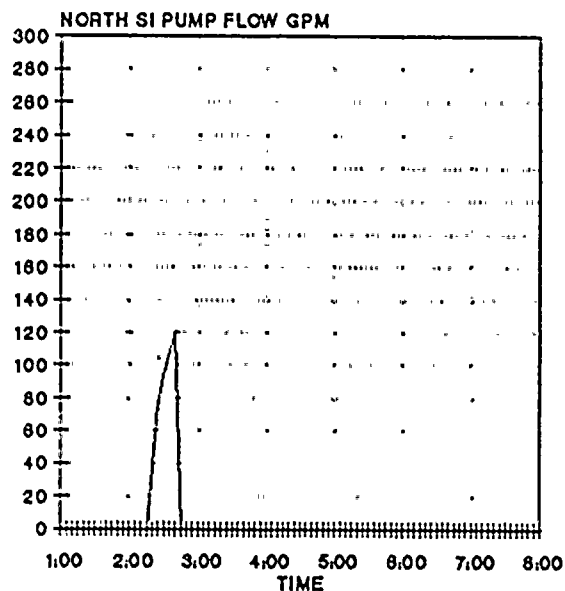
WEST RHR SPRAY FLOW VS. TIME



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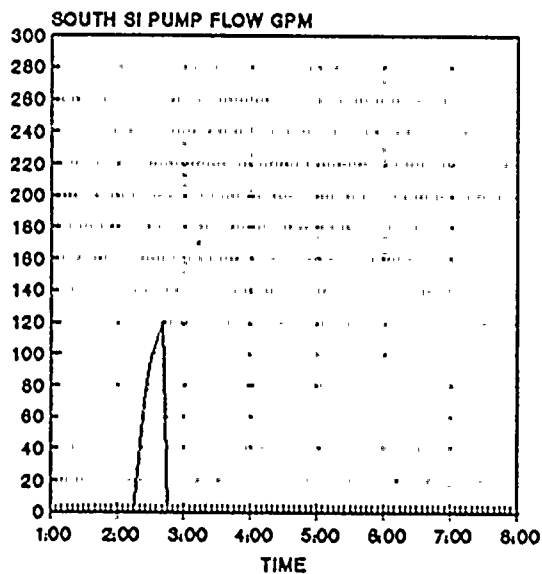
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SAFETY INJECTION PUMP FLOW VS. TIME



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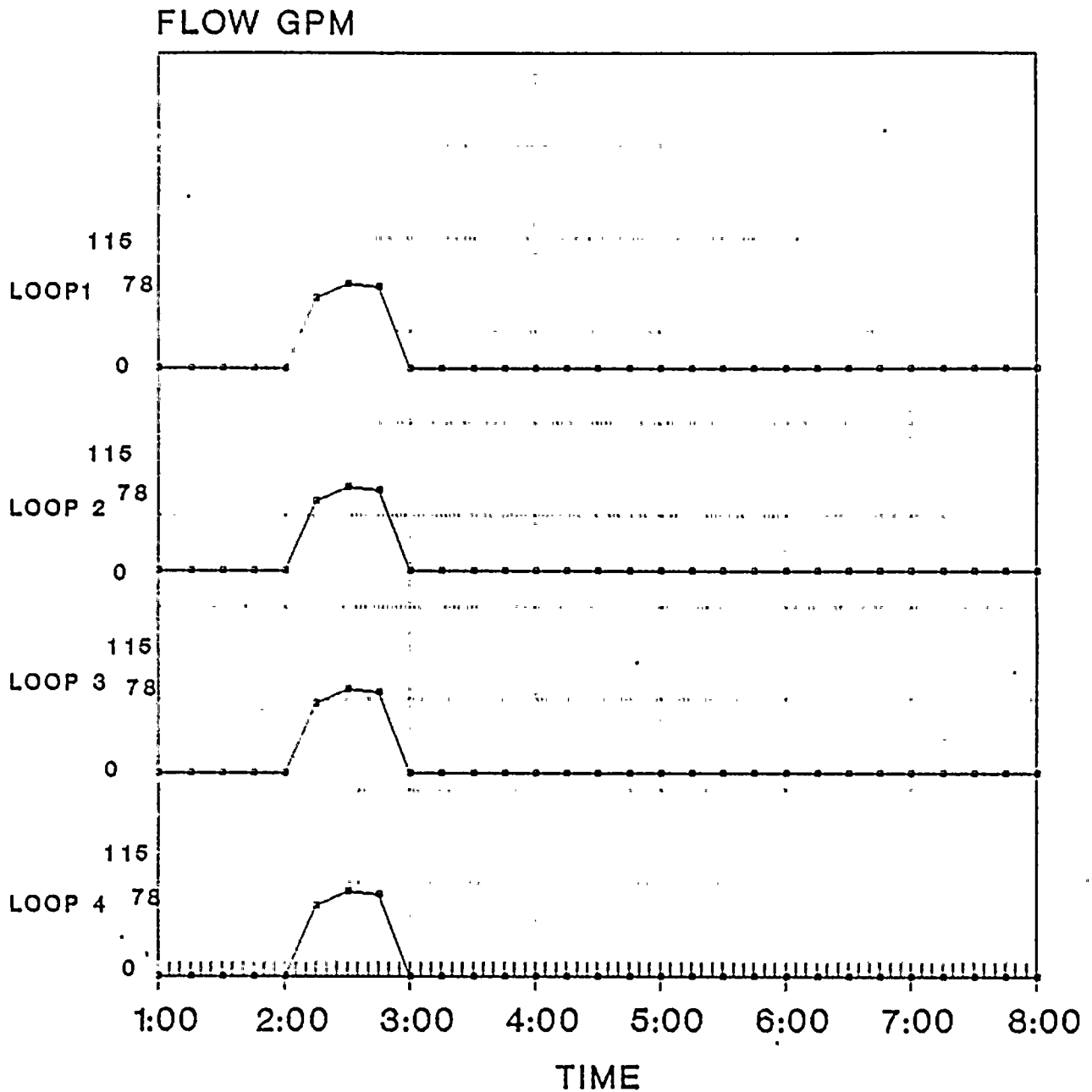
SAFETY INJECTION PUMP FLOW VS. TIME



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BORON INJECTION FLOW VS. TIME

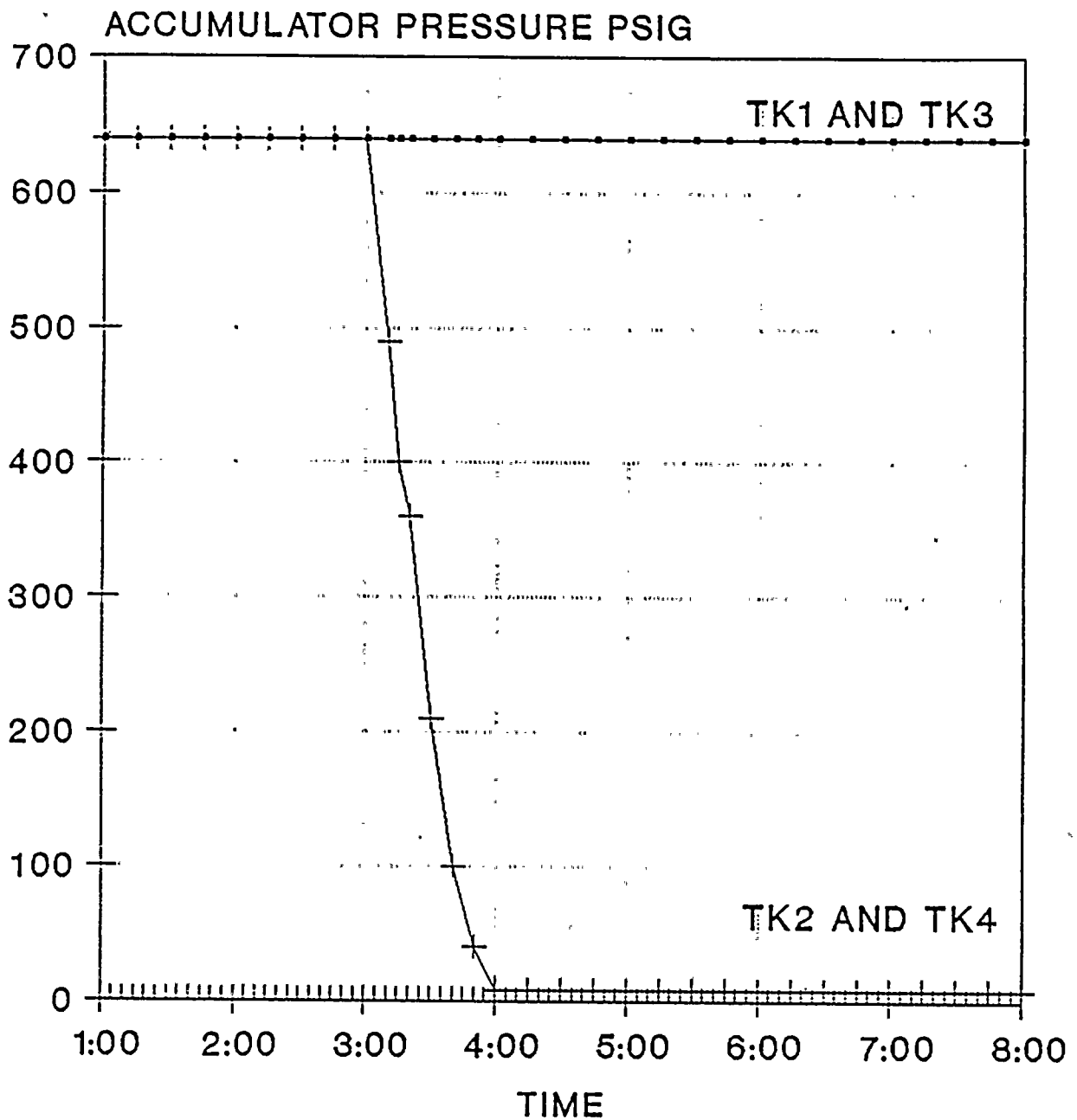


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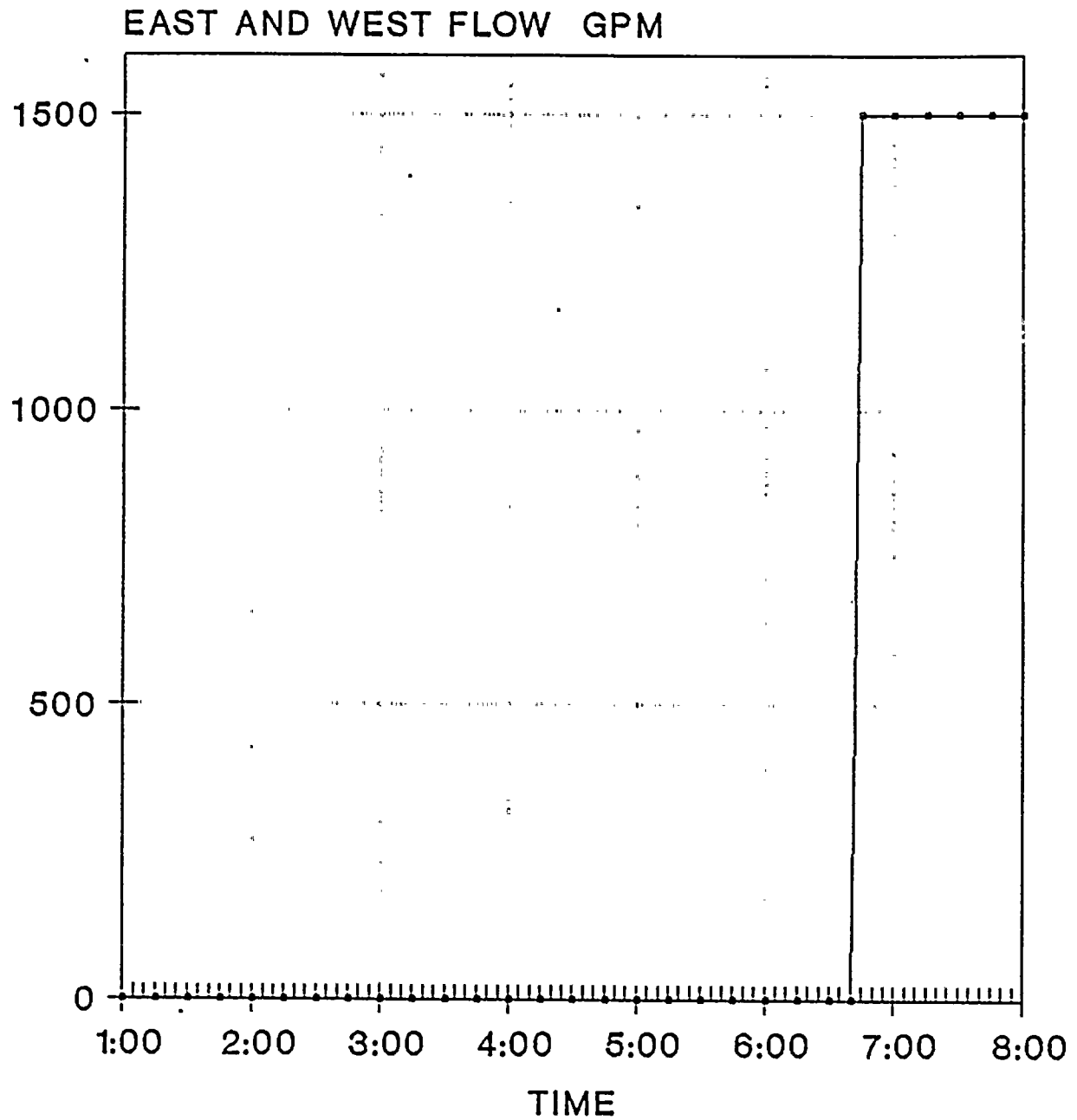
ACCUMULATOR PRESSURE VS. TIME



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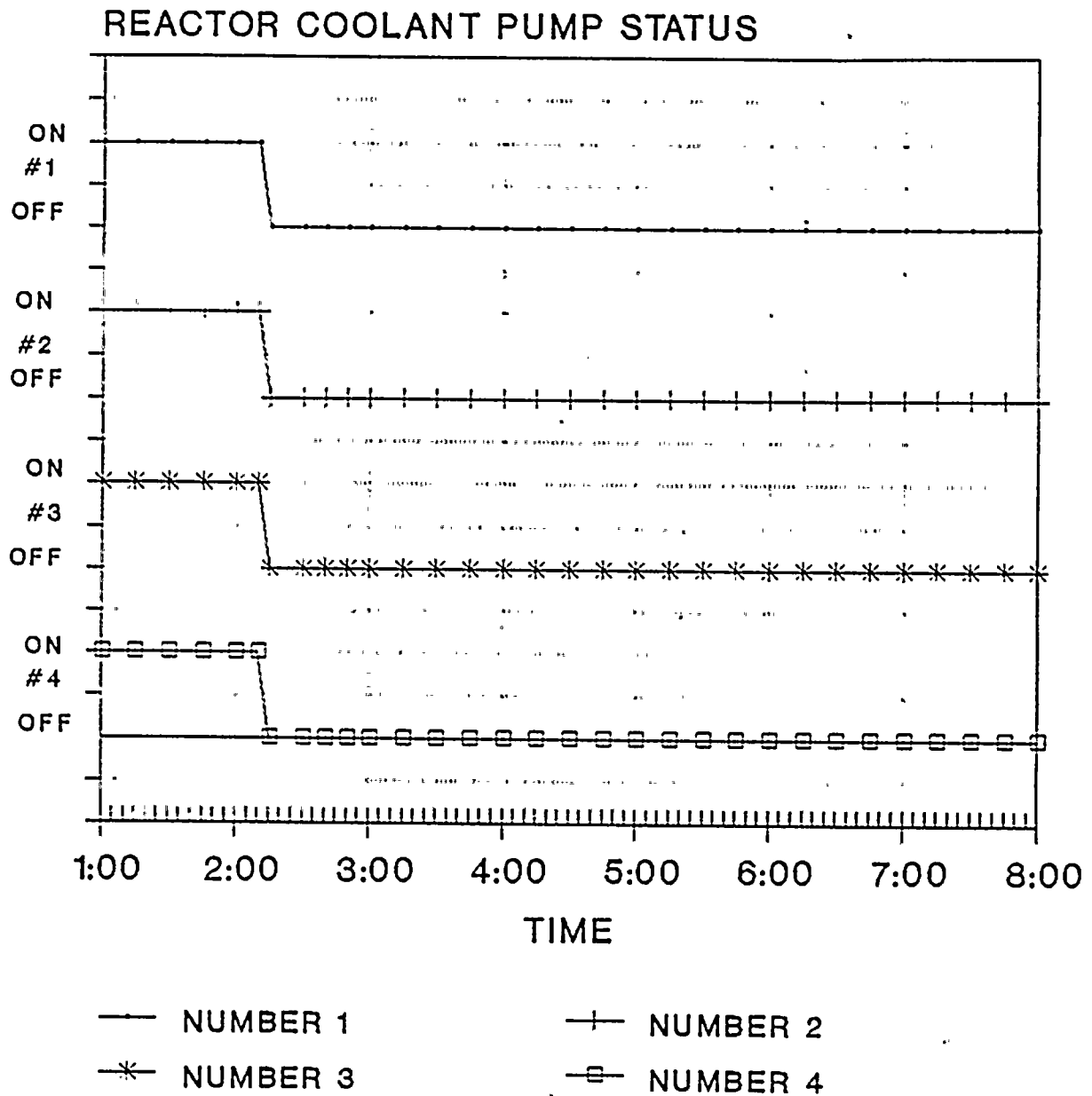
RHR INJECTION FLOW VS. TIME



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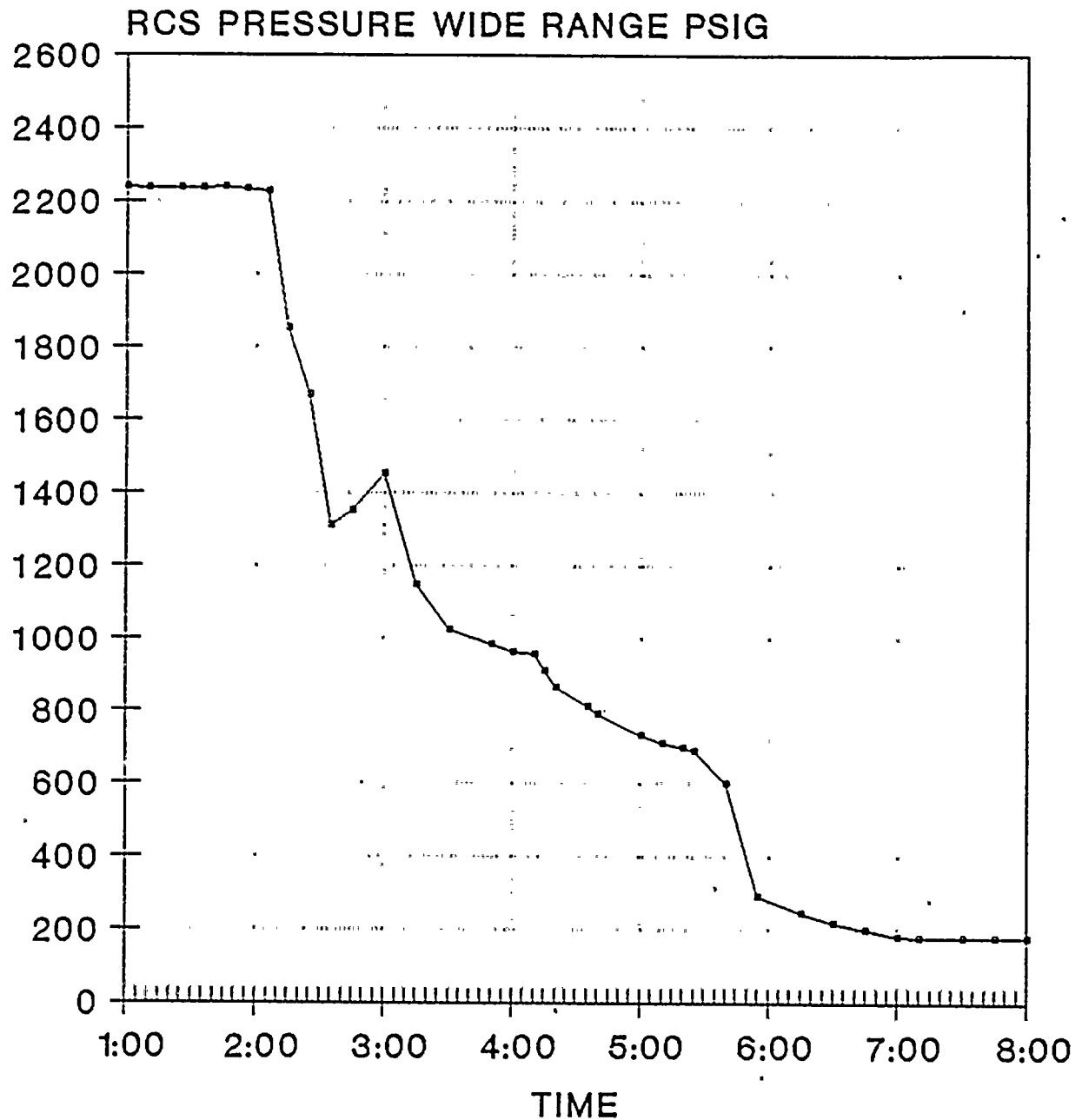
REACTOR COOLANT PUMP STATUS VS. TIME



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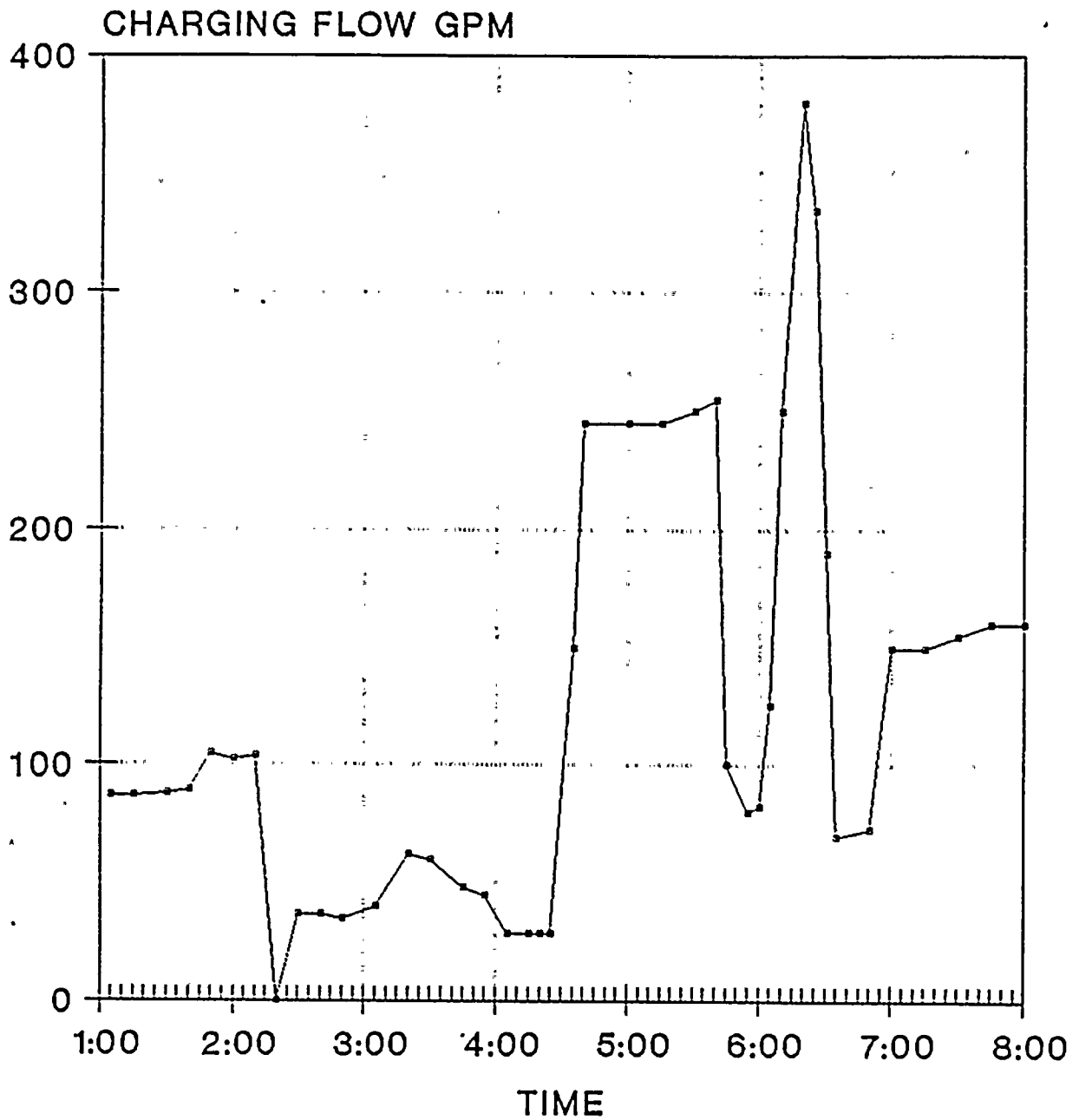
REACTOR COOLANT SYSTEM PRESSURE (W.R.) VS. TIME



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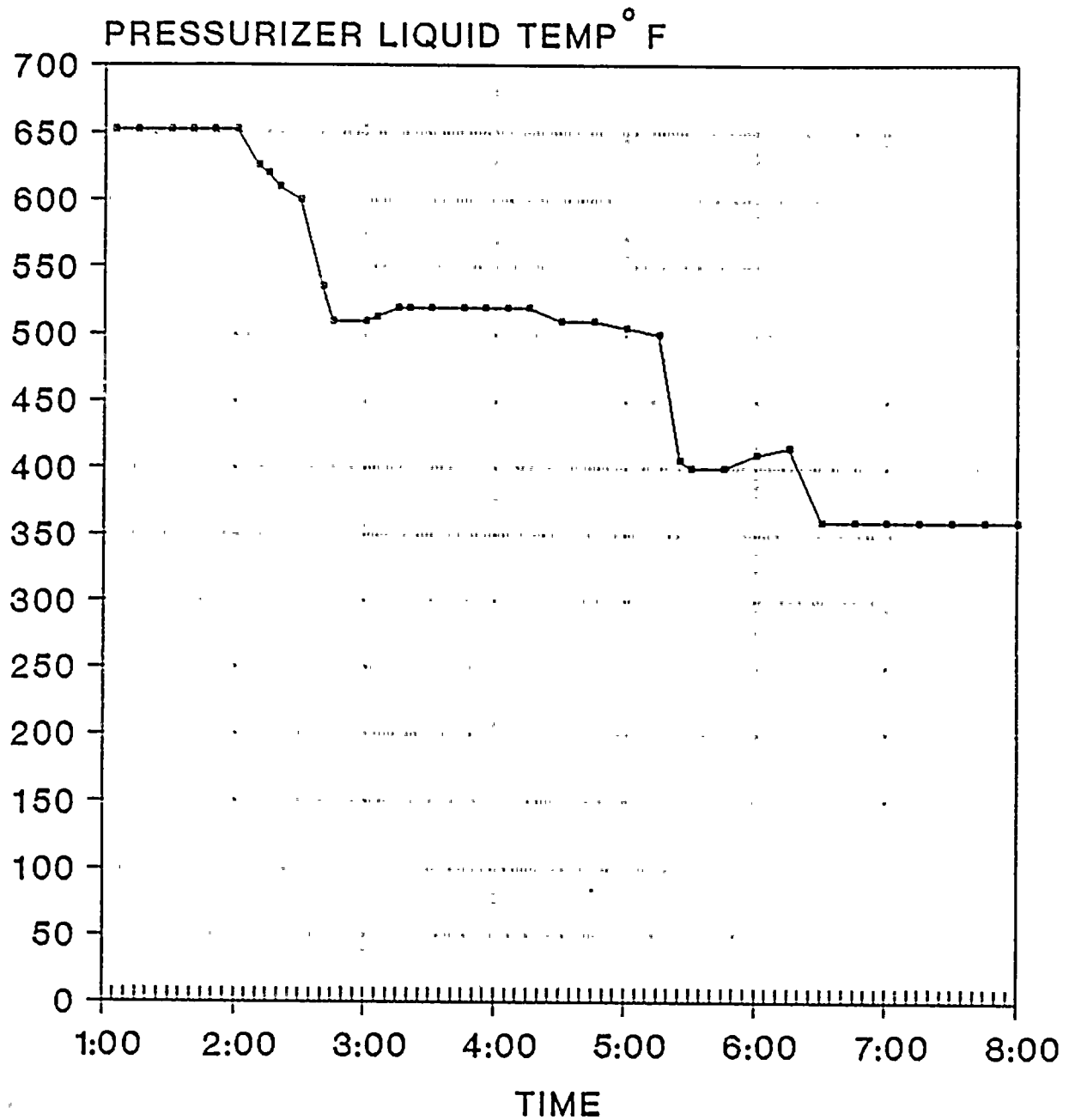
CHARGING FLOW VS. TIME



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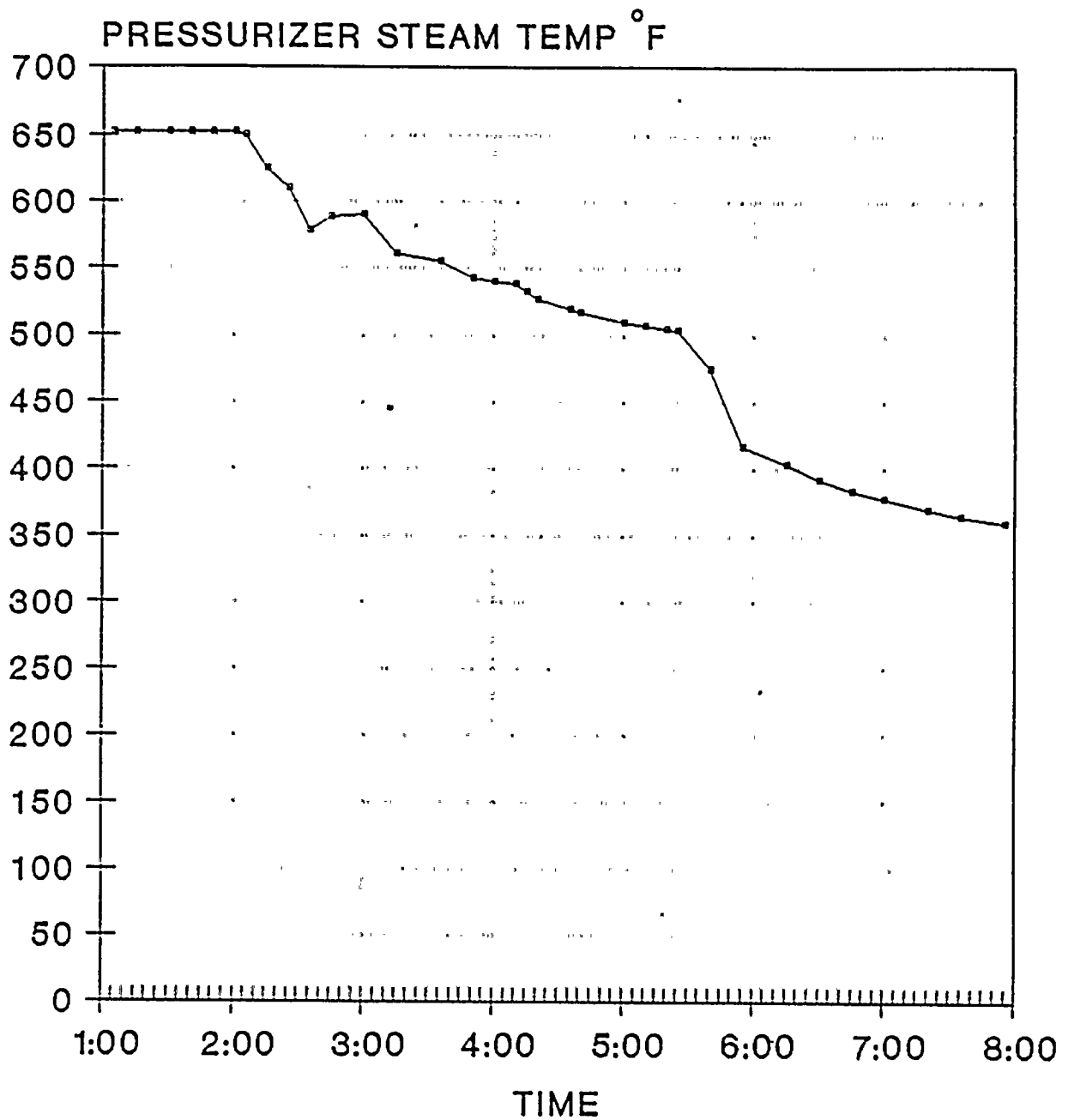
PRESSURIZER LIQUID TEMPERATURE VS. TIME



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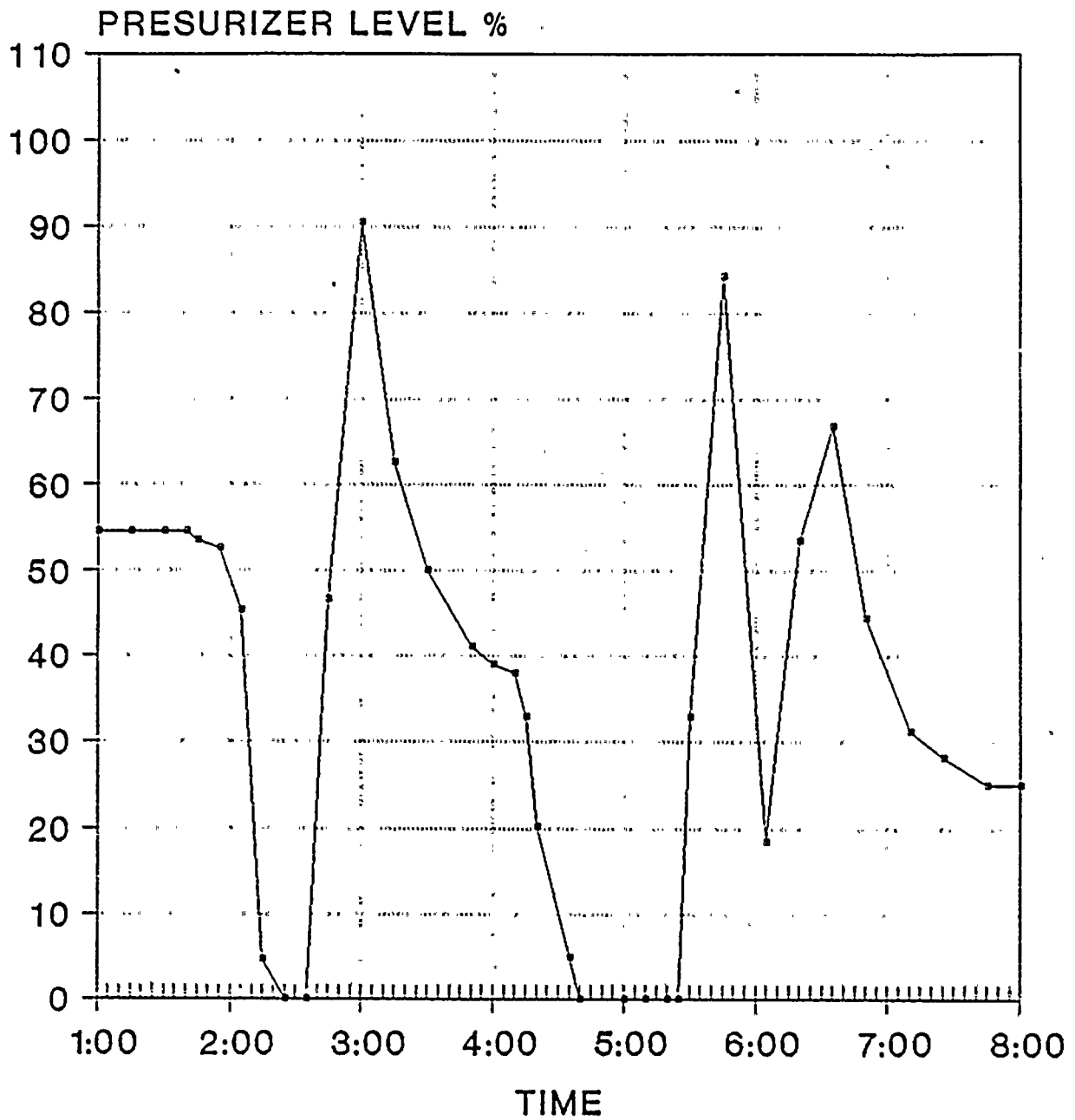
PRESSURIZER STEAM TEMPERATURE VS. TIME



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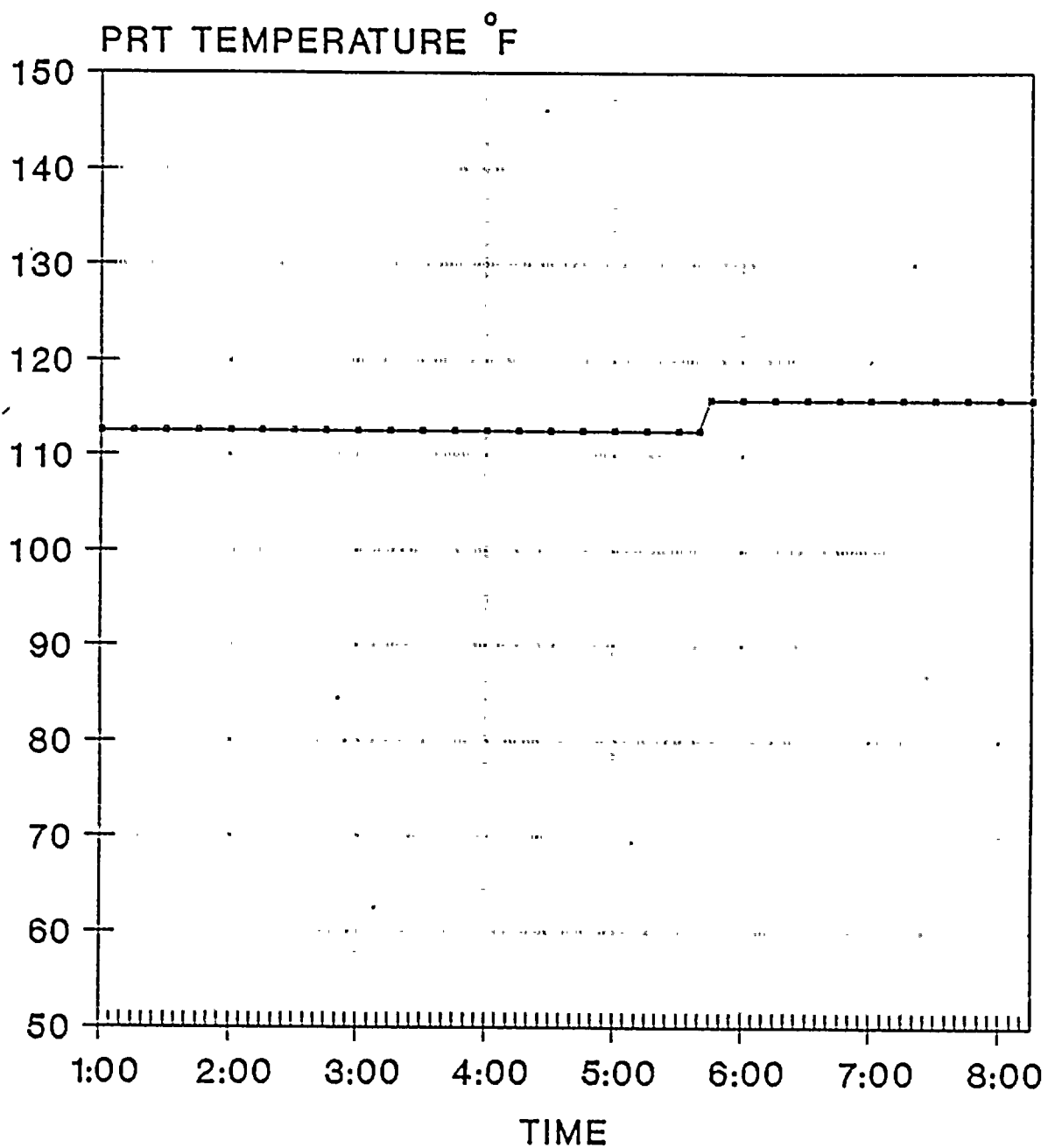
PRESSURIZER LEVEL VS. TIME



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PRT TEMPERATURE VS. TIME

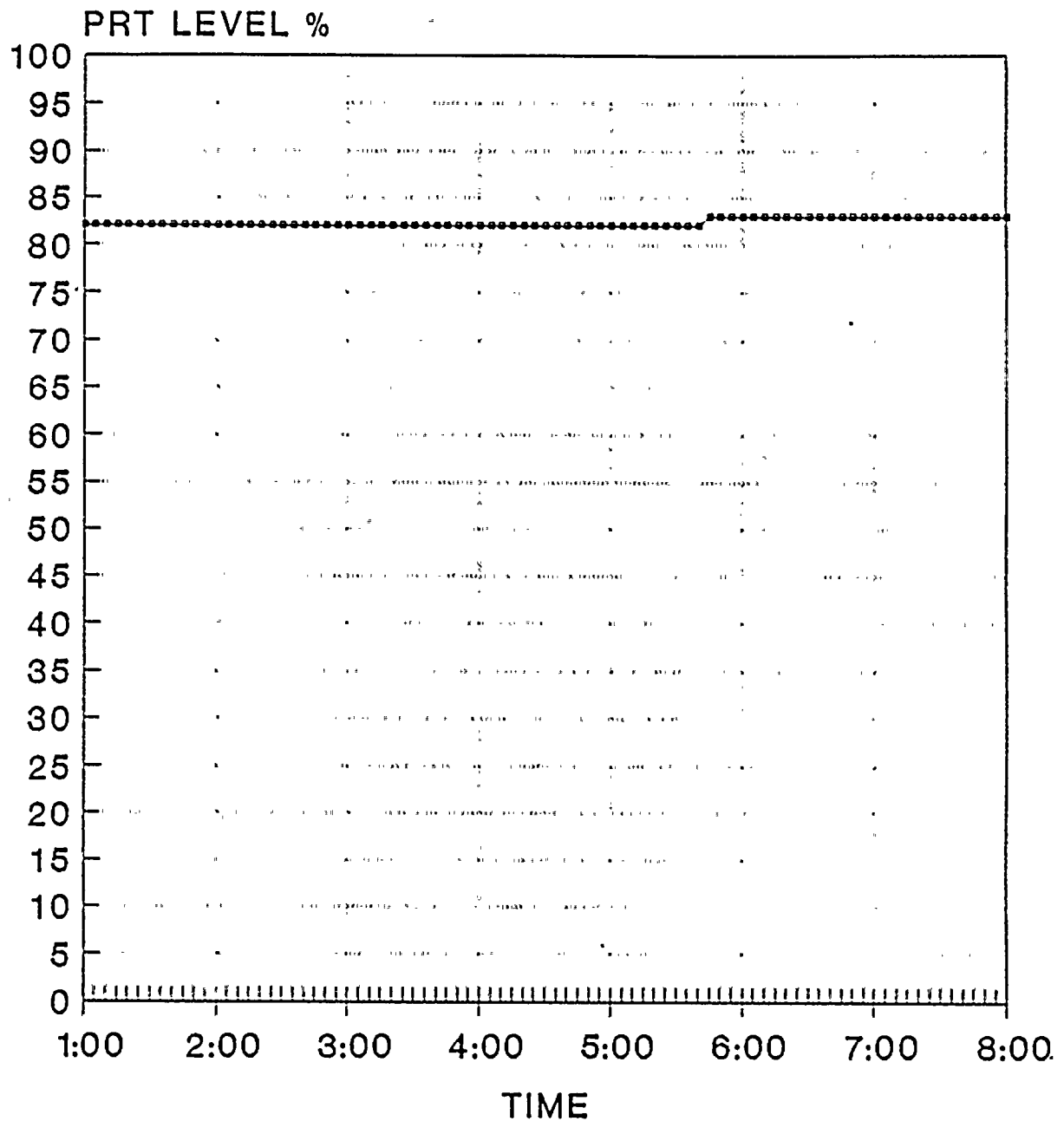


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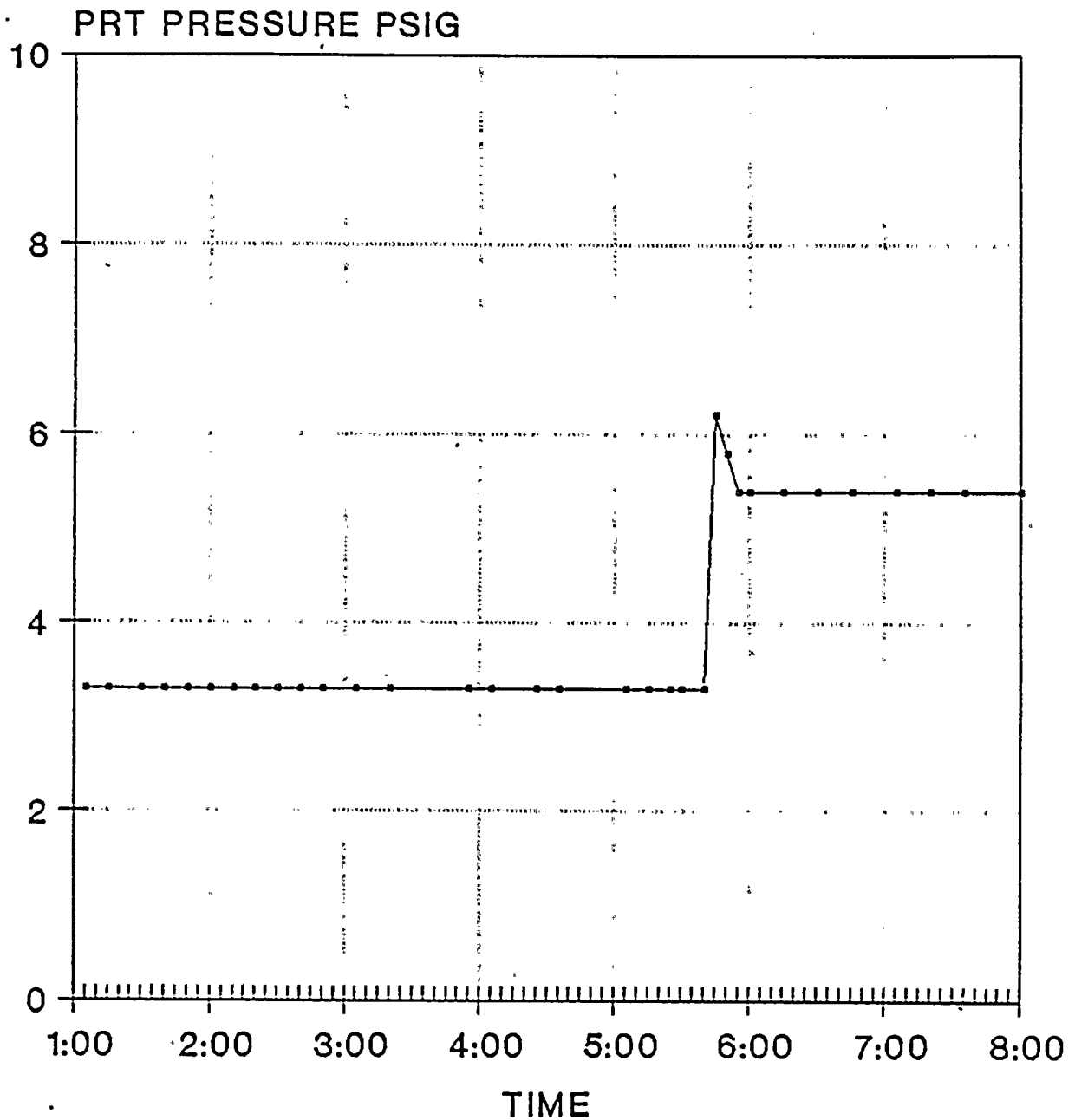
PRT LEVEL VS. TIME



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PRT PRESSURE VS. TIME

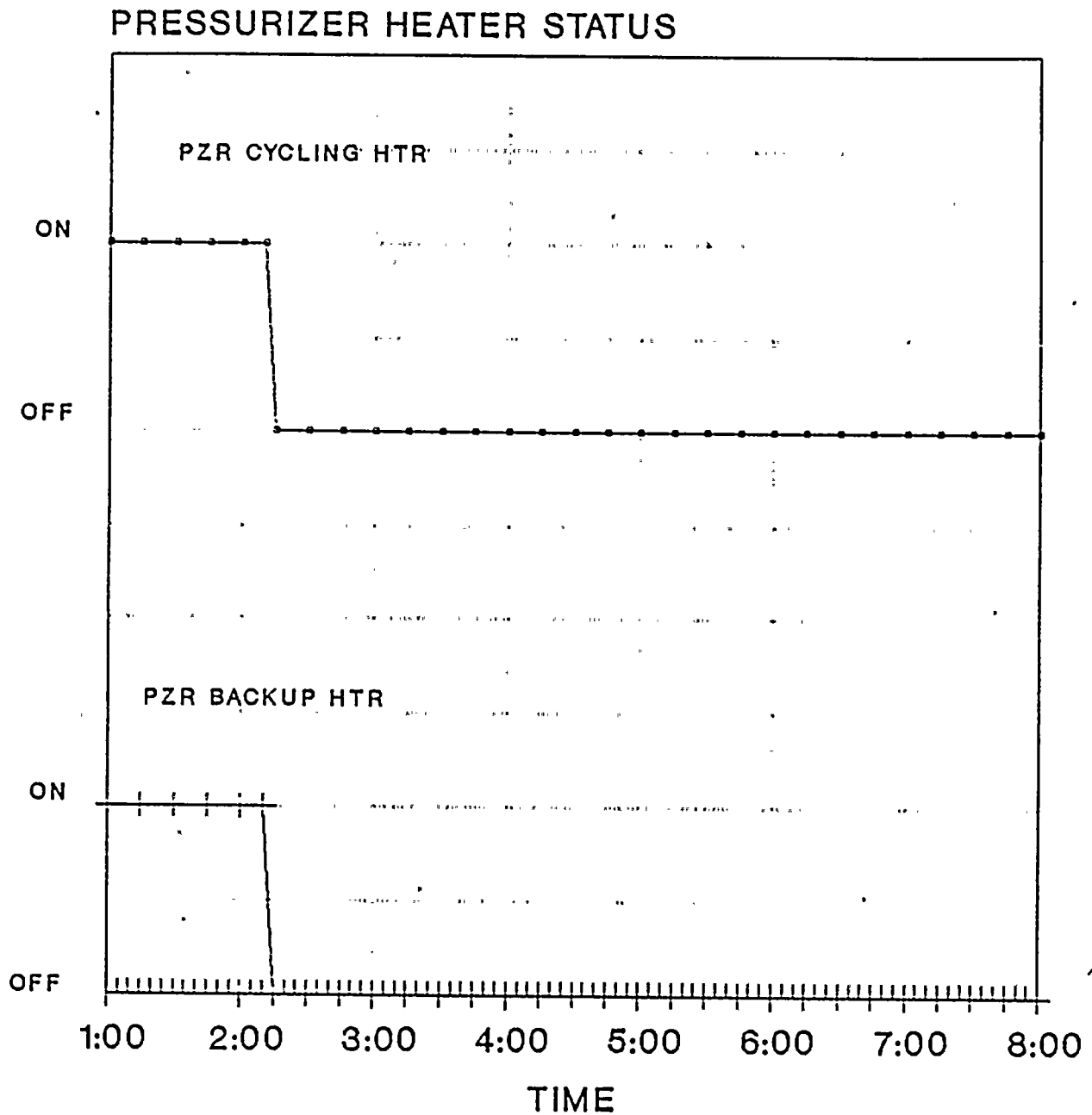


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PRESSURIZER HEATER STATUS VS. TIME



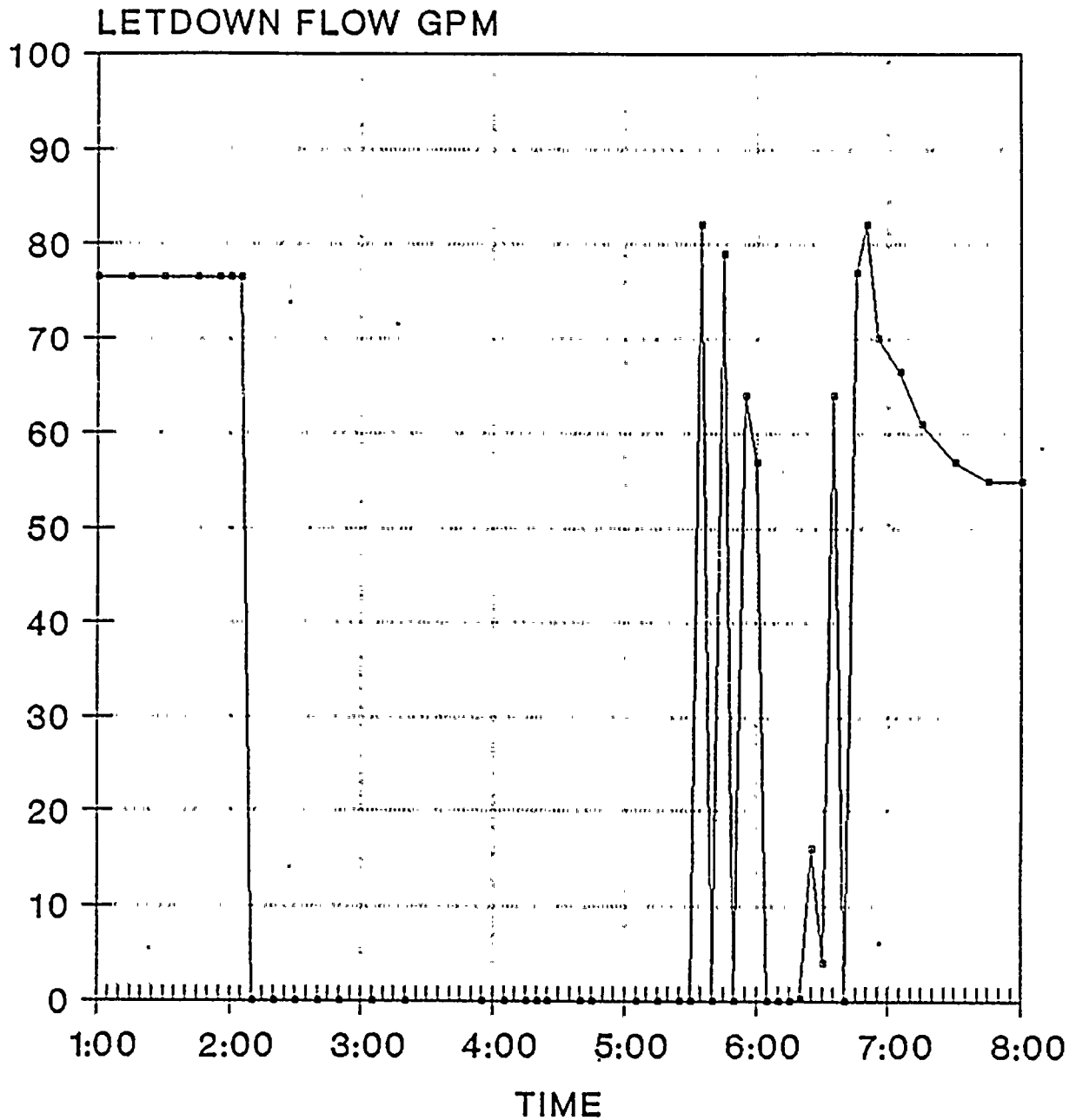
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24/25



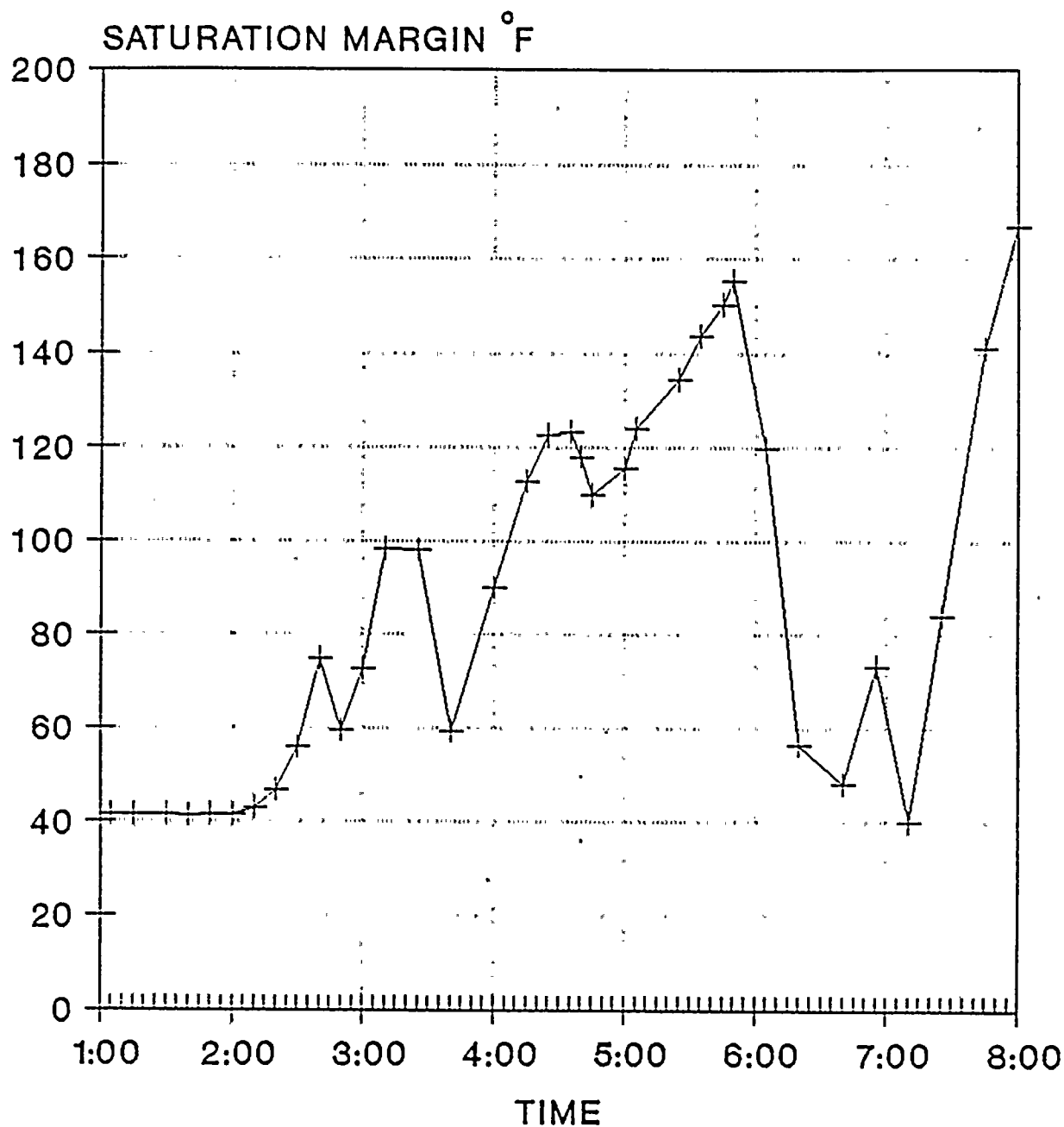
LETDOWN FLOW VS. TIME



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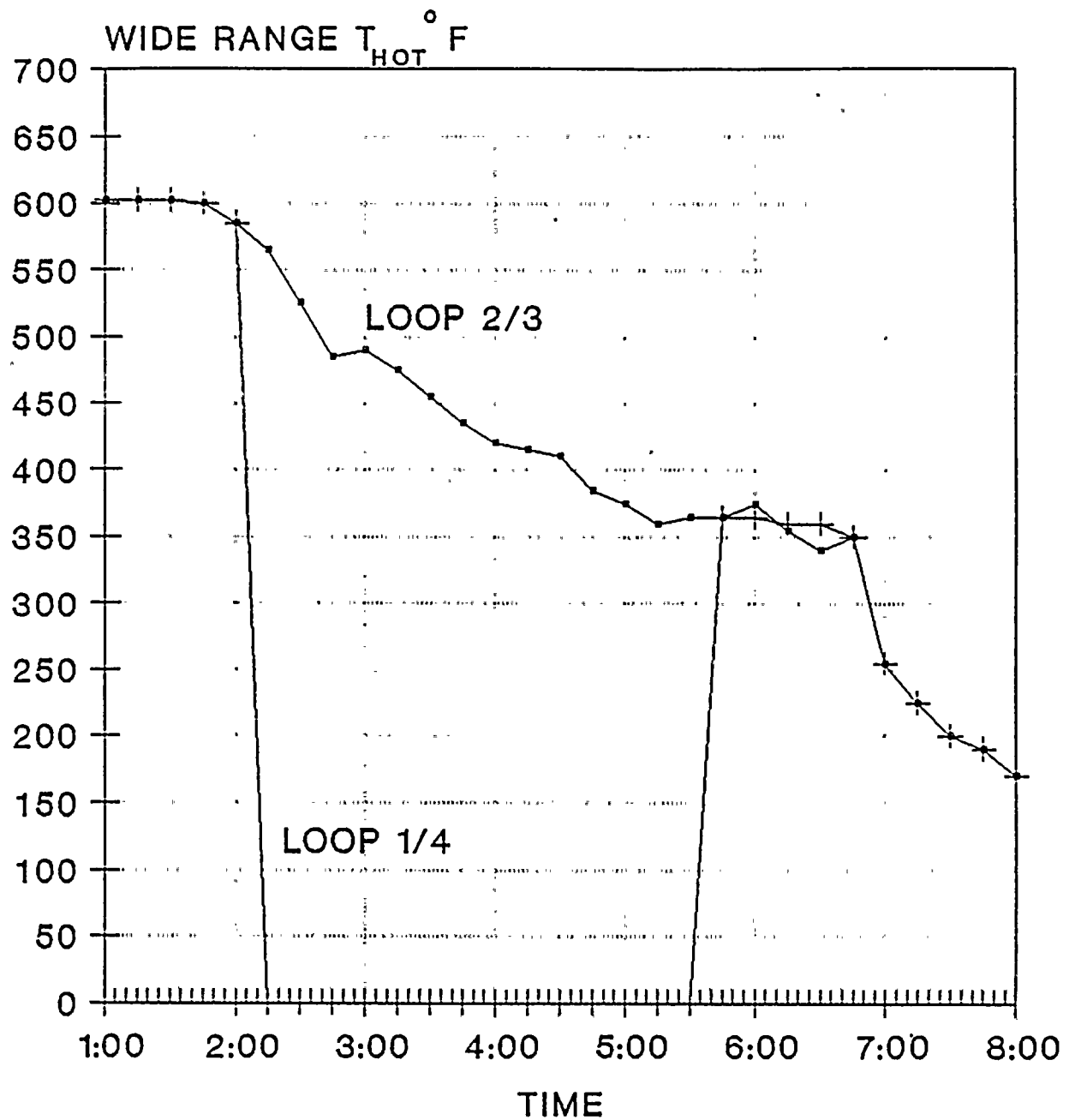
SATURATION MARGIN VS. TIME



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WIDE RANGE T_{HOT} VS. TIME

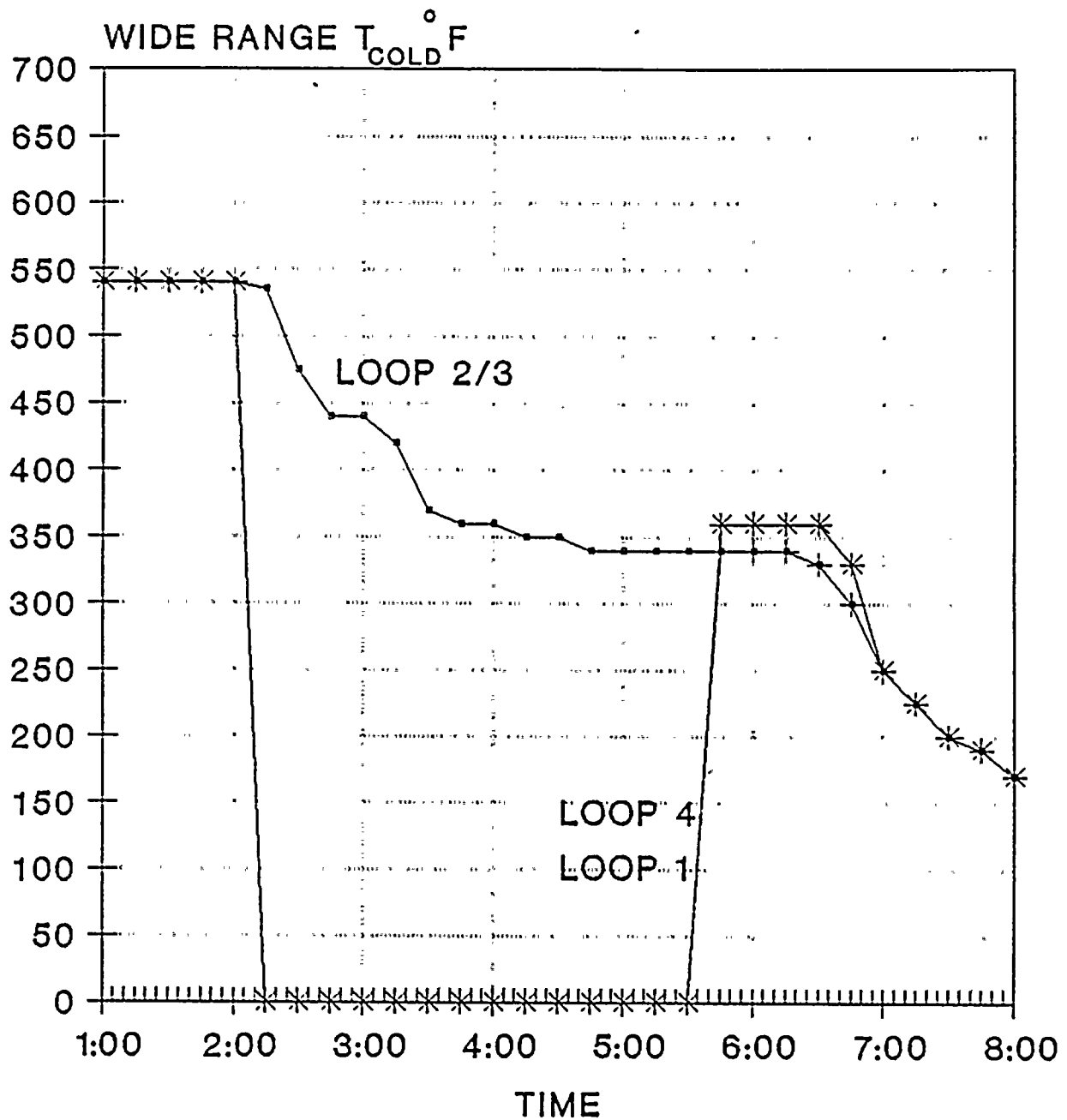


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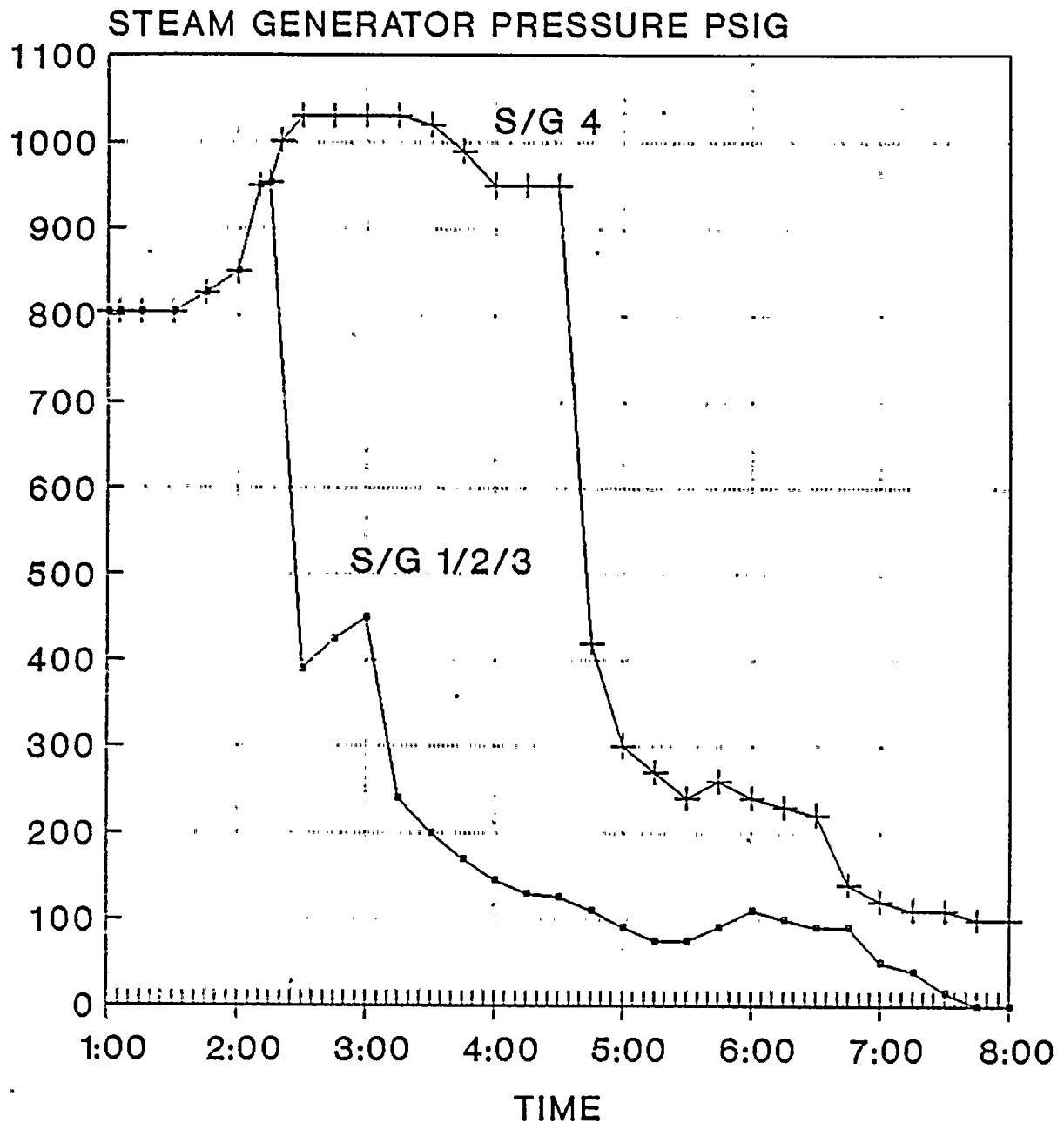
WIDE RANGE T_{COLD} VS. TIME



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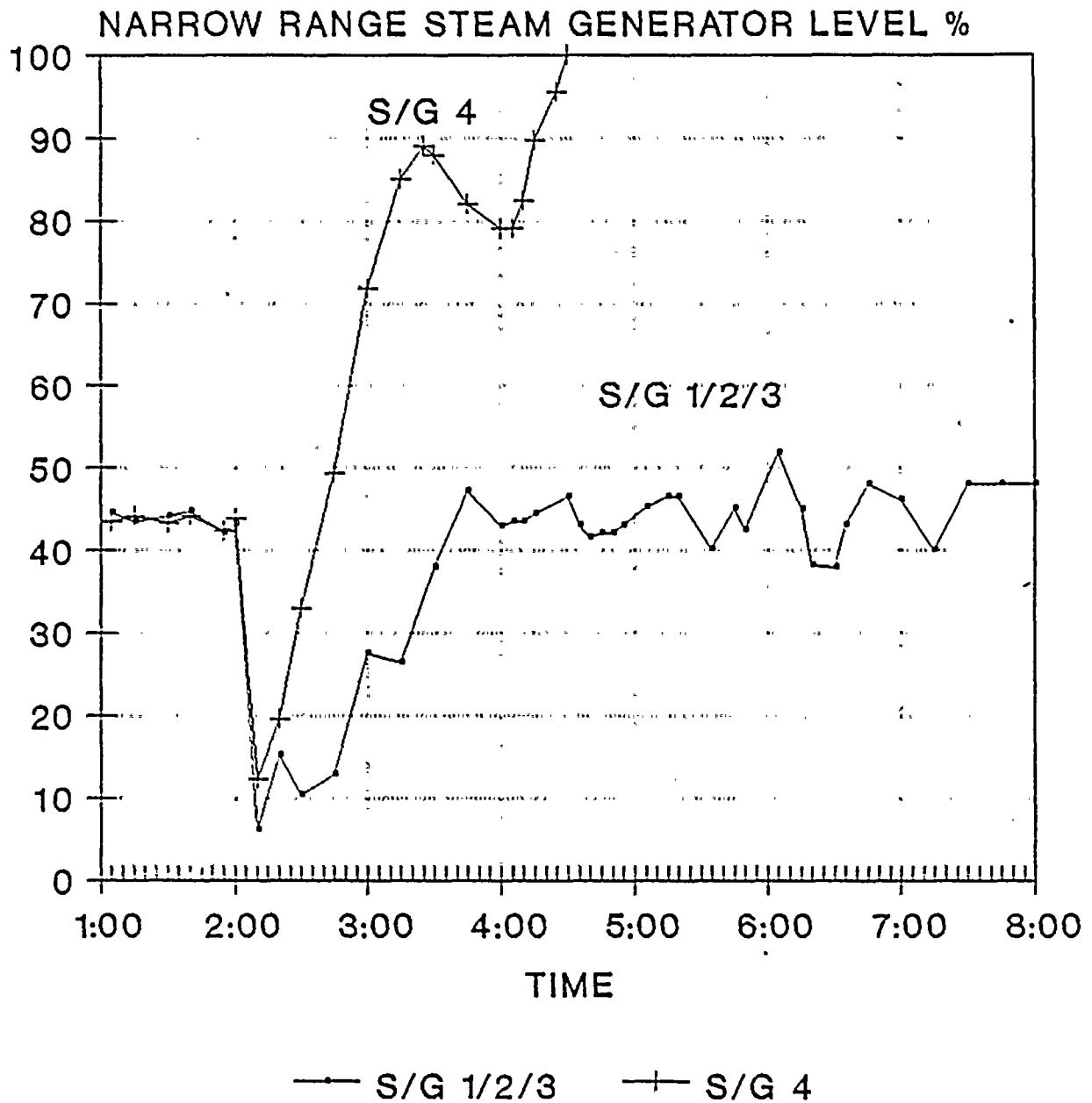
STEAM GENERATOR PRESSURE VS. TIME



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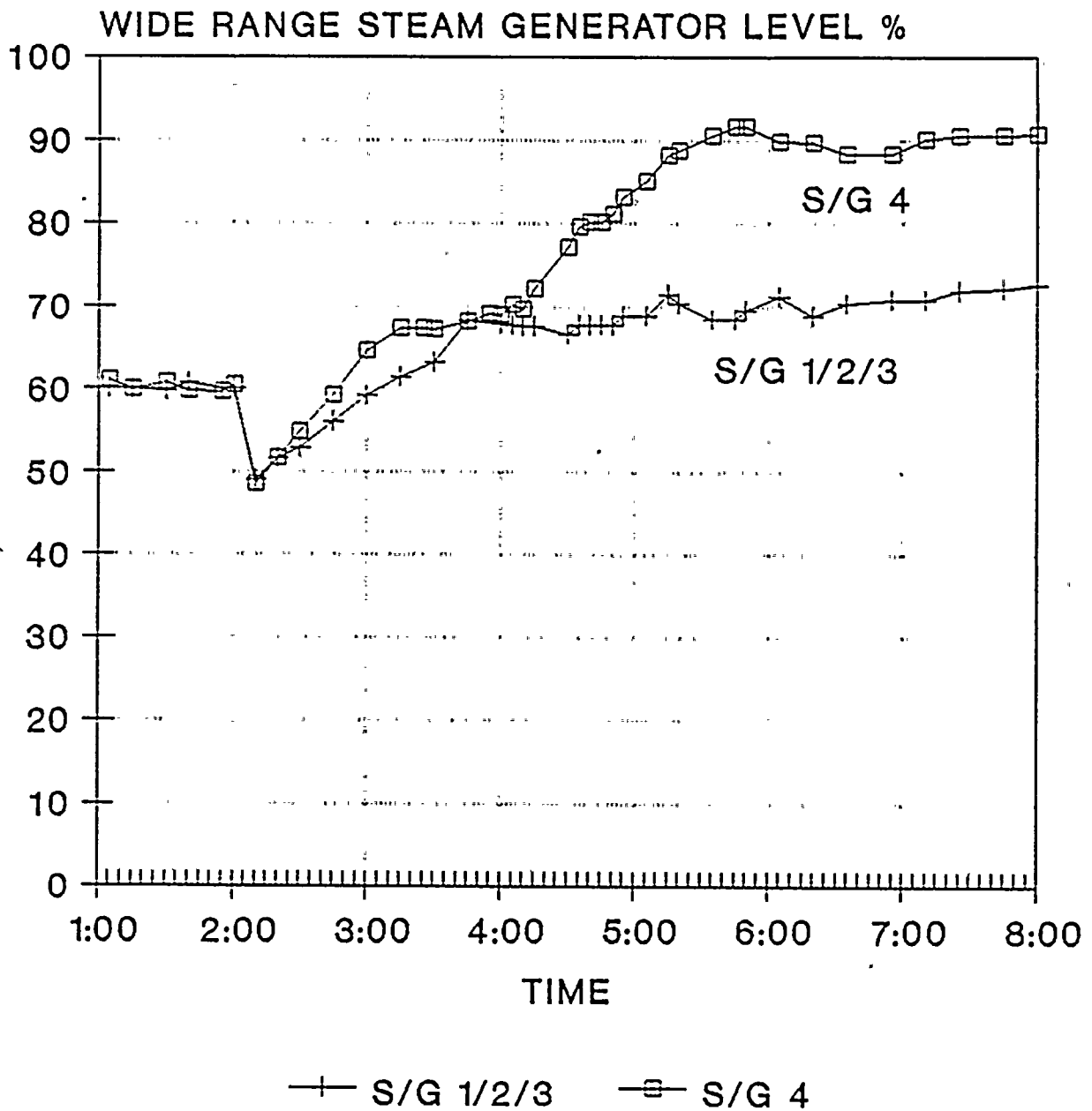
NARROW RANGE STEAM GENERATOR LEVEL VS. TIME



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WIDE RANGE STEAM GENERATOR LEVEL VS. TIME

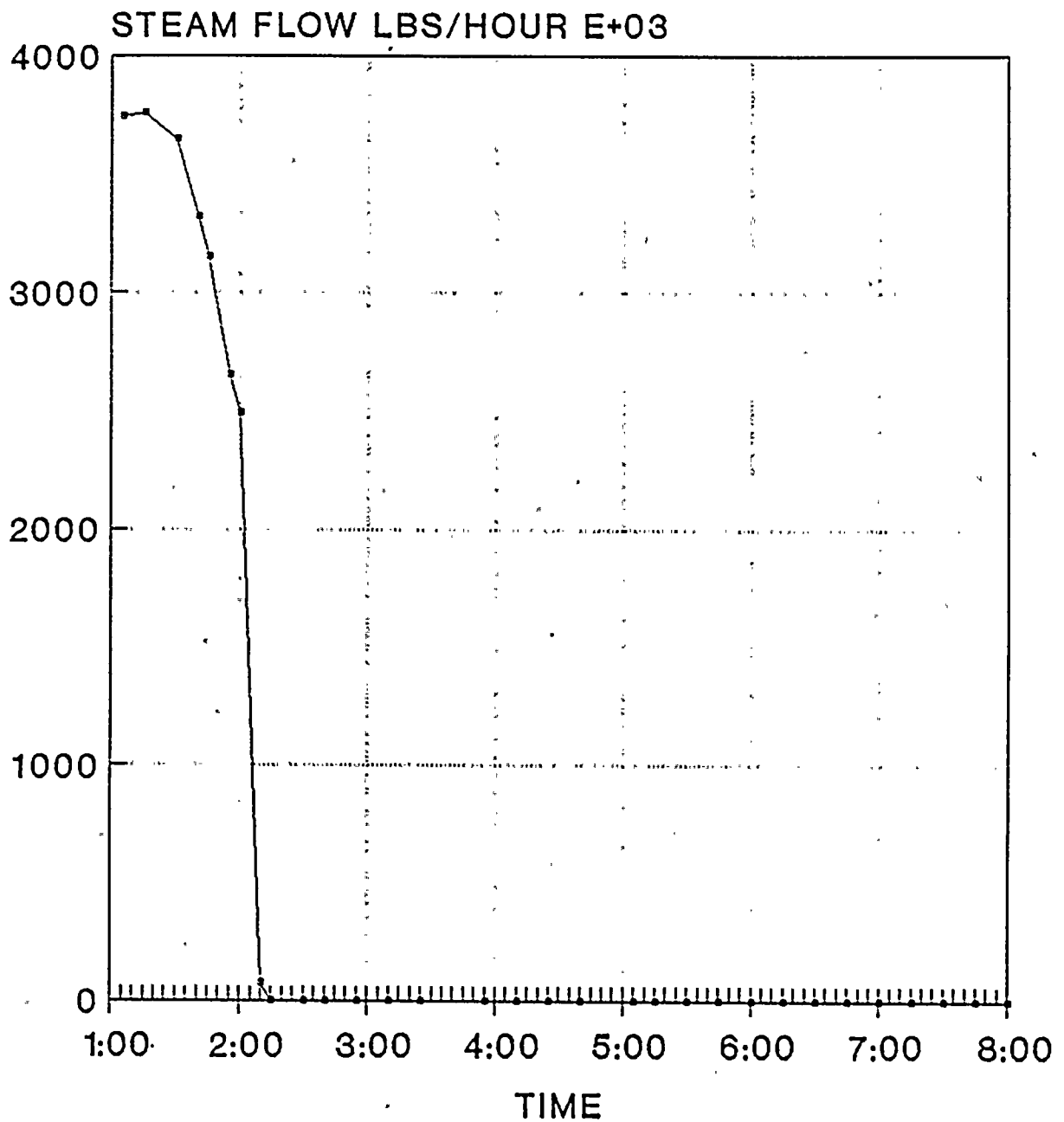


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STEAM FLOW VS. TIME

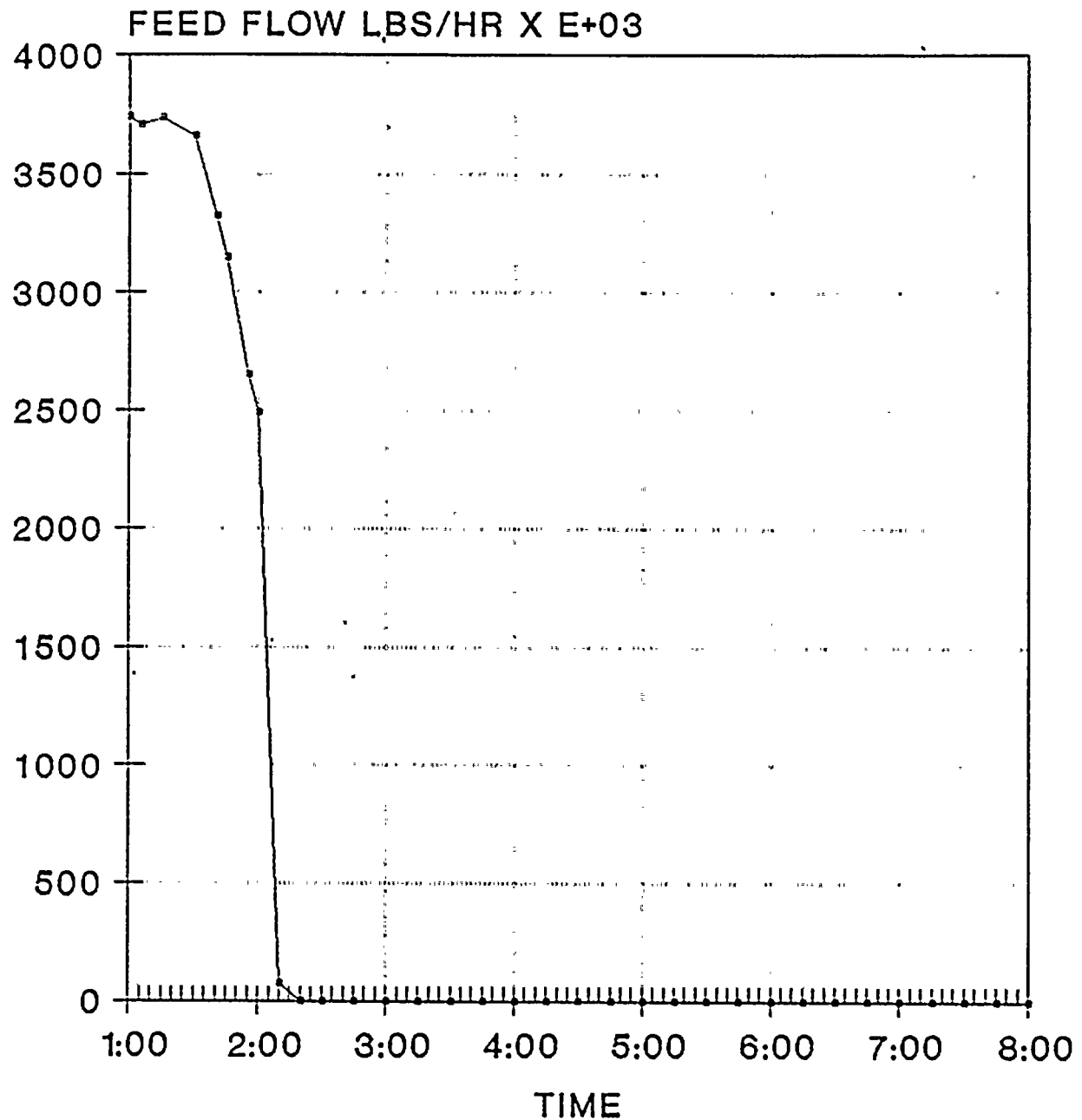


3APR90

THIS IS A DRILL



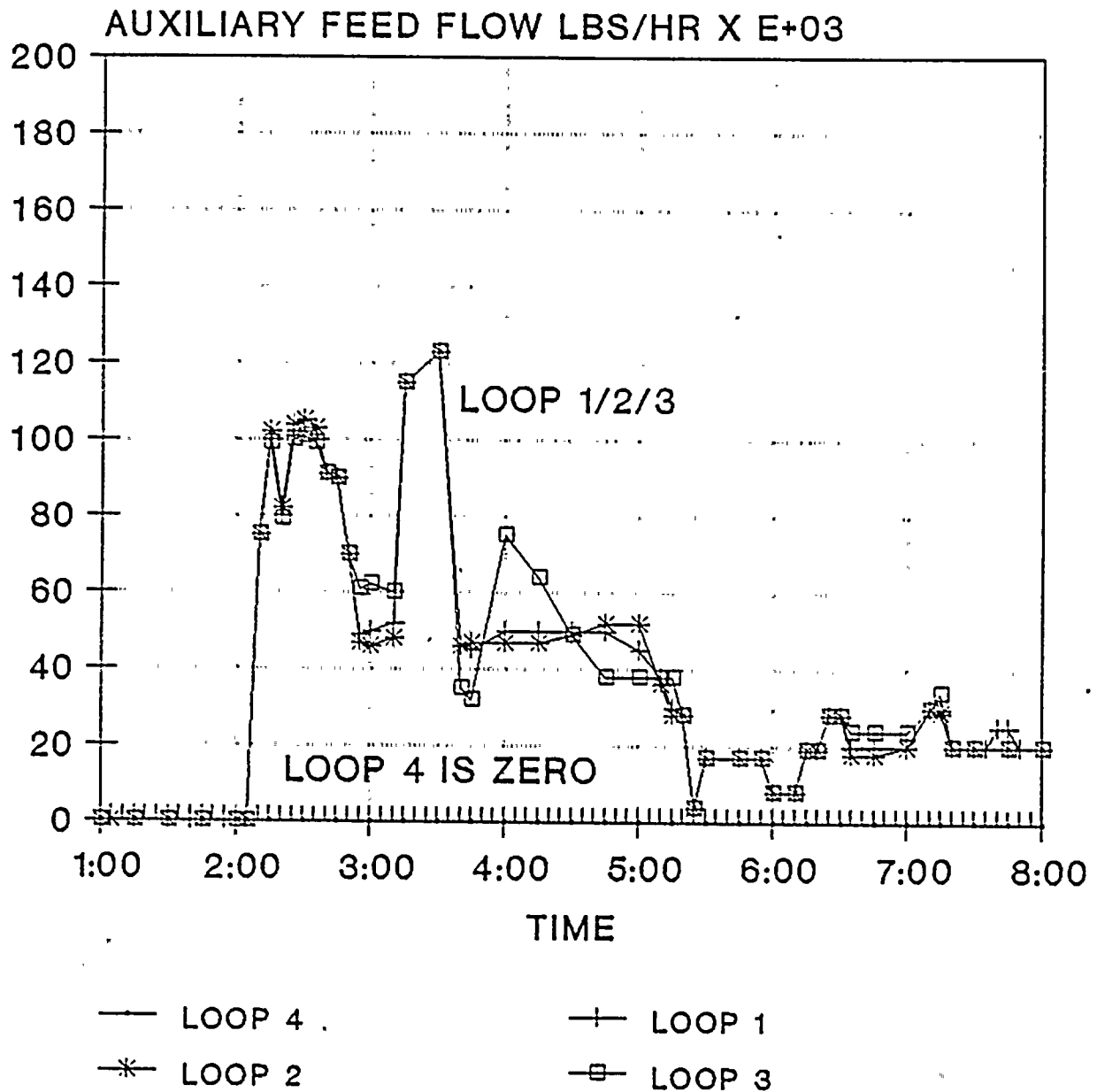
FEED FLOW VS. TIME



3APR90

THIS IS A DRILL

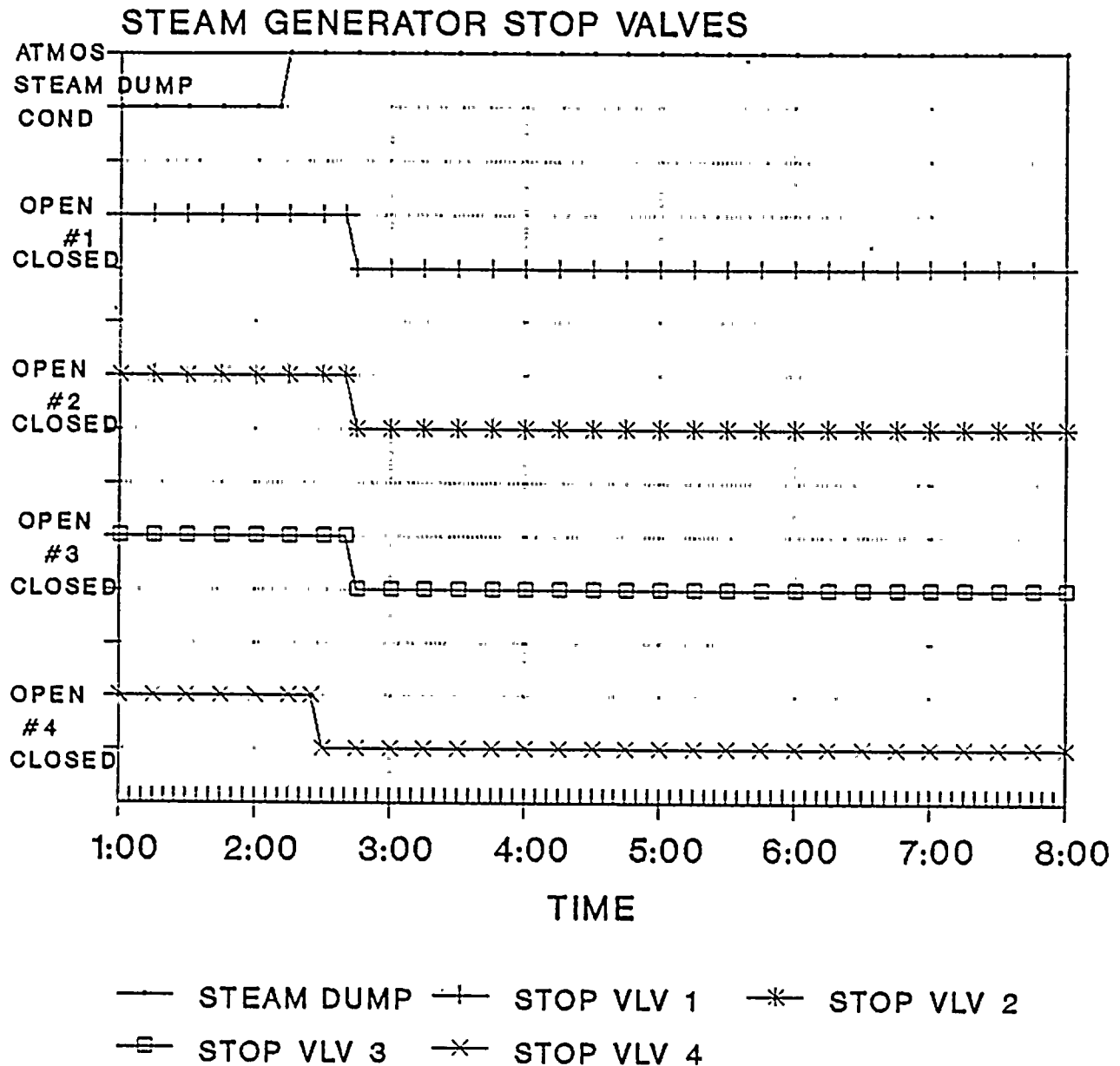
AUXILIARY FEED FLOW VS. TIME



3APR90

THIS IS A DRILL

STEAM FLOWPATH VS. TIME

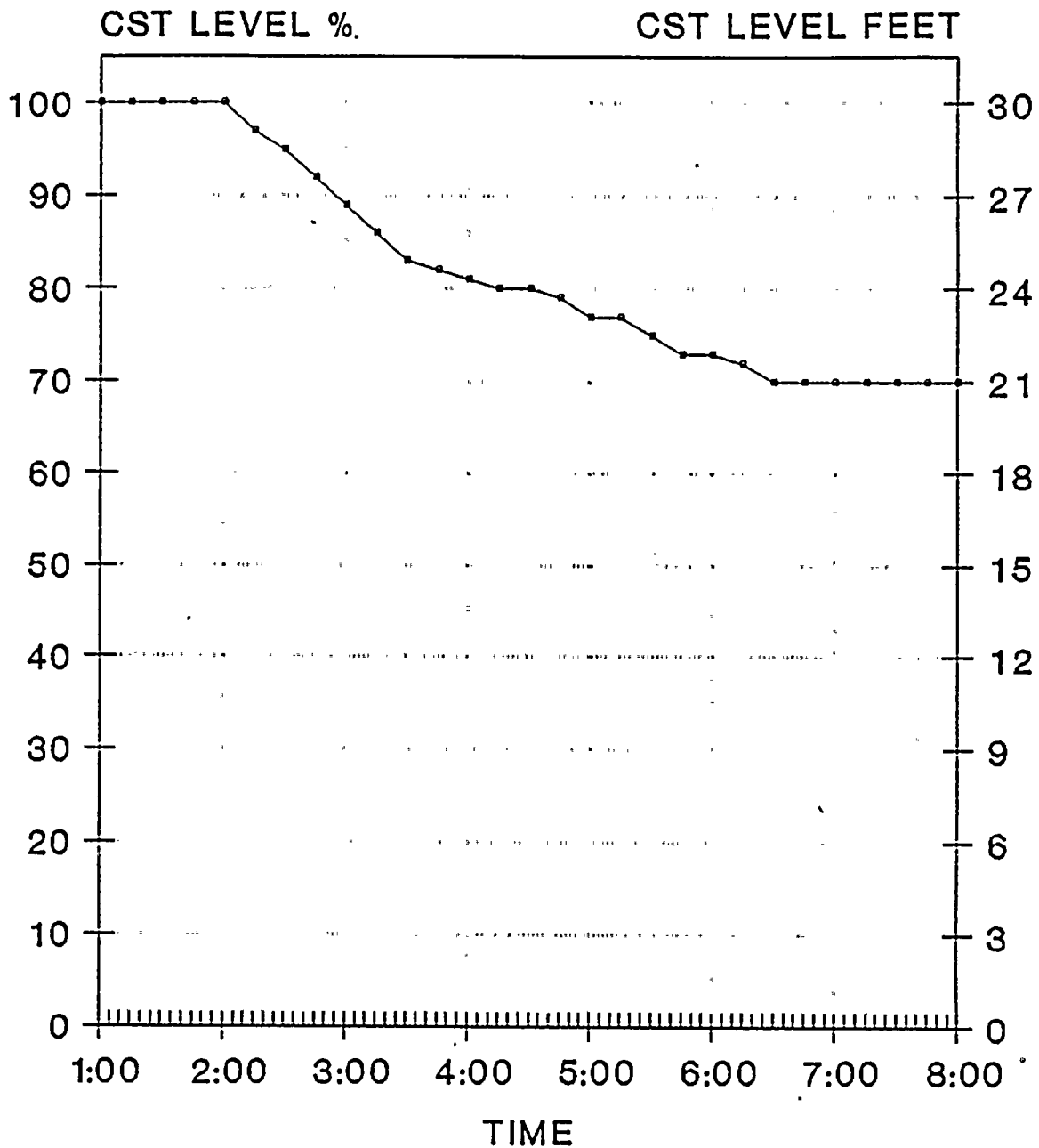


3APR90.

THIS IS A DRILL

36/38

CONDENSATE STORAGE TANK LEVEL VS. TIME



3APR90

THIS IS A DRILL

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VII. B. CONTROLLER MESSAGES

The following forms represent the means by which information required to prompt a response from players, and provide the Controller with general guidance, is provided. The messages are not given directly to players. This series is for Controllers only.

These messages are available to continue exercise play in the event of simulator malfunction. Because of the additional free-play permitted and subsequent variance from a preplanned time line, it is possible that adjustments will have to be made in delivery times of controller messages from the times stated if the messages are needed.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 1

Time: 0045

MESSAGE FOR: Control Room

This exercise is a full participation exercise by the Berrien County Sheriff's Department and a partial participation by the Michigan State Police. Phone numbers to be used during initial notification are:

Michigan State Police - Number used in PMP 2080 EPP.106, Exhibit B
Berrien County Sheriff - Number used in PMP 2080 EPP.106, Exhibit B
NRC ENS - to be announced
NRC HPN - to be announced

CONTROLLER USE ONLY

Establish the communication systems that are to be used AND NOT to be used during the exercise. Review basic rules of participation with the shift personnel. (See Section III, "Conduct of Exercise")

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 2

Time: 0045

MESSAGE FOR: Control Room

INITIAL CONDITIONS

- NRV-151 isolated due to leakby
- NRV-152 isolated due to NMO-152 being stuck closed.
- 100% Power
- RCS C_B - 61 ppm
- EOL - 17,500 M_D/MTU
- Emergency power out of service after being hit by lightning strike 12 hrs. earlier.
- Days on line - 184
- Power history for previous 30+ days
 - 100% for 20 days
 - 55% for 2 days
 - 100% for 32 days

CONTROLLER USE ONLY

Give Control Room operators copies of Log Book, Turnover Book and Outage Buster Daily Update Sheet containing initial conditions.

NOTE: Other key Plant personnel would receive/know this information from the previous morning meeting. Give copy to TSC, EOF & OSA controllers to distribute.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 3

Time: 0100

MESSAGE FOR: Control Room

Conditions as displayed on panels - start of exercise.

CONTROLLER USE ONLY

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 4

Time: 0115

MESSAGE FOR: Control Room

Annunciator 207, drop 90 alarms. Digital Metal Impact Monitor System activated.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 5

Time: 0115

MESSAGE FOR: Control Room

PMP 2080 EPP.103, Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 6

Time: 0116

MESSAGE FOR: Control Room

When operator checks DMIMS cabinet have tape available that has impact noise recorded on it. Play tape and tell operator these alarms are on Channels 760, 752, and 753. (Rx vessel lower - primary and secondary detectors and #4 S/G primary detector on hot leg)

CONTROLLER USE ONLY

Provide only if operator responds to DMIMS cabinet.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 7

Time: 0117

MESSAGE FOR: Control Room

#4 RCP vibrations increasing upwards - now at 2.7 mils.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 8

Time: 0119

MESSAGE FOR: Control Room

#4 RCP vibrations continue to slowly increase - now at 3.2 mils.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 9

Time: 0122

MESSAGE FOR: Control Room

#4 RCP vibrations continue to slowly increase - now at 5.0 mils.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 10

Time: 0122

MESSAGE FOR: OPS Superintendent

Have Control Room maintain Rx power at 100%. Tell them you will notify Performance to check DMIMS alarm and RCP vibration.

CONTROLLER USE ONLY

Give message to OPS Superintendent if notified by Control Room of DMIMS alarm and RCP vibration.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 11

Time: 0127

MESSAGE FOR: Control Room

Annunciator 207, Drop 52 alarms. RCP vibration high at 7.0 mils.
Levels off at 7.0 mils.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 12

Time: 0130

MESSAGE FOR: Control Room

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 13

Time: 0133

MESSAGE FOR: Control Room

Radiation Monitor alarms.

R-19
SRA-2805
SRA-2905

Steam Generator Blowdown Sample Flow
Low alarms

Steam Generator Blowdown Sample Valves
close

Steam Generator Blowdown Isolation
Valves close

Provide 0133 RMS Screen facsimile, and Exhibit A.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 14

Time: 0138

MESSAGE FOR: OPS Superintendent (or alternate)

Tell Control Room to begin a controlled shutdown at 10%/hr. unless other conditions develop which warrant an increased power reduction rate.

CONTROLLER USE ONLY

Give message to OPS Superintendent if notified by Control Room of primary - secondary leakage.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 15

Time: 0140

MESSAGE FOR: Control Room

VCT level decreasing .5%/min.

Pressurizer level constant

Charging flow - 97 gpm

Letdown flow - 75 gpm

NOTE: Charging flow control is in automatic.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 16

Time: 0143

MESSAGE FOR: Control Room

Steam Generator Blowdown Sample Flow Low alarms begin to clear and alarm one at a time as Chemistry Lab takes S/G blowdown samples.

CONTROLLER USE ONLY

Provide message only if simulator fails AND if Control Room has requested S/G samples.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 17

Time: 0145

MESSAGE FOR: Control Room

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 18

Time: 0146

MESSAGE FOR: Control Room

SRA-2807 alarm (Mid Range on GSLO)

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 19

Time: 0150

MESSAGE FOR: Control Room - Contingency Message

DO NOT trip unit at this time.

CONTROLLER USE ONLY

In the event a decision is made at this point to trip the unit based on possible fuel damage this should be delayed until approximately 0210.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 20

Time: 0155

MESSAGE FOR: Chemistry Technician

Chemistry has taken S/G samples and calls the Control Room to let them know that its activity is "very high".

CONTROLLER USE ONLY



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 21

Time: 0200

MESSAGE FOR: Control Room

RMS screen

Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 22

Time: 0200

MESSAGE FOR: Control Room - Contingency Message

Declare UNUSUAL EVENT if not already declared due to:

ECC 14 (U.E. 1) (Fission Product Barriers/Loss of Coolant)
ECC 17 (U.E. 1) (Steam Generator Tube Rupture)

CONTROLLER USE ONLY

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 23

Time: 0200 (or when SS calls to initiate PMP 2080 EPP.107 Call-out procedure)

MESSAGE FOR: Security
(Special telephone instructions)

Don't call: Bill Burgess
Doug Noble
I.D. Fleetwood

CONTROLLER USE ONLY

Provide when SS calls initial call in.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 24

Time: 0210

MESSAGE FOR: Control Room

Pressurizer pressure and pressurizer level decreasing rapidly.
Pressurizer decreasing > 5%/min. (~ 500 gpm leak)

CONTROLLER USE ONLY

Control Room should trip Rx and initiate SI.

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 25

Time: 0211

MESSAGE FOR: Control Room - Contingency

Conditions after Rx trip and SI.

- AB D/G incomplete start
- Reserve Feed trips, offsite power is lost
- CD D/G starts and loads

CONTROLLER USE ONLY

Notify Control Room to trip Rx and initiate SI if not done at 0210 hrs.

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 26

Time: 0215

MESSAGE FOR: Control Room

RMS screen
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 27

Time: 0221

MESSAGE FOR: AEO

Local indication of #4 Steam Generator Stop is closed.

Message dependent on dose rate.

Gen. area - 130 mR/hr

Contact pipe - 500 R/hr

CONTROLLER USE ONLY

Provide message only if AEO dispatched locally to steam generator.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 28

Time: 0223

MESSAGE FOR: Control Room

XCR-102 will not open.

CONTROLLER USE ONLY

This results in the loss of control air to one of the air headers in containment.

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 29

Time: 0230

MESSAGE FOR: Control Room - Contingency Message

Declare ALERT based on ECC-14 and ECC-17.

CONTROLLER USE ONLY

Provide message if action not already taken by now.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 30

Time: 0230

MESSAGE FOR: Control Room

RMS screen
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 31

Time: 0237

MESSAGE FOR: Control Room

NRV-153 will not open.

NOTE: NRV-151 and NRV-152 block closed due to loss of power and
stuck closed valve.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 32

Time: 0238

MESSAGE FOR: AEO

XCR-102 does not move when operated from Control Room. Air can be heard and felt around the top of the diaphragm housing.

CONTROLLER USE ONLY

Give AEO message only if sent to XCR-102 by Control Room.

Dose rate 14 mR/hr general area.

Dose rates due to 2R-19 sample lines.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 33

Time: 0245

MESSAGE FOR: Control Room

RMS screen
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 34

Time: 0300

MESSAGE FOR: Control Room

RMS screen
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 35

Time: 0305

MESSAGE FOR: Control Room

IMO-120 and IMO-140 power cannot be restored due to blackout.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 36

Time: 0313

MESSAGE FOR: Control Room

TSC, OSA & EOF operational.

CONTROLLER USE ONLY

Time is contingent on alert declaration time.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 37

Time: See below under "CONTROLLER USE ONLY"

MESSAGE FOR: EOF - Environmental Assessment Coordinator

Forecast meteorological data is as follows:

	<u>8 Hr. Forecast</u>	<u>24 Hr. Forecast</u>
Wind Direction	Variable 324°-355°	Variable 290°-325°
Wind Speed	Variable 5-10 mph	Variable 5-10 mph
Diff. Temp.	-0.7 to 2.0	1.0 to 2.0
Stability Class	D-E	
Precipitation	None	

CONTROLLER USE ONLY

Provide this data when actions are taken to obtain such data from Murray and Trettle. DO NOT allow the players to actually contact Murray and Trettle.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 38

Time: If PET recommends this action for any reason.

MESSAGE FOR: PET Team

No parts are to be taken from Unit One to repair any damaged equipment in Unit Two..

CONTROLLER USE ONLY

TSC Controller provides message if a decision is made to take parts from Unit One to repair Unit Two equipment.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 39

Time: 0315

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 40

Time: 0330

MESSAGE FOR: Control Room, TSC, EOF

RMS data

Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 41

Time: 0345

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 42

Time: When PAS Team at sampling panel.

MESSAGE FOR: One Member of PAS Team

Two drops of the sample fall from the end of the needle and land on his/her anti-Cs just above the knee on the right leg. It soaks through and contaminates his/her leg.

When frisked, the area reads 94,000 cpm.

CONTROLLER USE ONLY



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 43

Time: 0345

MESSAGE FOR: Control Room, TSC, EOF

RMS data

Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 44

Time: 0400

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 45

Time: 0405 (or when team arrives at Diesel - whichever is latest)

MESSAGE FOR: AB Diesel Repair Team

Governor bar linkage broken (completely through)

CONTROLLER USE ONLY

Provide message to team when inspection of governor linkage is in progress.

Do not allow parts to be taken from Unit One to repair Unit Two AB Diesel.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 46

Time: 0415

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 47

Time: 0430

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 48

Time: 0445 (or when team arrives at XCR-102, whichever is later)

MESSAGE FOR: XCR-102 Repair Team

Air can be heard and felt around the top of the diaphragm housing.

CONTROLLER USE ONLY

Provide message to team when they arrive at valve.

Dose rate 14 mR/hr general area.

Dose rate due to 2R-19 sample line (80 mR/hr contact with sample line).



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 49

Time: 0445

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 50

Time: 0446

MESSAGE FOR: Control Room

#4 S/G pressure decreasing rapidly, MRA-2602 high alarm
(5.50 E+3 μ Ci/cc).

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 51

Time: 0450

MESSAGE FOR: EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 52

Time: 0500

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 53

Time: 0515

MESSAGE FOR: EOF - Contingency Message

Declare General Emergency - ECC-19.

CONTROLLER USE ONLY

Provide at this time if not already declared.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 54

Time: 0515

MESSAGE FOR: XRC-102 Repair Team - Contingency Message

XRC-102 is repaired.

CONTROLLER USE ONLY

IF it looks like simulated repairs will continue beyond 0525 then provide this message now so scenario stays on track.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 55

Time: 0515

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 56

Time: 0530

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 57

Time: 0532 (or when team gets within approx. 1 foot from valve)

MESSAGE FOR: #4 PORV Team

Team encounters 288 R/hr at 1 foot from valve.

CONTROLLER USE ONLY

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 58

Time: 0540

MESSAGE FOR: AB Diesel Repair Team - Contingency Message

AB diesel is repaired.

CONTROLLER USE ONLY

If it appears that simulated repairs will continue beyond 0545 provide this message now so scenario stays on track.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 59

Time: 0545

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 60

Time: 0550

MESSAGE FOR: Control Room

AEO reports that RHR is aligned.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE.

Message No.: 61

Time: 0600

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 62.

Time: 0615 (or when new higher turn back dose is provided)

MESSAGE FOR: #4 PORV Team

SCBA air bottles need changing (if not already, done).

CONTROLLER USE ONLY

Purpose of this message is to delay team so valve is not repaired.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 63

Time: 0615

MESSAGE FOR: Control Room, TSC, EOF

RMS data

Exhibit a data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 64

Time: 0630

MESSAGE FOR: Control Room, TSC, EOF

RMS data
Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 65

Time: 0642

MESSAGE FOR: Control Room

RHR is in service.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 66

Time: 0645

MESSAGE FOR: Control Room, TSC, EOF

RMS data

Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 67

Time: 0656

MESSAGE FOR: Control Room

Reserve Power is restored.

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 68

Time: 0700

MESSAGE FOR: Control Room, TSC, EOF.

RMS data
Exhibit A data

CONTROLLER USE ONLY

NOTE: At this point RMS data should be showing low enough site boundary levels to justify de-escalating to ALERT level.

USE ONLY IF SIMULATOR FAILS.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 69

Time: 0715

MESSAGE FOR: Control Room, TSC, EOF

RMS data

Exhibit A data

CONTROLLER USE ONLY

USE ONLY IF SIMULATOR FAILS.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

EXERCISE MESSAGE

Message No.: 70

Time: 0730

MESSAGE FOR: Simulator Instructor - Contingency Message

If PORV Rad. Monitor is reading greater than 1 $\mu\text{Ci/cc}$ at 0730 close
#4 PORV to terminate exercise on time.

CONTROLLER USE ONLY



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VII. C. PLANT TECHNICAL DATA

This section represents data as a direct facsimile of the Technical Information Sheet in PMP 2080 EPP.103, Exhibit A.

This time specific data will be provided by the Controller when appropriate.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4/3/90 Time 0045

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>90</u> °F	5. Intermediate Range	<u>3.4E-4</u> AMPS
2. Cont. H ₂ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0</u> PSIG
3. RWST Level	* <u>97.4</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>0</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* <u>ON</u> / <u>OFF</u>	West* <u>ON</u> / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>640</u> GPM	LP3* <u>640</u> GPM LP4* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 <u>ON</u> / OFF *LP2 <u>ON</u> / OFF	*LP3 <u>ON</u> / OFF *LP4 <u>ON</u> / OFF

16. RCS Pressure -->	<u>2239</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>87</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>652</u> °F	24. PZR Cycling Htrs.	<u>ON</u> / OFF
19. PZR Steam Temp.	<u>652</u> °F	25. PZR Backup Htrs.	<u>ON</u> / OFF
20. PZR Level -->	<u>54.6</u> %	26. Letdown Flow	<u>76.5</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>41.5</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F
29. Wide Range T Cold	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F
30. S/G Pressure	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG
31. S/G N.R. Level	<u>44.5</u> %	<u>44.5</u> %	<u>44.5</u> %	<u>43.4</u> %
32. S/G W.R. Level	<u>60</u> %	<u>60</u> %	<u>60</u> %	<u>61</u> %
33. Steam Flow (pph X 10 ⁶)	<u>3745</u>	<u>3686</u>	<u>3640</u>	<u>3713</u>
34. Feed Flow (pph X 10 ⁰)	<u>3740</u>	<u>3775</u>	<u>3790</u>	<u>3740</u>
35. Aux. Feed Flow(pph X 10 ³)*	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
36. MSIV Status	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE
37. CST Level	* <u>100</u> %	* <u>20</u> Ft.		
38. Steam Dump	*ATMOS / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	✓ / —	49. East CCP*	✓ / —
40. West ESW*	✓ / —	50. West CCP*	✓ / —
41. East CCW*	✓ / —	51. TDAFP*	✓ / —
42. West CCW*	✓ / —	52. EMDAFP*	✓ / —
43. East CTS*	✓ / —	53. WMDAFP*	✓ / —
44. West CTS*	✓ / —	54. AB Diesel*	✓ / —
45. North SI*	✓ / —	55. CD Diesel*	✓ / —
46. South SI*	✓ / —	56. Normal Res.*	✓ / —
47. East RHR*	✓ / —	57. 12 EP*	— / ✓
48. West RHR*	✓ / —		

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4/3/90 Time 0100

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>90</u> °F	5. Intermediate Range	<u>3.4E-4</u> AMPS
2. Cont. H ² Concentration	* <u>0</u> %	6. Containment Pressure	<u>0</u> PSIG
3. RWST Level	* <u>97.4</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>0</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM	LP2* <u>0</u> GPM
13. Accum Pressure	LP1* <u>40</u> GPM	LP2* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 <u>ON</u> / OFF	*LP2 <u>ON</u> / OFF
		*LP3 <u>ON</u> / OFF
		*LP4 <u>ON</u> / OFF

16. RCS Pressure -->	<u>2239</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>87</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>652</u> °F	24. PZR Cycling Htrs.	<u>ON</u> / OFF
19. PZR Steam Temp.	<u>652</u> °F	25. PZR Backup Htrs.	<u>ON</u> / OFF
20. PZR Level -->	<u>54.6</u> %	26. Letdown Flow	<u>76.5</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>41.5</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F
29. Wide Range T Cold	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F
30. S/G Pressure	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG
31. S/G N.R. Level	<u>44.5</u> %	<u>44.5</u> %	<u>44.5</u> %	<u>43.4</u> %
32. S/G W.R. Level	<u>60</u> %	<u>60</u> %	<u>60</u> %	<u>61</u> %
33. Steam Flow (pph X 10 ⁶)	<u>3745</u>	<u>3686</u>	<u>3640</u>	<u>3713</u>
34. Feed Flow (pph X 10 ⁰)	<u>3740</u>	<u>3775</u>	<u>3790</u>	<u>3740</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
36. MSIV Status	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE
37. CST Level	* <u>100</u> %	* <u>30</u> Ft.		
38. Steam Dump	*ATMOS / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	<u>✓</u>	/	—	49. East CCP*	<u>✓</u>	/	—
40. West ESW*	<u>✓</u>	/	—	50. West CCP*	<u>✓</u>	/	—
41. East CCW*	<u>✓</u>	/	—	51. TDAFP*	<u>✓</u>	/	—
42. West CCW*	<u>✓</u>	/	—	52. EMDAFP*	<u>✓</u>	/	—
43. East CTS*	<u>✓</u>	/	—	53. WMDAFP*	<u>✓</u>	/	—
44. West CTS*	<u>✓</u>	/	—	54. AB Diesel*	<u>✓</u>	/	—
45. North SI*	<u>✓</u>	/	—	55. CD Diesel*	<u>✓</u>	/	—
46. South SI*	<u>✓</u>	/	—	56. Normal Res.*	<u>✓</u>	/	—
47. East RHR*	<u>✓</u>	/	—	57. 12 EP*	—	/	<u>✓</u>
48. West RHR*	<u>✓</u>	/	—				

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0115

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>90</u> °F	5. Intermediate Range	<u>3.4E-4</u> AMPS
2. Cont. H ² Concentration	* <u>0</u> %	6. Containment Pressure	<u>0</u> PSIG
3. RWST Level	* <u>97.4</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>0</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>640</u> GPM	LP3* <u>640</u> GPM LP4* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 <u>ON</u> / OFF *LP2 <u>ON</u> / OFF	*LP3 <u>ON</u> / OFF *LP4 <u>ON</u> / OFF

16. RCS Pressure -->	<u>2238.4</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>87</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>652</u> °F	24. PZR Cycling Htrs.	<u>ON</u> / OFF
19. PZR Steam Temp.	<u>652</u> °F	25. PZR Backup Htrs.	<u>ON</u> / OFF
20. PZR Level -->	<u>54.6</u> %	26. Letdown Flow	<u>76.5</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>41.5</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F
29. Wide Range T Cold	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F
30. S/G Pressure	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG
31. S/G N.R. Level	<u>43.4</u> %	<u>43.4</u> %	<u>43.4</u> %	<u>44.2</u> %
32. S/G W.R. Level	<u>60</u> %	<u>60</u> %	<u>60</u> %	<u>59.9</u> %
33. Steam Flow (pph X 10 ⁶)	<u>3760</u>	<u>3665</u>	<u>3760</u>	<u>3680</u>
34. Feed Flow (pph X 10 ³)	<u>3736</u>	<u>3639</u>	<u>3734</u>	<u>3681</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
36. MSIV Status	<u>OPEN</u> / CLOSE	<u>OPEN</u> / CLOSE	<u>OPEN</u> / CLOSE	<u>OPEN</u> / CLOSE
37. CST Level	* <u>100</u> %	* <u>30</u> Ft.		
38. Steam Dump	*ATMOS / <u>COND</u>			

EQUIPMENT STATUS

AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE	
39. East ESW*	<u>✓</u> / —	49. East CCP*	<u>✓</u> / —
40. West ESW*	<u>✓</u> / —	50. West CCP*	<u>✓</u> / —
41. East CCW*	<u>✓</u> / —	51. TDAFP*	<u>✓</u> / —
42. West CCW*	<u>✓</u> / —	52. EMDAFP*	<u>✓</u> / —
43. East CTS*	<u>✓</u> / —	53. WMDAFP*	<u>✓</u> / —
44. West CTS*	<u>✓</u> / —	54. AB Diesel*	<u>✓</u> / —
45. North SI*	<u>✓</u> / —	55. CD Diesel*	<u>✓</u> / —
46. South SI*	<u>✓</u> / —	56. Normal Res.*	<u>✓</u> / —
47. East RHR*	<u>✓</u> / —	57. 12 EP*	<u>✓</u> / —
48. West RHR*	<u>✓</u> / —		

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0130

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>90</u> °F	5. Intermediate Range	<u>3.4E-4</u> AMPS
2. Cont. H ₂ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0</u> PSIG
3. RWST Level	* <u>97.4</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>0</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* <u>ON</u> / <u>OFF</u>	West* <u>ON</u> / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>640</u> GPM	LP3* <u>640</u> GPM LP4* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 <u>ON</u> / OFF *LP2 <u>ON</u> / OFF	*LP3 <u>ON</u> / OFF *LP4 <u>ON</u> / OFF

16. RCS Pressure -->	<u>2237</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>88</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>652</u> °F	24. PZR Cycling Htrs.	* <u>ON</u> / OFF
19. PZR Steam Temp.	<u>652</u> °F	25. PZR Backup Htrs.	* <u>ON</u> / OFF
20. PZR Level -->	<u>54.6</u> %	26. Letdown Flow	<u>76.5</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>41.5</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F	<u>602</u> °F
29. Wide Range T Cold	<u>546</u> °F	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F
30. S/G Pressure	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG	<u>804</u> PSIG
31. S/G N.R. Level	<u>44.2</u> %	<u>44.2</u> %	<u>44.2</u> %	<u>43.3</u> %
32. S/G W.R. Level	<u>59.8</u> %	<u>59.8</u> %	<u>59.8</u> %	<u>60.8</u> %
33. Steam Flow (pph X 10 ⁶)	<u>3652</u>	<u>3676</u>	<u>3645</u>	<u>3641</u>
34. Feed Flow (pph X 10 ⁰)	<u>3659</u>	<u>3661</u>	<u>3736</u>	<u>3685</u>
35. Aux. Feed Flow(pph X 10 ³)*	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
36. MSIV Status	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE
37. CST Level	* <u>100</u> %	* <u>30</u> Ft.		
38. Steam Dump	* <u>ATMOS</u> / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	✓	—	49. East CCP*	✓	—
40. West ESW*	✓	—	50. West CCP*	✓	—
41. East CCW*	✓	—	51. TDAFP*	✓	—
42. West CCW*	✓	—	52. EMDAFP*	✓	—
43. East CTS*	✓	—	53. WMDAFP*	✓	—
44. West CTS*	✓	—	54. AB Diesel*	✓	—
45. North SI*	✓	—	55. CD Diesel*	✓	—
46. South SI*	✓	—	56. Normal Res.*	✓	—
47. East RHR*	✓	—	57. 12 EP*	—	✓
48. West RHR*	✓	—			

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0145

Data Taken By _____

Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp. * 90 °F 5. Intermediate Range 3.4E-4 AMPS
 2. Cont. H² Concentration * 0 % 6. Containment Pressure 0 PSIG
 3. RWST Level * 97.4 % 7. Containment Sump Level * 2 %
 4. Source Range * 0 CPM 8. Containment Level * 0 %

9. CTS Pumps East* ON / OFF West* ON / OFF
 10. RHR Spray Flow East* 0 GPM West* 0 GPM
 11. SI Flow North* 0 GPM South* 0 GPM
 12. BIT Flow LP1* 0 GPM LP2* 0 GPM LP3* 0 GPM LP4* 0 GPM
 13. Accum Pressure LP1* 640 GPM LP2* 640 GPM LP3* 640 GPM LP4* 640 GPM
 14. RHR Injection Flow East* 0 GPM West* 0 GPM
 15. RCP Status *LP1 ON / OFF *LP2 ON / OFF *LP3 ON / OFF *LP4 ON / OFF

16. RCS Pressure --> 2041.5 PSIG 22. PRT Level 82 %
 17. Charging Flow 96.7 GPM 23. PRT Pressure 3.3 PSIG
 18. PZR Liquid Temp. 652 °F 24. PZR Cycling Htrs. *ON / OFF
 19. PZR Steam Temp. 652 °F 25. PZR Backup Htrs. *ON / OFF
 20. PZR Level --> 53.6 % 26. Letdown Flow 76.5 GPM
 21. PRT Temp. 112.5 °F 27. Saturation Margin 41.5 °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>600</u> °F	<u>600</u> °F	<u>600</u> °F	<u>600</u> °F
29. Wide Range T Cold	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F
30. S/G Pressure	<u>825</u> PSIG	<u>825</u> PSIG	<u>825</u> PSIG	<u>825</u> PSIG
31. S/G N.R. Level	<u>43.8</u> %	<u>43.8</u> %	<u>43.8</u> %	<u>43.6</u> %
32. S/G W.R. Level	<u>60.5</u> %	<u>60.5</u> %	<u>60.5</u> %	<u>59.7</u> %
33. Steam Flow (pph X 10 ⁶)	<u>3156</u>	<u>3627</u>	<u>3571</u>	<u>3607</u>
34. Feed Flow (pph X 10 ⁶)	<u>3150</u>	<u>3599</u>	<u>3616</u>	<u>3565</u>
35. Aux. Feed Flow (pph X 10 ³)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
36. MSIV Status	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE
37. CST Level	* <u>100</u> %	* <u>30</u> Ft.		
38. Steam Dump	*ATMOS / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	✓	/	49. East CCP*	✓	/
40. West ESW*	✓	/	50. West CCP*	✓	/
41. East CCW*	✓	/	51. TDAFP*	✓	/
42. West CCW*	✓	/	52. EMDAFP*	✓	/
43. East CTS*	✓	/	53. WMDAFP*	✓	/
44. West CTS*	✓	/	54. AB Diesel*	✓	/
45. North SI*	✓	/	55. CD Diesel*	✓	/
46. South SI*	✓	/	56. Normal Res.*	✓	/
47. East RHR*	✓	/	57. 12 EP*	✓	/
48. West RHR*	✓	/			

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0500

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>90</u> °F	5. Intermediate Range	<u>3.2E-4</u> AMPS
2. Cont. H ⁻ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0</u> PSIG
3. RWST Level	* <u>97.4</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>0</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM	LP2* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM	LP2* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 <u>ON</u> / OFF	*LP2 <u>ON</u> / OFF
		*LP3 <u>ON</u> / OFF
		*LP4 <u>ON</u> / OFF

16. RCS Pressure -->	<u>2231</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>102.1</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>652</u> °F	24. PZR Cycling Htrs.	<u>ON</u> / OFF
19. PZR Steam Temp.	<u>652</u> °F	25. PZR Backup Htrs.	<u>ON</u> / OFF
20. PZR Level -->	<u>49</u> %	26. Letdown Flow	<u>76.5</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>41.5</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>585</u> °F	<u>585</u> °F	<u>585</u> °F	<u>585</u> °F
29. Wide Range T Cold	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F	<u>540</u> °F
30. S/G Pressure	<u>850</u> PSIG	<u>850</u> PSIG	<u>850</u> PSIG	<u>850</u> PSIG
31. S/G N.R. Level	<u>43.2</u> %	<u>43.2</u> %	<u>43.2</u> %	<u>43.9</u> %
32. S/G W.R. Level	<u>60</u> %	<u>60</u> %	<u>60</u> %	<u>60.5</u> %
33. Steam Flow (pph X 10 ⁶)	<u>3490</u>	<u>3100</u>	<u>3131</u>	<u>3211</u>
34. Feed Flow (pph X 10 ⁰)	<u>2490</u>	<u>3161</u>	<u>3215</u>	<u>3141</u>
35. Aux. Feed Flow (pph X 10 ⁻³)*	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
36. MSIV Status	<u>*OPEN</u> / CLOSE	<u>*OPEN</u> / CLOSE	<u>*OPEN</u> / CLOSE	<u>*OPEN</u> / CLOSE
37. CST Level	* <u>100</u> %	* <u>30</u> Ft.		
38. Steam Dump	*ATMOS / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	<u>✓</u>	<u>—</u>	49. East CCP*	<u>✓</u>	<u>—</u>
40. West ESW*	<u>✓</u>	<u>—</u>	50. West CCP*	<u>✓</u>	<u>—</u>
41. East CCW*	<u>✓</u>	<u>—</u>	51. TDAFP*	<u>✓</u>	<u>—</u>
42. West CCW*	<u>✓</u>	<u>—</u>	52. EMDAFP*	<u>✓</u>	<u>—</u>
43. East CTS*	<u>✓</u>	<u>—</u>	53. WMDAFP*	<u>✓</u>	<u>—</u>
44. West CTS*	<u>✓</u>	<u>—</u>	54. AB Diesel*	<u>✓</u>	<u>—</u>
45. North SI*	<u>✓</u>	<u>—</u>	55. CD Diesel*	<u>✓</u>	<u>—</u>
46. South SI*	<u>✓</u>	<u>—</u>	56. Normal Res.*	<u>✓</u>	<u>—</u>
47. East RHR*	<u>✓</u>	<u>—</u>	57. 12 EP*	<u>—</u>	<u>✓</u>
48. West RHR*	<u>✓</u>	<u>—</u>			

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-96 Time 0215

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>97</u> °F	5. Intermediate Range	<u>1.5E-10</u> AMPS
2. Cont. H ² Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.06</u> PSIG
3. RWST Level	* <u>95</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>2E5</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>75</u> GPM	LP2* <u>75</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM	LP2* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>
	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>1852.9</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>51.7</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>620</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>625</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>4.6</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>44.9</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>565</u> °F	<u>565</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>535</u> °F	<u>535</u> °F	<u>++</u> °F
30. S/G Pressure	<u>955</u> PSIG	<u>955</u> PSIG	<u>955</u> PSIG	<u>955</u> PSIG
31. S/G N.R. Level	<u>10.7</u> %	<u>10.7</u> %	<u>10.7</u> %	<u>16.0</u> %
32. S/G W.R. Level	<u>50.4</u> %	<u>50.4</u> %	<u>50.4</u> %	<u>50.1</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>1275</u>	<u>1285</u>	<u>1317</u>
34. Feed Flow (pph X 10 ⁰)	<u>37</u>	<u>1297</u>	<u>1284</u>	<u>1290</u>
35. Aux. Feed Flow (pph X 10 ³)	* <u>100</u>	<u>102</u>	<u>99</u>	<u>0</u>
36. MSIV Status	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE	* <u>OPEN</u> / CLOSE
37. CST Level	* <u>97</u> %	* <u>29.1</u> Ft.		
38. Steam Dump	* <u>ATMOS</u> / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	— / —	49. East CCP*	— / —
40. West ESW*	— / —	50. West CCP*	— / —
41. East CCW*	— / —	51. TDAFP*	— / —
42. West CCW*	— / —	52. EMDAFP*	— / —
43. East CTS*	— / —	53. WMDAFP*	— / —
44. West CTS*	— / —	54. AB Diesel*	— / —
45. North SI*	— / —	55. CD Diesel*	— / —
46. South SI*	— / —	56. Normal Res.*	— / —
47. East RHR*	— / —	57. 12 EP*	— / —
48. West RHR*	— / —		

* Data to be taken by Control Room operator:

++ no power to chart



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0230

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>106</u> °F	5. Intermediate Range	<u>3.5E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.2</u> PSIG
3. RWST Level	* <u>94</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>200</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>97</u> GPM	South* <u>97</u> GPM
12. BIT Flow	LP1* <u>90</u> GPM	LP2* <u>90</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM	LP2* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>
	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>1491</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>36.5</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>600</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>590</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>0</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>55.9</u> °F

VSIS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>525</u> °F	<u>525</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>475</u> °F	<u>475</u> °F	<u>++</u> °F
30. S/G Pressure	<u>390</u> PSIG	<u>390</u> PSIG	<u>390</u> PSIG	<u>1030</u> PSIG
31. S/G N.R. Level	<u>10.4</u> %	<u>10.4</u> %	<u>10.4</u> %	<u>33</u> %
32. S/G W.R. Level	<u>55.9</u> %	<u>55.9</u> %	<u>55.9</u> %	<u>54.8</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>314</u>	<u>318</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)	* <u>102</u>	* <u>105</u>	* <u>101</u>	* <u>0</u>
36. MSIV Status	<u>*OPEN</u> / CLOSE	<u>*OPEN</u> / CLOSE	<u>*OPEN</u> / CLOSE	<u>*OPEN</u> / CLOSE
37. CST Level	* <u>95</u> %	* <u>28.5</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	<u>✓</u>	/		49. East CCP*	<u>✓</u>	/	
40. West ESW*	<u>✓</u>	/	<u>✓</u>	50. West CCP*	<u>✓</u>	/	<u>✓</u>
41. East CCW*	<u>✓</u>	/		51. TDAFP*	<u>✓</u>	/	
42. West CCW*	<u>✓</u>	/	<u>✓</u>	52. EMDAFP*	<u>✓</u>	/	
43. East CTS*	<u>✓</u>	/		53. WMDAFP*	<u>✓</u>	/	
44. West CTS*	<u>✓</u>	/	<u>✓</u>	54. AB Diesel*	<u>✓</u>	/	<u>✓</u>
45. North SI*	<u>✓</u>	/	<u>✓</u>	55. CD Diesel*	<u>✓</u>	/	<u>✓</u>
46. South SI*	<u>✓</u>	/	<u>✓</u>	56. Normal Res.*	<u>✓</u>	/	<u>✓</u>
47. East RHR*	<u>✓</u>	/		57. 12 EP*	<u>✓</u>	/	<u>✓</u>
48. West RHR*	<u>✓</u>	/	<u>✓</u>				

* Data to be taken by Control Room operator.

++ no power to chart



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0245

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>108</u> °F	5. Intermediate Range	<u>5.8E-11</u> AMPS
2. Cont. H ₂ Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.23</u> PSIG
3. RWST Level	*	<u>93</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	*	<u>150</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM
12. BIT Flow	LP1*	<u>87</u> GPM	LP2*	<u>87</u> GPM
13. Accum Pressure	LP1*	<u>640</u> GPM	LP2*	<u>640</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>1352.5</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>35.7</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>510</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>588</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>46.7</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>67.3</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>485</u> °F	<u>485</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>440</u> °F	<u>440</u> °F	<u>++</u> °F
30. S/G Pressure	<u>425</u> PSIG	<u>425</u> PSIG	<u>425</u> PSIG	<u>1030</u> PSIG
31. S/G N.R. Level	<u>12.8</u> %	<u>12.8</u> %	<u>12.8</u> %	<u>49.4</u> %
32. S/G W.R. Level	<u>56.1</u> %	<u>56.1</u> %	<u>56.1</u> %	<u>59.2</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>95</u>	<u>99</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>90</u>	<u>90</u>	<u>90</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>92</u> %	* <u>27.6</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	<u>✓</u>	/		49. East CCP*	<u>✓</u>	/	
40. West ESW*	<u>✓</u>	/		50. West CCP*	<u>✓</u>	/	
41. East CCW*	<u>✓</u>	/		51. TDAFP*	<u>✓</u>	/	
42. West CCW*	<u>✓</u>	/		52. EMDAFP*	<u>✓</u>	/	
43. East CTS*	<u>✓</u>	/		53. WMDAFP*	<u>✓</u>	/	
44. West CTS*	<u>✓</u>	/		54. AB Diesel*	<u>✓</u>	/	
45. North SI*	<u>✓</u>	/		55. CD Diesel*	<u>✓</u>	/	
46. South SI*	<u>✓</u>	/		56. Normal Res.*	<u>✓</u>	/	
47. East RHR*	<u>✓</u>	/		57. 12 EP*	<u>✓</u>	/	
48. West RHR*	<u>✓</u>	/					

* Data to be taken by Control Room operator.

++ no power to chart



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0300

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>2.3E-11</u> AMPS
2. Cont. H ² Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.25</u> PSIG
3. RWST Level	*	<u>93</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	*	<u>150</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM	LP2* <u>0</u> GPM
13. Accum Pressure	LP1* <u>40</u> GPM	LP2* <u>640</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>
	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>1452.2</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>40</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>510</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>590</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>90.5</u> %	26. Latdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>72.8</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>490</u> °F	<u>490</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>440</u> °F	<u>440</u> °F	<u>++</u> °F
30. S/G Pressure	<u>450</u> PSIG	<u>450</u> PSIG	<u>450</u> PSIG	<u>1030</u> PSIG
31. S/G N.R. Level	<u>27.5</u> %	<u>27.5</u> %	<u>27.5</u> %	<u>71.9</u> %
32. S/G W.R. Level	<u>59.3</u> %	<u>59.3</u> %	<u>59.3</u> %	<u>64.6</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>50</u>	<u>46</u>	<u>62</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>89</u> %	* <u>26.7</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	<u>✓</u>	/	<u>—</u>	49. East CCP*	<u>✓</u>	/	<u>—</u>
40. West ESW*	<u>—</u>	/	<u>✓</u>	50. West CCP*	<u>—</u>	/	<u>✓</u>
41. East CCW*	<u>✓</u>	/	<u>—</u>	51. TDAFP*	<u>✓</u>	/	<u>—</u>
42. West CCW*	<u>—</u>	/	<u>✓</u>	52. EMDAFP*	<u>✓</u>	/	<u>—</u>
43. East CTS*	<u>✓</u>	/	<u>—</u>	53. WMDAFP*	<u>—</u>	/	<u>✓</u>
44. West CTS*	<u>—</u>	/	<u>✓</u>	54. AB Diesel*	<u>—</u>	/	<u>✓</u>
45. North SI*	<u>✓</u>	/	<u>—</u>	55. CD Diesel*	<u>✓</u>	/	<u>—</u>
46. South SI*	<u>—</u>	/	<u>✓</u>	56. Normal Res.*	<u>—</u>	/	<u>✓</u>
47. East RHR*	<u>✓</u>	/	<u>—</u>	57. 12 EP*	<u>—</u>	/	<u>✓</u>
48. West RHR*	<u>—</u>	/	<u>✓</u>				

* Data to be taken by Control Room operator.

++ no power to chart

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0315

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>2.0E-11</u> AMPS
2. Cont. H ₂ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.3</u> PSIG
3. RWST Level	* <u>93</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>150</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>440</u> GPM LP2* <u>400</u> GPM	LP3* <u>646</u> GPM LP4* <u>400</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u> *LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>	

16. RCS Pressure -->	<u>1147.8</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>62.1</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>520</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>561</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>62.6</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>98.2</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>475</u> °F	<u>475</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>420</u> °F	<u>420</u> °F	<u>++</u> °F
30. S/G Pressure	<u>240</u> PSIG	<u>240</u> PSIG	<u>240</u> PSIG	<u>1020</u> PSIG
31. S/G N.R. Level	<u>26.5</u> %	<u>26.5</u> %	<u>26.5</u> %	<u>85.1</u> %
32. S/G W.R. Level	<u>61.4</u> %	<u>61.4</u> %	<u>61.4</u> %	<u>67.4</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>115</u>	<u>115</u>	<u>115</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>86</u> %	* <u>25.8</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	<u>✓</u>	/	<u>✓</u>	49. East CCP*	<u>✓</u>	/	<u>✓</u>
40. West ESW*	<u>✓</u>	/	<u>✓</u>	50. West CCP*	<u>✓</u>	/	<u>✓</u>
41. East CCW*	<u>✓</u>	/	<u>✓</u>	51. TDAFP*	<u>✓</u>	/	<u>✓</u>
42. West CCW*	<u>✓</u>	/	<u>✓</u>	52. EMDAFP*	<u>✓</u>	/	<u>✓</u>
43. East CTS*	<u>✓</u>	/	<u>✓</u>	53. WMDAFP*	<u>✓</u>	/	<u>✓</u>
44. West CTS*	<u>✓</u>	/	<u>✓</u>	54. AB Diesel*	<u>✓</u>	/	<u>✓</u>
45. North SI*	<u>✓</u>	/	<u>✓</u>	55. CD Diesel*	<u>✓</u>	/	<u>✓</u>
46. South SI*	<u>✓</u>	/	<u>✓</u>	56. Normal Res.*	<u>✓</u>	/	<u>✓</u>
47. East RHR*	<u>✓</u>	/	<u>✓</u>	57. 12 EP*	<u>✓</u>	/	<u>✓</u>
48. West RHR*	<u>✓</u>	/	<u>✓</u>				

* Data to be taken by Control Room operator.

++ no power to chart



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0330

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>1.8E-11</u> AMPS
2. Cont. H ₂ Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.44</u> PSIG
3. RWST Level	*	<u>93</u> %	7. Containment Sump Level	<u>2</u> %
4. Source Range	*	<u>140</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM
12. BIT Flow	LP1*	<u>0</u> GPM	LP2*	<u>0</u> GPM
13. Accum Pressure	LP1*	<u>40</u> GPM	LP2*	<u>210</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>1025</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>60</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>520</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>557</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>50</u> %	26. Latdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>78.6</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>455</u> °F	<u>455</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>370</u> °F	<u>370</u> °F	<u>++</u> °F
30. S/G Pressure	<u>200</u> PSIG	<u>200</u> PSIG	<u>200</u> PSIG	<u>1020</u> PSIG
31. S/G N.R. Level	<u>38</u> %	<u>38</u> %	<u>38</u> %	<u>88</u> %
32. S/G W.R. Level	<u>63.2</u> %	<u>63.2</u> %	<u>63.2</u> %	<u>67.2</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>123</u>	<u>123</u>	<u>123</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>83</u> %	* <u>24.9</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	<u>✓</u>	/		49. East CCP*	<u>✓</u>	/	
40. West ESW*	<u>—</u>	/	<u>✓</u>	50. West CCP*	<u>—</u>	/	<u>✓</u>
41. East CCW*	<u>✓</u>	/		51. TDAFP*	<u>✓</u>	/	
42. West CCW*	<u>—</u>	/	<u>✓</u>	52. EMDAFP*	<u>✓</u>	/	
43. East CTS*	<u>✓</u>	/		53. WMDAFP*	<u>—</u>	/	<u>✓</u>
44. West CTS*	<u>—</u>	/	<u>✓</u>	54. AB Diesel*	<u>—</u>	/	<u>✓</u>
45. North SI*	<u>✓</u>	/		55. CD Diesel*	<u>✓</u>	/	
46. South SI*	<u>—</u>	/	<u>✓</u>	56. Normal Res.*	<u>—</u>	/	<u>✓</u>
47. East RHR*	<u>✓</u>	/		57. 12 EP*	<u>—</u>	/	<u>✓</u>
48. West RHR*	<u>—</u>	/	<u>✓</u>				

* Data to be taken by Control Room operator.

++ no power to chart



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TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0345

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.6E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.52</u> PSIG
3. RWST Level	* <u>93</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>100</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps.	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM	LP2* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM	LP2* <u>70</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>
	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>985</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>48</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>520</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>545</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>42</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>69.5</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>435</u> °F	<u>435</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>360</u> °F	<u>360</u> °F	<u>++</u> °F
30. S/G Pressure	<u>170</u> PSIG	<u>170</u> PSIG	<u>170</u> PSIG	<u>990</u> PSIG
31. S/G N.R. Level	<u>47.1</u> %	<u>47.1</u> %	<u>47.1</u> %	<u>82.1</u> %
32. S/G W.R. Level	<u>68.3</u> %	<u>68.3</u> %	<u>68.3</u> %	<u>68.2</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>45</u>	<u>47</u>	<u>32</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>82</u> %	* <u>24.6</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	✓	/	49. East CCP*	✓	/
40. West ESW*	✓	/	50. West CCP*	✓	/
41. East CCW*	✓	/	51. TDAFP*	✓	/
42. West CCW*	✓	/	52. EMDAFP*	✓	/
43. East CTS*	✓	/	53. WMDAFP*	✓	/
44. West CTS*	✓	/	54. AB Diesel*	✓	/
45. North SI*	✓	/	55. CD Diesel*	✓	/
46. South SI*	✓	/	56. Normal Res.*	✓	/
47. East RHR*	✓	/	57. 12 EP*	✓	/
48. West RHR*	✓	/			

* Data to be taken by Control Room operator.

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11-11-11

11-11-11

11-11-11



11-11-11



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0400

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.55E-11</u> AMPS
2. Cont. H ² Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>93</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>100</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>965</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>36.8</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>530</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>540</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>39</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>90</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>420</u> °F	<u>420</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>360</u> °F	<u>360</u> °F	<u>++</u> °F
30. S/G Pressure	<u>145</u> PSIG	<u>145</u> PSIG	<u>145</u> PSIG	<u>950</u> PSIG
31. S/G N.R. Level	<u>42.9</u> %	<u>42.9</u> %	<u>42.9</u> %	<u>79.1</u> %
32. S/G W.R. Level	<u>67.9</u> %	<u>67.9</u> %	<u>67.9</u> %	<u>69</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>50</u>	<u>47</u>	<u>75</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>81</u> %	* <u>24.3</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	<u>✓</u> / <u>✓</u>	49. East CCP*	<u>✓</u> / <u>✓</u>
40. West ESW*	<u>✓</u> / <u>✓</u>	50. West CCP*	<u>✓</u> / <u>✓</u>
41. East CCW*	<u>✓</u> / <u>✓</u>	51. TDAFP*	<u>✓</u> / <u>✓</u>
42. West CCW*	<u>✓</u> / <u>✓</u>	52. EMDAFP*	<u>✓</u> / <u>✓</u>
43. East CTS*	<u>✓</u> / <u>✓</u>	53. WMDAFP*	<u>✓</u> / <u>✓</u>
44. West CTS*	<u>✓</u> / <u>✓</u>	54. AB Diesel*	<u>✓</u> / <u>✓</u>
45. North SI*	<u>✓</u> / <u>✓</u>	55. CD Diesel*	<u>✓</u> / <u>✓</u>
46. South SI*	<u>✓</u> / <u>✓</u>	56. Normal Res.*	<u>✓</u> / <u>✓</u>
47. East RHR*	<u>✓</u> / <u>✓</u>	57. 12 EP*	<u>✓</u> / <u>✓</u>
48. West RHR*	<u>✓</u> / <u>✓</u>		

* Data to be taken by Control Room operator.

++ no power to chart

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0415

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.55E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>93</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>90</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u> *LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>	

16. RCS Pressure -->	<u>911.5</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>28.8</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>520</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>533</u> °F	25. PZR Backup Htrs	*ON / <u>OFF</u>
20. PZR Level -->	<u>32.8</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>112.7</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>415</u> °F	<u>415</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>350</u> °F	<u>350</u> °F	<u>++</u> °F
30. S/G Pressure	<u>130</u> PSIG	<u>130</u> PSIG	<u>130</u> PSIG	<u>950</u> PSIG
31. S/G N.R. Level	<u>44.4</u> %	<u>44.4</u> %	<u>44.4</u> %	<u>89.7</u> %
32. S/G W.R. Level	<u>67.6</u> %	<u>67.6</u> %	<u>67.6</u> %	<u>69.7</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>50</u>	<u>47</u>	<u>64</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>80</u> %	* <u>24</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE			AVAILABLE / UNAVAILABLE	
39. East ESW*	<u>✓</u>	<u>/</u>	49. East CCP*	<u>✓</u>	<u>/</u>
40. West ESW*	<u>✓</u>	<u>/</u>	50. West CCP*	<u>✓</u>	<u>/</u>
41. East CCW*	<u>✓</u>	<u>/</u>	51. TDAFP*	<u>✓</u>	<u>/</u>
42. West CCW*	<u>✓</u>	<u>/</u>	52. EMDAFP*	<u>✓</u>	<u>/</u>
43. East CTS*	<u>✓</u>	<u>/</u>	53. WMDAFP*	<u>✓</u>	<u>/</u>
44. West CTS*	<u>✓</u>	<u>/</u>	54. AB Diesel*	<u>✓</u>	<u>/</u>
45. North SI*	<u>✓</u>	<u>/</u>	55. CD Diesel*	<u>✓</u>	<u>/</u>
46. South SI*	<u>✓</u>	<u>/</u>	56. Normal Res.*	<u>✓</u>	<u>/</u>
47. East RHR*	<u>✓</u>	<u>/</u>	57. 12 EP*	<u>✓</u>	<u>/</u>
48. West RHR*	<u>✓</u>	<u>/</u>			

* Data to be taken by Control Room operator.

++ no power to chart

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0430

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u>	°F	5. Intermediate Range	<u>1.5E-11</u>	AMPS
2. Cont. H ⁺ Concentration	*	<u>0</u>	%	6. Containment Pressure	<u>0.57</u>	PSIG
3. RWST Level	*	<u>92</u>	%	7. Containment Sump Level*	<u>2</u>	%
4. Source Range	*	<u>90</u>	CPM	8. Containment Level	* <u>0</u>	%

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>				
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM				
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM				
12. BIT Flow	LP1*	<u>0</u> GPM	LP2*	<u>0</u> GPM	LP3*	<u>0</u> GPM	LP4*	<u>0</u> GPM
13. Accum Pressure	LP1*	<u>640</u> GPM	LP2*	<u>8</u> GPM	LP3*	<u>640</u> GPM	LP4*	<u>8</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM				
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>				

16. RCS Pressure -->	<u>814</u>	PSIG	22. PRT Level	<u>82</u>	%
17. Charging Flow	<u>89.4</u>	GPM	23. PRT Pressure	<u>3.3</u>	PSIG
18. PZR Liquid Temp.	<u>510</u>	°F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>	
19. PZR Steam Temp.	<u>522</u>	°F	25. PZR Backup Htrs.	*ON / <u>OFF</u>	
20. PZR Level -->	<u>14</u>	%	26. Letdown Flow	<u>0</u>	GPM
21. PRT Temp.	<u>112.5</u>	°F	27. Saturation Margin	<u>123.9</u>	Ft

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>410</u> °F	<u>410</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>350</u> °F	<u>350</u> °F	<u>++</u> °F
30. S/G Pressure	<u>125</u> PSIG	<u>125</u> PSIG	<u>125</u> PSIG	<u>950</u> PSIG
31. S/G N.R. Level	<u>46.5</u> %	<u>46.5</u> %	<u>46.5</u> %	<u>100</u> %
32. S/G W.R. Level	<u>66.6</u> %	<u>66.6</u> %	<u>66.6</u> %	<u>77.1</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow(pph X 10 ³)*	<u>50</u>	<u>49</u>	<u>49</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>80</u> %	* <u>24</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE	AVAILABLE / UNAVAILABLE	
39. East ESW*	<u>✓</u> / <u>✓</u>	49. East CCP*	<u>✓</u> / <u>✓</u>
40. West ESW*	<u>✓</u> / <u>✓</u>	50. West CCP*	<u>✓</u> / <u>✓</u>
41. East CCW*	<u>✓</u> / <u>✓</u>	51. TDAFP*	<u>✓</u> / <u>✓</u>
42. West CCW*	<u>✓</u> / <u>✓</u>	52. EMDAFP*	<u>✓</u> / <u>✓</u>
43. East CTS*	<u>✓</u> / <u>✓</u>	53. WMDAFP*	<u>✓</u> / <u>✓</u>
44. West CTS*	<u>✓</u> / <u>✓</u>	54. AB Diesel*	<u>✓</u> / <u>✓</u>
45. North SI*	<u>✓</u> / <u>✓</u>	55. CD Diesel*	<u>✓</u> / <u>✓</u>
46. South SI*	<u>✓</u> / <u>✓</u>	56. Normal Res.*	<u>✓</u> / <u>✓</u>
47. East RHR*	<u>✓</u> / <u>✓</u>	57. 12 EP*	<u>✓</u> / <u>✓</u>
48. West RHR*	<u>✓</u> / <u>✓</u>		

* Data to be taken by Control Room operator.

++ no power to chart

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0445

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>1.4E-11</u> AMPS
2. Cont. H ₂ Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	*	<u>90</u> %	7. Containment Sump Level	<u>3</u> %
4. Source Range	*	<u>85</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>791</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>245</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>510</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>516</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>0</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>169.8</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>385</u> °F	<u>385</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>340</u> °F	<u>340</u> °F	<u>++</u> °F
30. S/G Pressure	<u>110</u> PSIG	<u>110</u> PSIG	<u>110</u> PSIG	<u>420</u> PSIG
31. S/G N.R. Level	<u>42.1</u> %	<u>42.1</u> %	<u>42.1</u> %	<u>100</u> %
32. S/G W.R. Level	<u>67.8</u> %	<u>67.8</u> %	<u>67.8</u> %	<u>80.1</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>50</u>	<u>50</u>	<u>38</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>79</u> %	* <u>23.7</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	✓	/		49. East CCP*	✓	/	
40. West ESW*	✓	/	✓	50. West CCP*	✓	/	✓
41. East CCW*	✓	/	✓	51. TDAFP*	✓	/	
42. West CCW*	✓	/	✓	52. EMDAFP*	✓	/	
43. East CTS*	✓	/	✓	53. WMDAFP*	✓	/	
44. West CTS*	✓	/	✓	54. AB Diesel*	✓	/	
45. North SI*	✓	/	✓	55. CD Diesel*	✓	/	
46. South SI*	✓	/	✓	56. Normal Res.*	✓	/	
47. East RHR*	✓	/	✓	57. 12 EP*	✓	/	✓
48. West RHR*	✓	/	✓				

* Data to be taken by Control Room operator.

++ no power to chart



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0500

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.3E-11</u> AMPS
2. Cont. H ₂ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>90</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>80</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>735</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>245</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>505</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>510</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>0</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>115.6</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>375</u> °F	<u>375</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>340</u> °F	<u>340</u> °F	<u>++</u> °F
30. S/G Pressure	<u>90</u> PSIG	<u>90</u> PSIG	<u>90</u> PSIG	<u>300</u> PSIG
31. S/G N.R. Level	<u>44.2</u> %	<u>44.2</u> %	<u>44.2</u> %	<u>100</u> %
32. S/G W.R. Level	<u>68.8</u> %	<u>68.8</u> %	<u>68.8</u> %	<u>84</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>45</u>	<u>52</u>	<u>38</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>77</u> %	* <u>23.1</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	<u>✓</u> / <u>—</u>	49. East CCP*	<u>✓</u> / <u>—</u>
40. West ESW*	<u>—</u> / <u>✓</u>	50. West CCP*	<u>—</u> / <u>✓</u>
41. East CCW*	<u>✓</u> / <u>—</u>	51. TDAFP*	<u>✓</u> / <u>—</u>
42. West CCW*	<u>—</u> / <u>✓</u>	52. EMDAFP*	<u>✓</u> / <u>—</u>
43. East CTS*	<u>✓</u> / <u>—</u>	53. WMDAFP*	<u>—</u> / <u>✓</u>
44. West CTS*	<u>—</u> / <u>✓</u>	54. AB Diesel*	<u>—</u> / <u>✓</u>
45. North SI*	<u>✓</u> / <u>—</u>	55. CD Diesel*	<u>✓</u> / <u>—</u>
46. South SI*	<u>—</u> / <u>✓</u>	56. Normal Res.*	<u>—</u> / <u>✓</u>
47. East RHR*	<u>✓</u> / <u>—</u>	57. 12 EP*	<u>—</u> / <u>✓</u>
48. West RHR*	<u>—</u> / <u>✓</u>		

* Data to be taken by Control Room operator.

++ no power to chart

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0515

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>1.2E-11</u> AMPS
2. Cont. H ⁺ Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	*	<u>90</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	*	<u>80</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM
12. BIT Flow	LP1*	<u>0</u> GPM	LP2*	<u>0</u> GPM
13. Accum Pressure	LP1*	<u>640</u> GPM	LP2*	<u>8</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>706</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>345</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>500</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>506</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>0</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>129</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>360</u> °F	<u>360</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>340</u> °F	<u>340</u> °F	<u>++</u> °F
30. S/G Pressure	<u>75</u> PSIG	<u>75</u> PSIG	<u>75</u> PSIG	<u>270</u> PSIG
31. S/G N.R. Level	<u>46.5</u> %	<u>46.5</u> %	<u>46.5</u> %	<u>100</u> %
32. S/G W.R. Level	<u>71.5</u> %	<u>71.5</u> %	<u>71.5</u> %	<u>88.2</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>30</u>	<u>28</u>	<u>38</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>77</u> %	* <u>23.1</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	<u>✓</u>	<u>/</u>	49. East CCP*	<u>✓</u>	<u>/</u>
40. West ESW*	<u>✓</u>	<u>/</u>	50. West CCP*	<u>✓</u>	<u>/</u>
41. East CCW*	<u>✓</u>	<u>/</u>	51. TDAFP*	<u>✓</u>	<u>/</u>
42. West CCW*	<u>✓</u>	<u>/</u>	52. EMDAFP*	<u>✓</u>	<u>/</u>
43. East CTS*	<u>✓</u>	<u>/</u>	53. WMDAFP*	<u>✓</u>	<u>/</u>
44. West CTS*	<u>✓</u>	<u>/</u>	54. AB Diesel*	<u>✓</u>	<u>/</u>
45. North SI*	<u>✓</u>	<u>/</u>	55. CD Diesel*	<u>✓</u>	<u>/</u>
46. South SI*	<u>✓</u>	<u>/</u>	56. Normal Res.*	<u>✓</u>	<u>/</u>
47. East RHR*	<u>✓</u>	<u>/</u>	57. 12 EP*	<u>✓</u>	<u>/</u>
48. West RHR*	<u>✓</u>	<u>/</u>			

* Data to be taken by Control Room operator.

++ no power to chart



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0530

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>1.1E-11</u> AMPS
2. Cont. H ⁻ Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	*	<u>90</u> %	7. Containment Sump Level	* <u>9</u> %
4. Source Range	*	<u>80</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM
12. BIT Flow	LP1*	<u>0</u> GPM	LP2*	<u>0</u> GPM
13. Accum Pressure	LP1*	<u>640</u> GPM	LP2*	<u>8</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>691</u> PSIG	22. PRT Level	<u>82</u> %
17. Charging Flow	<u>250</u> GPM	23. PRT Pressure	<u>3.3</u> PSIG
18. PZR Liquid Temp.	<u>400</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>490</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>32.9</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>112.5</u> °F	27. Saturation Margin	<u>139</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>++</u> °F	<u>365</u> °F	<u>365</u> °F	<u>++</u> °F
29. Wide Range T Cold	<u>++</u> °F	<u>340</u> °F	<u>340</u> °F	<u>++</u> °F
30. S/G Pressure	<u>75</u> PSIG	<u>75</u> PSIG	<u>75</u> PSIG	<u>240</u> PSIG
31. S/G N.R. Level	<u>40.9</u> %	<u>40.9</u> %	<u>40.9</u> %	<u>100</u> %
32. S/G W.R. Level	<u>69</u> %	<u>69</u> %	<u>69</u> %	<u>89</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>17</u>	<u>17</u>	<u>17</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>75</u> %	* <u>22.5</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	<u>✓</u>	<u>/</u>	49. East CCP*	<u>✓</u>	<u>/</u>
40. West ESW*	<u>✓</u>	<u>/</u>	50. West CCP*	<u>✓</u>	<u>/</u>
41. East CCW*	<u>✓</u>	<u>/</u>	51. TDAFP*	<u>✓</u>	<u>/</u>
42. West CCW*	<u>✓</u>	<u>/</u>	52. EMDAFP*	<u>✓</u>	<u>/</u>
43. East CTS*	<u>✓</u>	<u>/</u>	53. WMDAFP*	<u>✓</u>	<u>/</u>
44. West CTS*	<u>✓</u>	<u>/</u>	54. AB Diesel*	<u>✓</u>	<u>/</u>
45. North SI*	<u>✓</u>	<u>/</u>	55. CD Diesel*	<u>✓</u>	<u>/</u>
46. South SI*	<u>✓</u>	<u>/</u>	56. Normal Res.*	<u>✓</u>	<u>/</u>
47. East RHR*	<u>✓</u>	<u>/</u>	57. 12 EP*	<u>✓</u>	<u>/</u>
48. West RHR*	<u>✓</u>	<u>/</u>			

* Data to be taken by Control Room operator.

++ no power to chart

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0545

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>88</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>80</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM	LP2* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM	LP2* <u>8</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>
	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>600</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>100</u> GPM	23. PRT Pressure	<u>6.2</u> PSIG
18. PZR Liquid Temp.	<u>400</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>446</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>84.3</u> %	26. Letdown Flow	<u>79</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>150.3</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>365</u> °F	<u>365</u> °F	<u>365</u> °F	<u>365</u> °F
29. Wide Range T Cold	<u>340</u> °F	<u>340</u> °F	<u>340</u> °F	<u>360</u> °F
30. S/G Pressure	<u>90</u> PSIG	<u>90</u> PSIG	<u>90</u> PSIG	<u>200</u> PSIG
31. S/G N.R. Level	<u>45.1</u> %	<u>45.1</u> %	<u>45.1</u> %	<u>100</u> %
32. S/G W.R. Level	<u>68.5</u> %	<u>68.5</u> %	<u>68.5</u> %	<u>91.7</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>17</u>	<u>17</u>	<u>17</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>73</u> %	* <u>21.9</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	<u>/</u> /	49. East CCP*	<u>/</u> /
40. West ESW*	<u>/</u> /	50. West CCP*	<u>/</u> /
41. East CCW*	<u>/</u> /	51. TDAFP*	<u>/</u> /
42. West CCW*	<u>/</u> /	52. EMDAFP*	<u>/</u> /
43. East CTS*	<u>/</u> /	53. WMDAFP*	<u>/</u> /
44. West CTS*	<u>/</u> /	54. AB Diesel*	<u>/</u> /
45. North SI*	<u>/</u> /	55. CD Diesel*	<u>/</u> /
46. South SI*	<u>/</u> /	56. Normal Res.*	<u>/</u> /
47. East RHR*	<u>/</u> /	57. 12 EP*	<u>/</u> /
48. West RHR*	<u>/</u> /		

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0600

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ² Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	*	<u>88</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	*	<u>80</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM
12. BIT Flow	LP1*	<u>0</u> GPM	LP2*	<u>0</u> GPM
13. Accum Pressure	LP1*	<u>640</u> GPM	LP2*	<u>8</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>294</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>82.8</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>410</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>414</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>35.8</u> %	26. Letdown Flow	<u>57</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>137.6</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>365</u> °F	<u>375</u> °F	<u>375</u> °F	<u>365</u> °F
29. Wide Range T Cold	<u>340</u> °F	<u>340</u> °F	<u>340</u> °F	<u>360</u> °F
30. S/G Pressure	<u>110</u> PSIG	<u>110</u> PSIG	<u>110</u> PSIG	<u>240</u> PSIG
31. S/G N.R. Level	<u>45.6</u> %	<u>45.6</u> %	<u>45.6</u> %	<u>100</u> %
32. S/G W.R. Level	<u>70</u> %	<u>70</u> %	<u>70</u> %	<u>90.3</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>8</u>	<u>8</u>	<u>8</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>73</u> %	* <u>21.9</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	✓	/	---	49. East CCP*	✓	/	---
40. West ESW*	✓	/	---	50. West CCP*	✓	/	---
41. East CCW*	✓	/	---	51. TDAFP*	✓	/	---
42. West CCW*	✓	/	---	52. EMDAFP*	✓	/	---
43. East CTS*	✓	/	---	53. WMDAFP*	✓	/	---
44. West CTS*	✓	/	---	54. AB Diesel*	✓	/	---
45. North SI*	✓	/	---	55. CD Diesel*	✓	/	---
46. South SI*	✓	/	---	56. Normal Res.*	---	/	✓
47. East RHR*	✓	/	---	57. 12 EP*	---	/	✓
48. West RHR*	✓	/	---				

* Data to be taken by Control Room operator.



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TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0615

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ² Concentration	*	<u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	*	<u>87</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	*	<u>75</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>249</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>315</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>415</u> °F	24. PZR Cycling Htrs. *	<u>ON</u> / <u>OFF</u>
19. PZR Steam Temp.	<u>404</u> °F	25. PZR Backup Htrs. *	<u>ON</u> / <u>OFF</u>
20. PZR Level -->	<u>36.6</u> %	26. Letdown Flow	<u>0</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>88.2</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
23. Wide Range T Hot	<u>360</u> °F	<u>355</u> °F	<u>355</u> °F	<u>360</u> °F
29. Wide Range T Cold	<u>340</u> °F	<u>340</u> °F	<u>340</u> °F	<u>360</u> °F
30. S/G Pressure	<u>100</u> PSIG	<u>100</u> PSIG	<u>100</u> PSIG	<u>240</u> PSIG
31. S/G N.R. Level	<u>45</u> %	<u>45</u> %	<u>45</u> %	<u>100</u> %
32. S/G W.R. Level	<u>70</u> %	<u>70</u> %	<u>70</u> %	<u>82.8</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow(pph X 10 ³)*	<u>19</u>	<u>19</u>	<u>19</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>72</u> %	* <u>21.6</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	✓	/	—	49. East CCP*	✓	/	—
40. West ESW*	✓	/	—	50. West CCP*	✓	/	—
41. East CCW*	✓	/	—	51. TDAFP*	✓	/	—
42. West CCW*	✓	/	—	52. EMDAFP*	✓	/	—
43. East CTS*	✓	/	—	53. WMDAFP*	✓	/	—
44. West CTS*	✓	/	—	54. AB Diesel*	✓	/	—
45. North SI*	✓	/	—	55. CD Diesel*	✓	/	—
46. South SI*	✓	/	—	56. Normal Res.*	✓	/	—
47. East RHR*	✓	/	—	57. 12 EP*	✓	/	—
48. West RHR*	✓	/	—				

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2

Date 4-3-90 Time 0630

Data Taken By _____

Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	*	<u>109</u>	°F	5. Intermediate Range	<u>1.0E-11</u>	AMPS
2. Cont. H ⁺ Concentration	*	<u>0</u>	%	6. Containment Pressure	<u>0.57</u>	PSIG
3. RWST Level	*	<u>87</u>	%	7. Containment Sump Level*	<u>2</u>	%
4. Source Range	*	<u>70</u>	CPM	8. Containment Level	* <u>0</u>	%

9. CTS Pumps	East*	ON / <u>OFF</u>	West*	ON / <u>OFF</u>				
10. RHR Spray Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM				
11. SI Flow	North*	<u>0</u> GPM	South*	<u>0</u> GPM				
12. BIT Flow	LP1*	<u>0</u> GPM	LP2*	<u>0</u> GPM	LP3*	<u>0</u> GPM	LP4*	<u>0</u> GPM
13. Accum Pressure	LP1*	<u>640</u> GPM	LP2*	<u>8</u> GPM	LP3*	<u>640</u> GPM	LP4*	<u>8</u> GPM
14. RHR Injection Flow	East*	<u>0</u> GPM	West*	<u>0</u> GPM				
15. RCP Status	*LP1 ON / <u>OFF</u>	*LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u>	*LP4 ON / <u>OFF</u>				

16. RCS Pressure -->	<u>221</u>	PSIG	22. PRT Level	<u>83</u>	%
17. Charging Flow	<u>190</u>	GPM	23. PRT Pressure	<u>5.4</u>	PSIG
18. PZR Liquid Temp.	<u>360</u>	°F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>	
19. PZR Steam Temp.	<u>392</u>	°F	25. PZR Backup Htrs.	*ON / <u>OFF</u>	
20. PZR Level -->	<u>62</u>	%	26. Letdown Flow	<u>4</u>	GPM
21. PRT Temp.	<u>115.8</u>	°F	27. Saturation Margin	<u>52.4</u>	°F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>360</u> °F	<u>340</u> °F	<u>340</u> °F	<u>340</u> °F
29. Wide Range T Cold	<u>330</u> °F	<u>330</u> °F	<u>330</u> °F	<u>330</u> °F
30. S/G Pressure	<u>90</u> PSIG	<u>90</u> PSIG	<u>90</u> PSIG	<u>220</u> PSIG
31. S/G N.R. Level	<u>38</u> %	<u>38</u> %	<u>38</u> %	<u>100</u> %
32. S/G W.R. Level	<u>69.6</u> %	<u>69.6</u> %	<u>69.6</u> %	<u>89.1</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>28</u>	<u>28</u>	<u>28</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	/	UNAVAILABLE		AVAILABLE	/	UNAVAILABLE
39. East ESW*	✓	/	---	49. East CCP*	✓	/	---
40. West ESW*	✓	/	---	50. West CCP*	✓	/	---
41. East CCW*	✓	/	---	51. TDAFP*	✓	/	---
42. West CCW*	✓	/	---	52. EMDAFP*	✓	/	---
43. East CTS*	✓	/	---	53. WMDAFP*	✓	/	---
44. West CTS*	✓	/	---	54. AB Diesel*	✓	/	---
45. North SI*	✓	/	---	55. CD Diesel*	✓	/	---
46. South SI*	✓	/	---	56. Normal Res.*	✓	/	---
47. East RHR*	✓	/	---	57. 12 EP*	✓	/	---
48. West RHR*	✓	/	---				

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0645

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u> *LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>	

16. RCS Pressure -->	<u>200</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>73.2</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>360</u> °F	24. PZR Cycling Htrs. *	ON / <u>OFF</u>
19. PZR Steam Temp.	<u>384</u> °F	25. PZR Backup Htrs. *	ON / <u>OFF</u>
20. PZR Level -->	<u>55.6</u> %	26. Letdown Flow	<u>77</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>56.5</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>350</u> °F	<u>350</u> °F	<u>350</u> °F	<u>350</u> °F
29. Wide Range T Cold	<u>300</u> °F	<u>300</u> °F	<u>300</u> °F	<u>330</u> °F
30. S/G Pressure	<u>90</u> PSIG	<u>90</u> PSIG	<u>90</u> PSIG	<u>140</u> PSIG
31. S/G N.R. Level	<u>48</u> %	<u>48</u> %	<u>48</u> %	<u>100</u> %
32. S/G W.R. Level	<u>70.6</u> %	<u>70.6</u> %	<u>70.6</u> %	<u>88.3</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>20</u>	<u>18</u>	<u>24</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	<u>✓</u> / <u>---</u>	49. East CCP*	<u>✓</u> / <u>---</u>
40. West ESW*	<u>✓</u> / <u>---</u>	50. West CCP*	<u>✓</u> / <u>---</u>
41. East CCW*	<u>✓</u> / <u>---</u>	51. TDAFP*	<u>✓</u> / <u>---</u>
42. West CCW*	<u>✓</u> / <u>---</u>	52. EMDAFP*	<u>✓</u> / <u>---</u>
43. East CTS*	<u>✓</u> / <u>---</u>	53. WMDAFP*	<u>✓</u> / <u>---</u>
44. West CTS*	<u>✓</u> / <u>---</u>	54. AB Diesel*	<u>✓</u> / <u>---</u>
45. North SI*	<u>✓</u> / <u>---</u>	55. CD Diesel*	<u>✓</u> / <u>---</u>
46. South SI*	<u>✓</u> / <u>---</u>	56. Normal Res.*	<u>✓</u> / <u>---</u>
47. East RHR*	<u>✓</u> / <u>---</u>	57. 12 EP*	<u>✓</u> / <u>---</u>
48. West RHR*	<u>✓</u> / <u>---</u>		

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0700

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>182</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>150</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>360</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>378</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>37.8</u> %	26. Letdown Flow	<u>68</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>62.1</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>255</u> °F	<u>255</u> °F	<u>255</u> °F	<u>255</u> °F
29. Wide Range T Cold	<u>250</u> °F	<u>250</u> °F	<u>250</u> °F	<u>250</u> °F
30. S/G Pressure	<u>50</u> PSIG	<u>50</u> PSIG	<u>50</u> PSIG	<u>120</u> PSIG
31. S/G N.R. Level	<u>46</u> %	<u>46</u> %	<u>46</u> %	<u>100</u> %
32. S/G W.R. Level	<u>70.8</u> %	<u>70.8</u> %	<u>70.8</u> %	<u>88.8</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>20</u>	<u>20</u>	<u>24</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	✓	/	49. East CCP*	✓	/
40. West ESW*	✓	/	50. West CCP*	✓	/
41. East CCW*	✓	/	51. TDAFP*	✓	/
42. West CCW*	✓	/	52. EMDAFP*	✓	/
43. East CTS*	✓	/	53. WMDAFP*	✓	/
44. West CTS*	✓	/	54. AB Diesel*	✓	/
45. North SI*	✓	/	55. CD Diesel*	✓	/
46. South SI*	✓	/	56. Normal Res.*	✓	/
47. East RHR*	✓	/	57. 12 EP*	✓	/
48. West RHR*	✓	/			

* Data to be taken by Control Room operator.

TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0715

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>180</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>150</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>360</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>372</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>30.1</u> %	26. Letdown Flow	<u>61</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>64.7</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>225</u> °F	<u>225</u> °F	<u>225</u> °F	<u>225</u> °F
29. Wide Range T Cold	<u>225</u> °F	<u>225</u> °F	<u>225</u> °F	<u>225</u> °F
30. S/G Pressure	<u>40</u> PSIG	<u>40</u> PSIG	<u>40</u> PSIG	<u>110</u> PSIG
31. S/G N.R. Level	<u>40</u> %	<u>40</u> %	<u>40</u> %	<u>100</u> %
32. S/G W.R. Level	<u>71.2</u> %	<u>71.2</u> %	<u>71.2</u> %	<u>90.3</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)	<u>30</u>	<u>29</u>	<u>34</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	✓ / —	49. East CCP*	✓ / —
40. West ESW*	✓ / —	50. West CCP*	✓ / —
41. East CCW*	✓ / —	51. TDAFP*	✓ / —
42. West CCW*	✓ / —	52. EMDAFP*	✓ / —
43. East CTS*	✓ / —	53. WMDAFP*	✓ / —
44. West CTS*	✓ / —	54. AB Diesel*	✓ / —
45. North SI*	✓ / —	55. CD Diesel*	✓ / —
46. South SI*	✓ / —	56. Normal Res.*	✓ / —
47. East RHR*	✓ / —	57. 12 EP*	— / ✓
48. West RHR*	✓ / —		

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0730

Data Taken By _____

Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ² Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %
9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>	
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM	
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM	
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM	
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM	
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM	
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>	
16. RCS Pressure -->	<u>180</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>155</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>360</u> °F	24. PZR Cycling Htrs. *	ON / <u>OFF</u>
19. PZR Steam Temp.	<u>366</u> °F	25. PZR Backup Htrs. *	ON / <u>OFF</u>
20. PZR Level -->	<u>37.4</u> %	26. Letdown Flow	<u>57</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>98.3</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>200</u> °F	<u>200</u> °F	<u>200</u> °F	<u>200</u> °F
29. Wide Range T Cold	<u>200</u> °F	<u>200</u> °F	<u>200</u> °F	<u>200</u> °F
30. S/G Pressure	<u>15</u> PSIG	<u>15</u> PSIG	<u>15</u> PSIG	<u>110</u> PSIG
31. S/G N.R. Level	<u>48</u> %	<u>48</u> %	<u>48</u> %	<u>100</u> %
32. S/G W.R. Level	<u>72</u> %	<u>72</u> %	<u>72</u> %	<u>90.5</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>20</u>	<u>20</u>	<u>20</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>40</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	✓	/	49. East CCP*	✓	/
40. West ESW*	✓	/	50. West CCP*	✓	/
41. East CCW*	✓	/	51. TDAFP*	✓	/
42. West CCW*	✓	/	52. EMDAFP*	✓	/
43. East CTS*	✓	/	53. WMDAFP*	✓	/
44. West CTS*	✓	/	54. AB Diesel*	✓	/
45. North SI*	✓	/	55. CD Diesel*	✓	/
46. South SI*	✓	/	56. Normal Res.*	✓	/
47. East RHR*	✓	/	57. 12 EP*	✓	/
48. West RHR*	✓	/			

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2

Date 4-3-90 Time 0745

Data Taken By _____

Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ² Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level	* <u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>180</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>160</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>320</u> °F	24. PZR Cycling Htrs.	*ON / <u>OFF</u>
19. PZR Steam Temp.	<u>323</u> °F	25. PZR Backup Htrs.	*ON / <u>OFF</u>
20. PZR Level -->	<u>25</u> %	26. Letdown Flow	<u>55</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>141.2</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>190</u> °F	<u>190</u> °F	<u>190</u> °F	<u>190</u> °F
29. Wide Range T Cold	<u>190</u> °F	<u>190</u> °F	<u>190</u> °F	<u>190</u> °F
30. S/G Pressure	<u>0</u> PSIG	<u>0</u> PSIG	<u>0</u> PSIG	<u>100</u> PSIG
31. S/G N.R. Level	<u>48</u> %	<u>48</u> %	<u>48</u> %	<u>100</u> %
32. S/G W.R. Level	<u>72.2</u> %	<u>72.2</u> %	<u>72.2</u> %	<u>90.6</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>25</u>	<u>20</u>	<u>20</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>ATMOS</u> / <u>COND</u>			

EQUIPMENT STATUS

	AVAILABLE	UNAVAILABLE		AVAILABLE	UNAVAILABLE
39. East ESW*	✓	—	49. East CCP*	✓	—
40. West ESW*	✓	—	50. West CCP*	✓	—
41. East CCW*	✓	—	51. TDAFP*	✓	—
42. West CCW*	✓	—	52. EMDAFP*	✓	—
43. East CTS*	✓	—	53. WMDAFP*	✓	—
44. West CTS*	✓	—	54. AB Diesel*	✓	—
45. North SI*	✓	—	55. CD Diesel*	✓	—
46. South SI*	✓	—	56. Normal Res.*	✓	—
47. East RHR*	✓	—	57. 12 EP*	—	✓
48. West RHR*	✓	—			

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0800

Data Taken By _____

Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ⁺ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u>	*LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>

16. RCS Pressure -->	<u>180</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>160</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>360</u> °F	24. PZR Cycling Htrs. *	ON / <u>OFF</u>
19. PZR Steam Temp.	<u>360</u> °F	25. PZR Backup Htrs. *	ON / <u>OFF</u>
20. PZR Level -->	<u>25</u> %	26. Letdown Flow	<u>55</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>167</u> °F

NSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F
29. Wide Range T Cold	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F
30. S/G Pressure	<u>0</u> PSIG	<u>0</u> PSIG	<u>0</u> PSIG	<u>100</u> PSIG
31. S/G N.R. Level	<u>48</u> %	<u>48</u> %	<u>48</u> %	<u>100</u> %
32. S/G W.R. Level	<u>72.5</u> %	<u>72.5</u> %	<u>72.5</u> %	<u>90.7</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ⁰)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>20</u>	<u>20</u>	<u>20</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

	AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE
39. East ESW*	<u>✓</u> / <u>---</u>	49. East CCP*	<u>✓</u> / <u>---</u>
40. West ESW*	<u>✓</u> / <u>---</u>	50. West CCP*	<u>✓</u> / <u>---</u>
41. East CCW*	<u>✓</u> / <u>---</u>	51. TDAFP*	<u>✓</u> / <u>---</u>
42. West CCW*	<u>✓</u> / <u>---</u>	52. EMDAFP*	<u>✓</u> / <u>---</u>
43. East CTS*	<u>✓</u> / <u>---</u>	53. WMDAFP*	<u>✓</u> / <u>---</u>
44. West CTS*	<u>✓</u> / <u>---</u>	54. AB Diesel*	<u>✓</u> / <u>---</u>
45. North SI*	<u>✓</u> / <u>---</u>	55. CD Diesel*	<u>✓</u> / <u>---</u>
46. South SI*	<u>✓</u> / <u>---</u>	56. Normal Res.*	<u>✓</u> / <u>---</u>
47. East RHR*	<u>✓</u> / <u>---</u>	57. 12 EP*	<u>✓</u> / <u>---</u>
48. West RHR*	<u>✓</u> / <u>---</u>		

* Data to be taken by Control Room operator.



TECHNICAL INFORMATION SHEET

Unit No: 2 Date 4-3-90 Time 0815

Data Taken By _____ Data Reviewed By _____

NOTE

When redundant indication exists, record most severe condition.

RCS PARAMETER

1. Containment Temp.	* <u>109</u> °F	5. Intermediate Range	<u>1.0E-11</u> AMPS
2. Cont. H ₂ Concentration	* <u>0</u> %	6. Containment Pressure	<u>0.57</u> PSIG
3. RWST Level	* <u>87</u> %	7. Containment Sump Level*	<u>2</u> %
4. Source Range	* <u>60</u> CPM	8. Containment Level	* <u>0</u> %

9. CTS Pumps	East* ON / <u>OFF</u>	West* ON / <u>OFF</u>
10. RHR Spray Flow	East* <u>0</u> GPM	West* <u>0</u> GPM
11. SI Flow	North* <u>0</u> GPM	South* <u>0</u> GPM
12. BIT Flow	LP1* <u>0</u> GPM LP2* <u>0</u> GPM	LP3* <u>0</u> GPM LP4* <u>0</u> GPM
13. Accum Pressure	LP1* <u>640</u> GPM LP2* <u>8</u> GPM	LP3* <u>640</u> GPM LP4* <u>8</u> GPM
14. RHR Injection Flow	East* <u>1500</u> GPM	West* <u>1500</u> GPM
15. RCP Status	*LP1 ON / <u>OFF</u> *LP2 ON / <u>OFF</u> *LP3 ON / <u>OFF</u> *LP4 ON / <u>OFF</u>	

16. RCS Pressure -->	<u>180</u> PSIG	22. PRT Level	<u>83</u> %
17. Charging Flow	<u>160</u> GPM	23. PRT Pressure	<u>5.4</u> PSIG
18. PZR Liquid Temp.	<u>360</u> °F	24. PZR Cycling Htrs. *	ON / <u>OFF</u>
19. PZR Steam Temp.	<u>360</u> °F	25. PZR Backup Htrs. *	ON / <u>OFF</u>
20. PZR Level -->	<u>25</u> %	26. Letdown Flow	<u>55</u> GPM
21. PRT Temp.	<u>115.8</u> °F	27. Saturation Margin	<u>167</u> °F

VSSS LOOP PARAMETERS

	Loop 1	Loop 2	Loop 3	Loop 4
28. Wide Range T Hot	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F
29. Wide Range T Cold	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F	<u>170</u> °F
30. S/G Pressure	<u>0</u> PSIG	<u>0</u> PSIG	<u>0</u> PSIG	<u>100</u> PSIG
31. S/G N.R. Level	<u>48</u> %	<u>48</u> %	<u>48</u> %	<u>100</u> %
32. S/G W.R. Level	<u>72.5</u> %	<u>72.5</u> %	<u>72.5</u> %	<u>90.7</u> %
33. Steam Flow (pph X 10 ⁶)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
34. Feed Flow (pph X 10 ³)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
35. Aux. Feed Flow (pph X 10 ³)*	<u>20</u>	<u>20</u>	<u>20</u>	<u>0</u>
36. MSIV Status	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>	*OPEN / <u>CLOSE</u>
37. CST Level	* <u>70</u> %	* <u>21</u> Ft.		
38. Steam Dump	<u>*ATMOS</u> / COND			

EQUIPMENT STATUS

AVAILABLE / UNAVAILABLE		AVAILABLE / UNAVAILABLE	
39. East ESW*	<u>✓</u> / <u>—</u>	49. East CCP*	<u>✓</u> / <u>—</u>
40. West ESW*	<u>✓</u> / <u>—</u>	50. West CCP*	<u>✓</u> / <u>—</u>
41. East CCW*	<u>✓</u> / <u>—</u>	51. TDAFP*	<u>✓</u> / <u>—</u>
42. West CCW*	<u>✓</u> / <u>—</u>	52. EMDAFP*	<u>✓</u> / <u>—</u>
43. East CTS*	<u>✓</u> / <u>—</u>	53. WMDAFP*	<u>✓</u> / <u>—</u>
44. West CTS*	<u>✓</u> / <u>—</u>	54. AB Diesel*	<u>✓</u> / <u>—</u>
45. North SI*	<u>✓</u> / <u>—</u>	55. CD Diesel*	<u>✓</u> / <u>—</u>
46. South SI*	<u>✓</u> / <u>—</u>	56. Normal Res.*	<u>✓</u> / <u>—</u>
47. East RHR*	<u>✓</u> / <u>—</u>	57. 12 EP*	<u>✓</u> / <u>—</u>
48. West RHR*	<u>✓</u> / <u>—</u>		

* Data to be taken by Control Room operator.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VII. D. THERMOCOUPLE MAPS

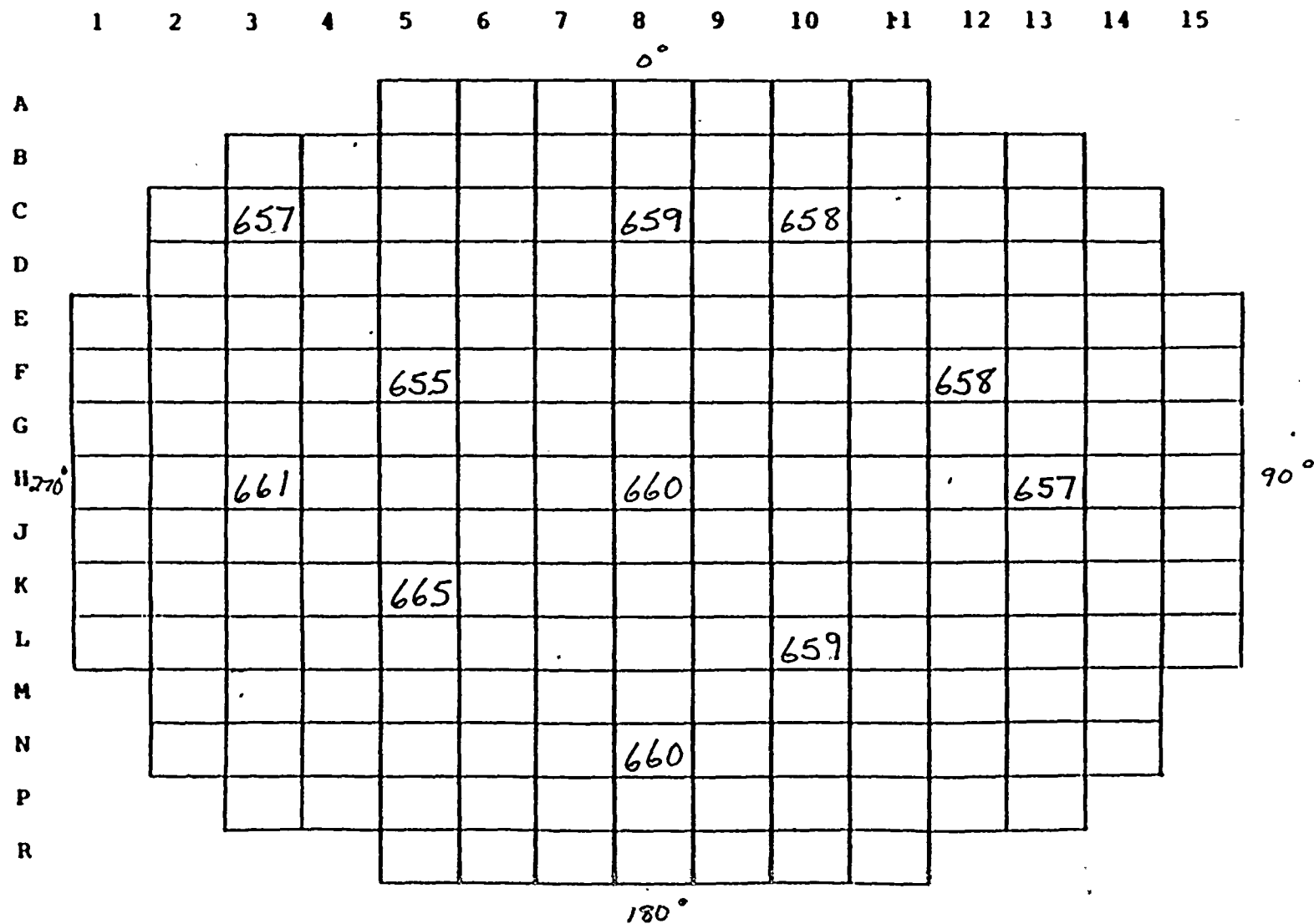


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0100

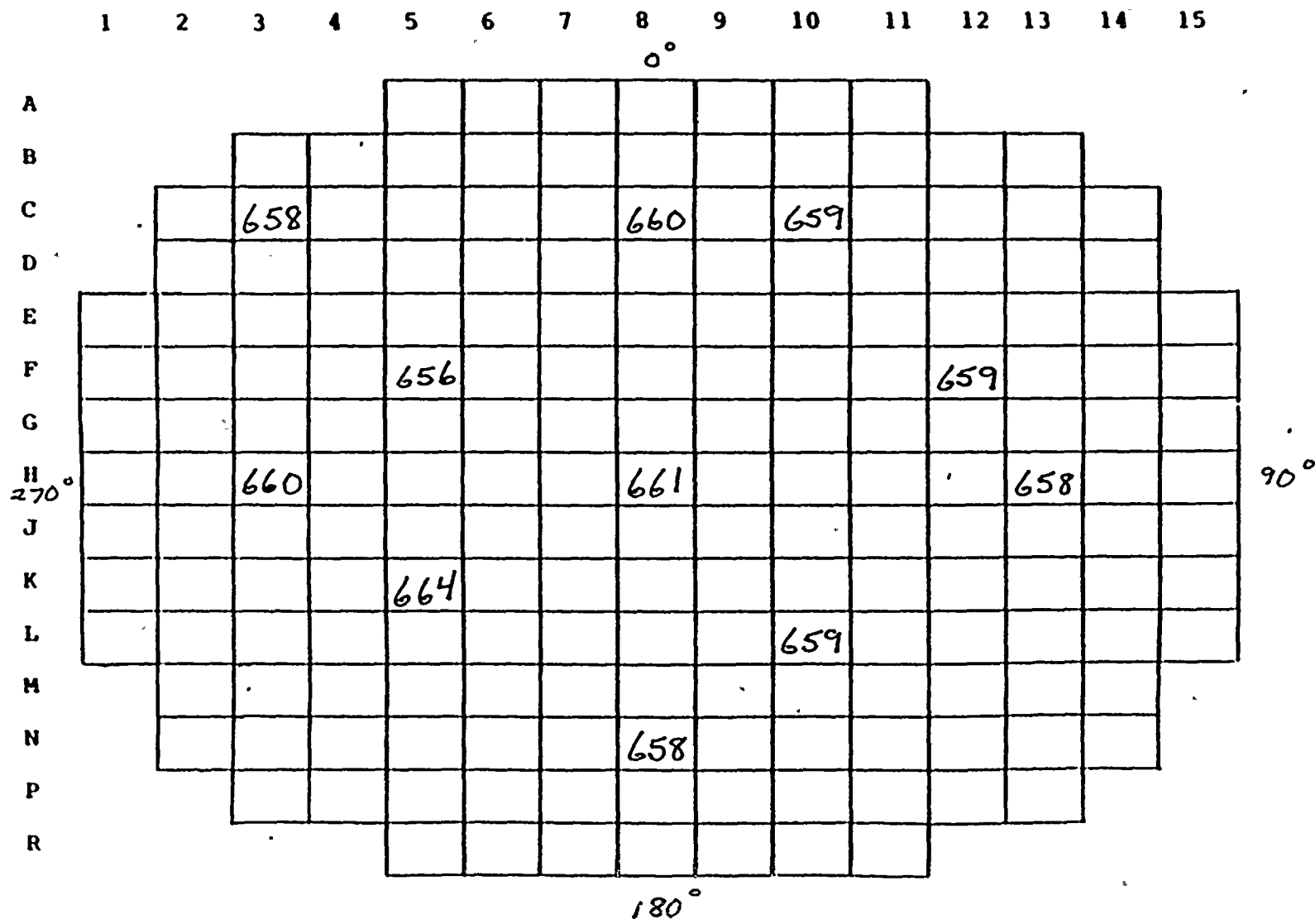


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0115





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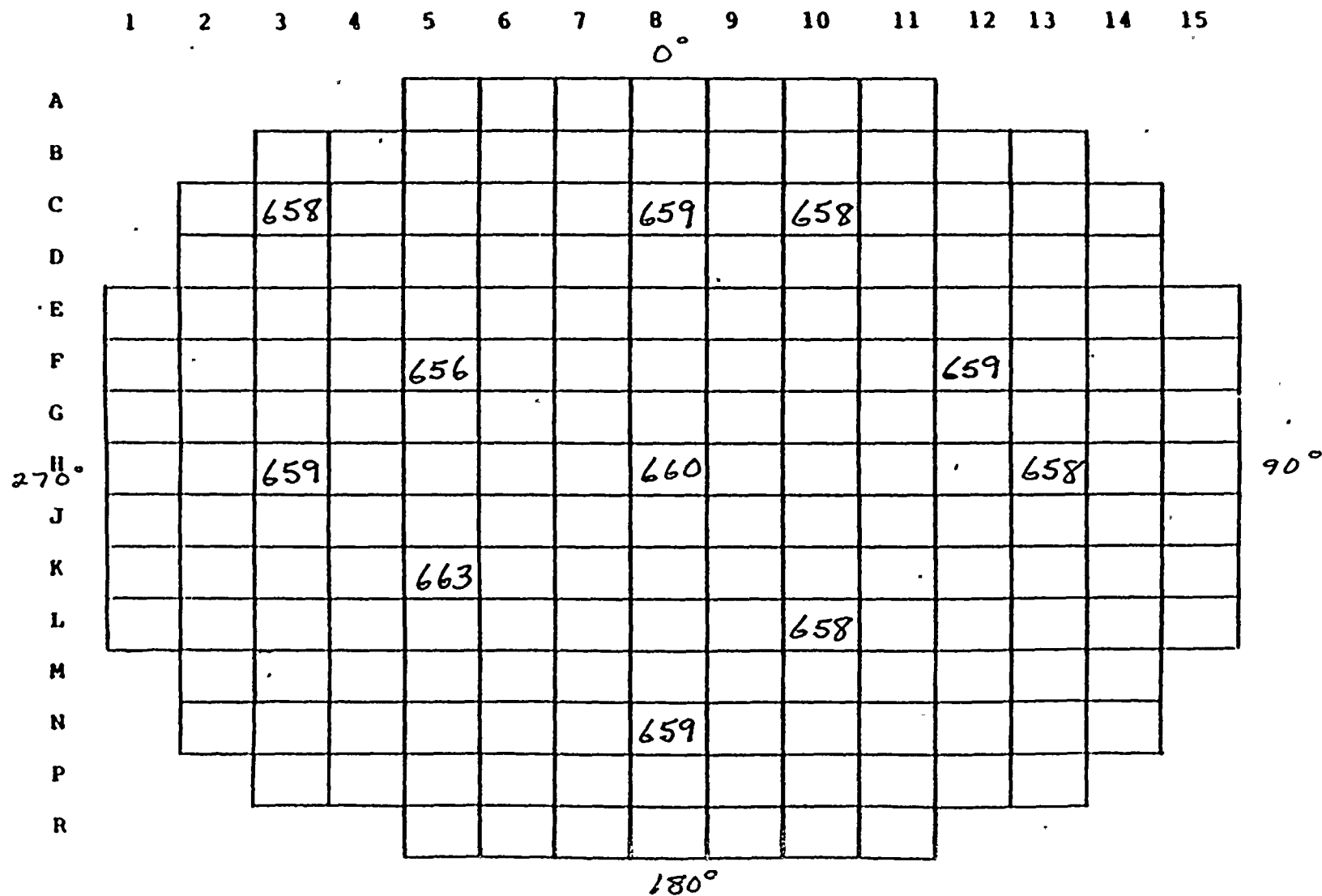


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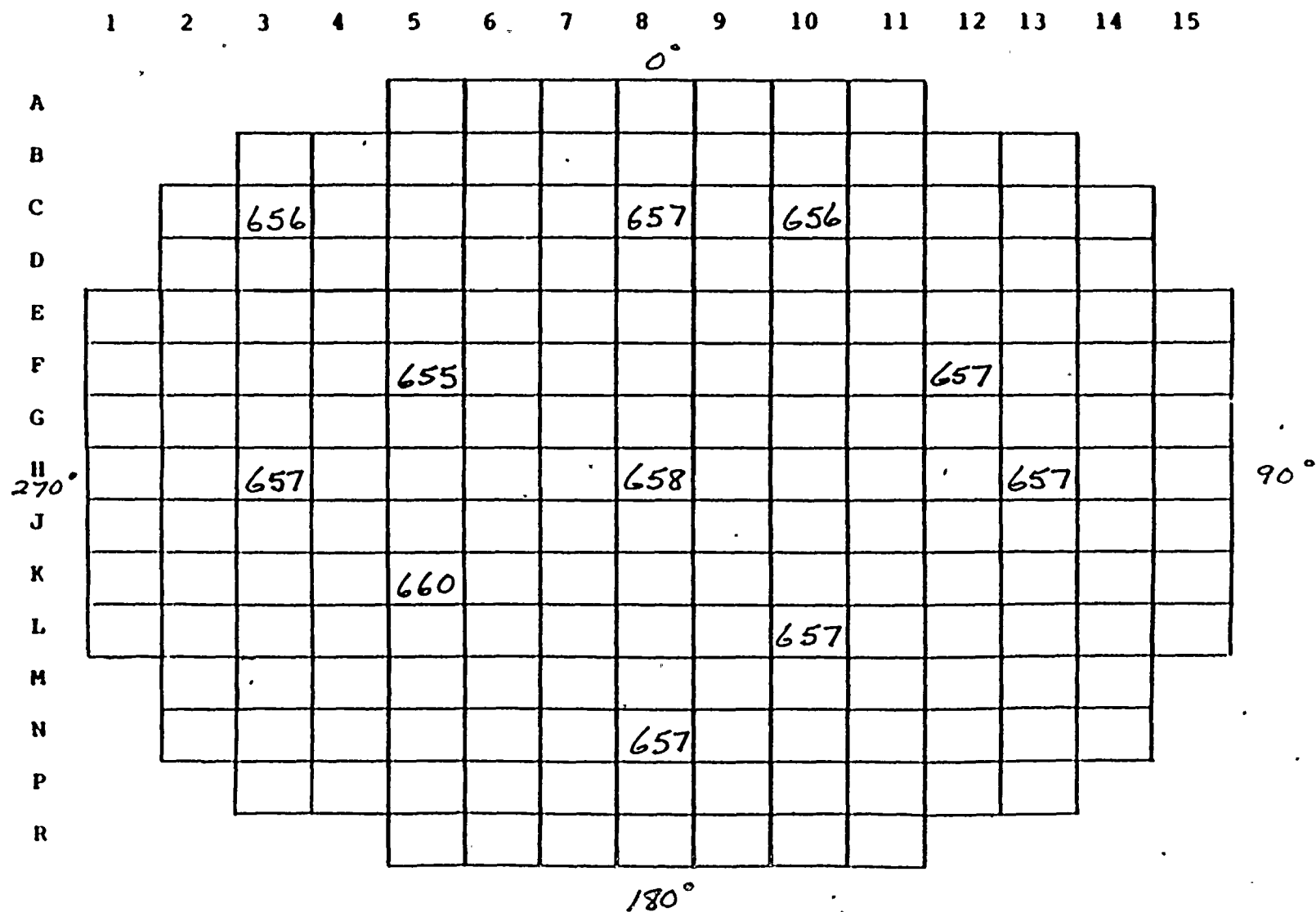
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THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0130





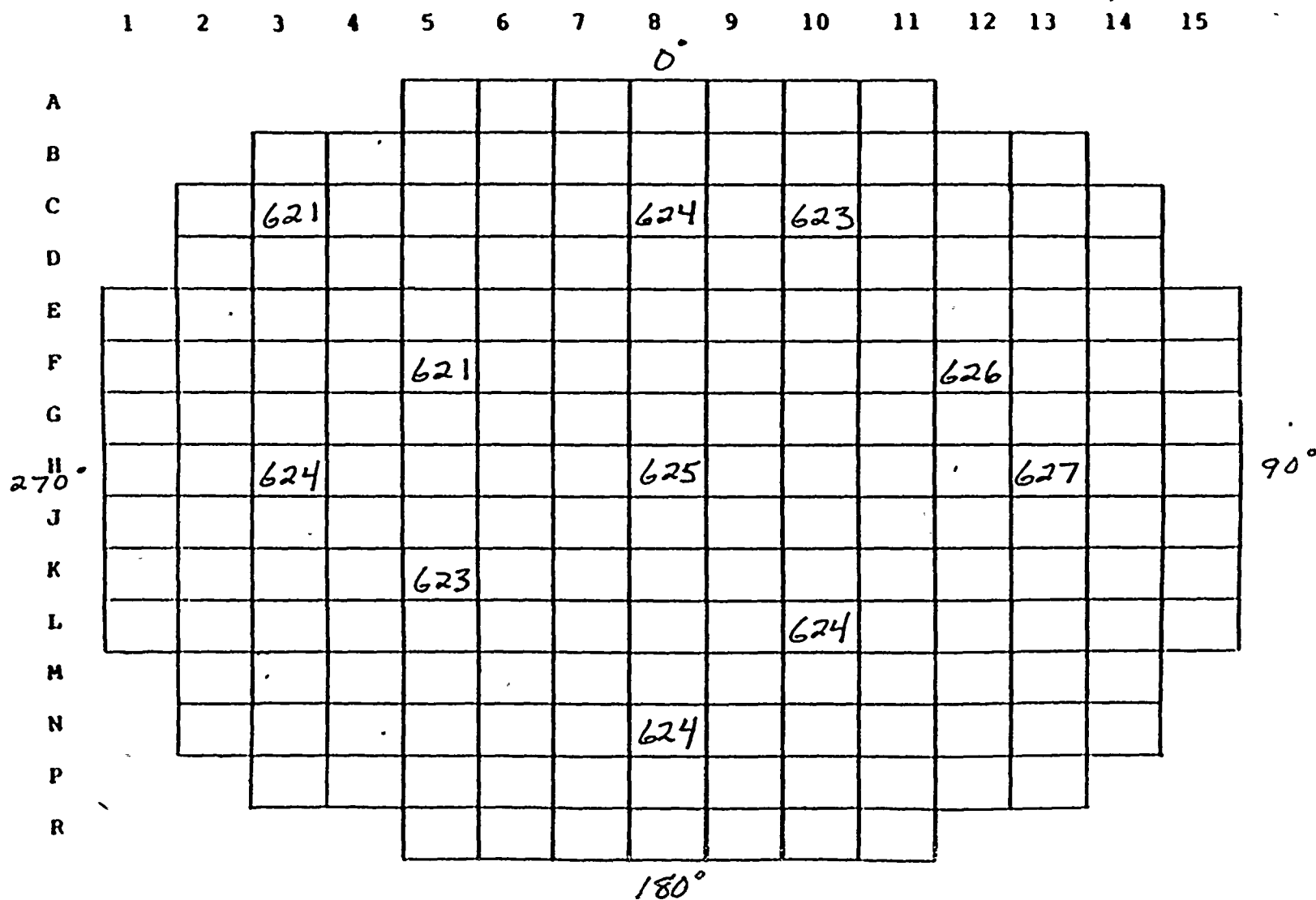
DRILL DATA1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATADRILL DATADate 4/3/90 Time 0145

DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

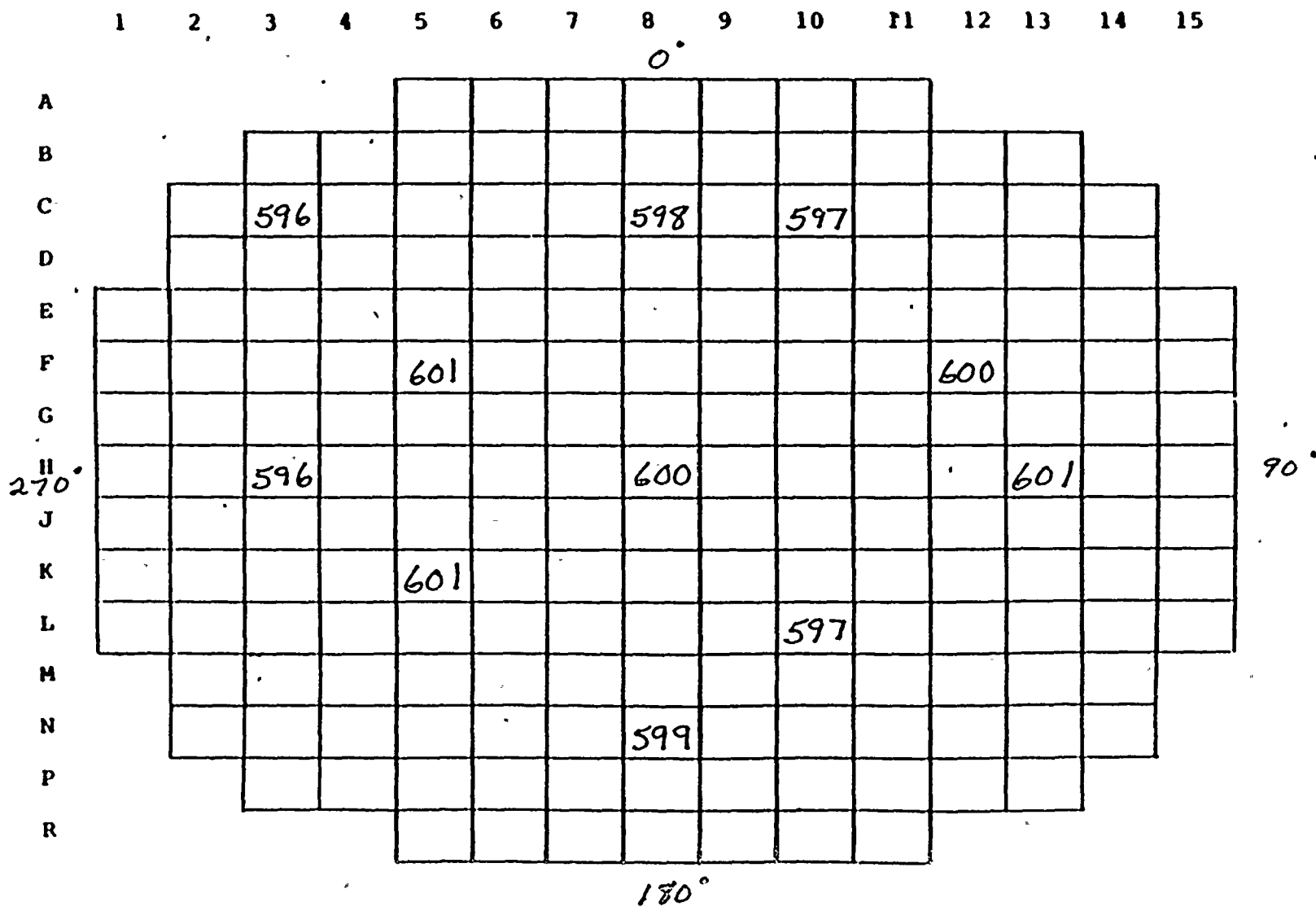
Date 4/3/90 Time 0200





1990 COOK PLANT GRADED EXERCISE
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Date 4/3/90 Time 0215

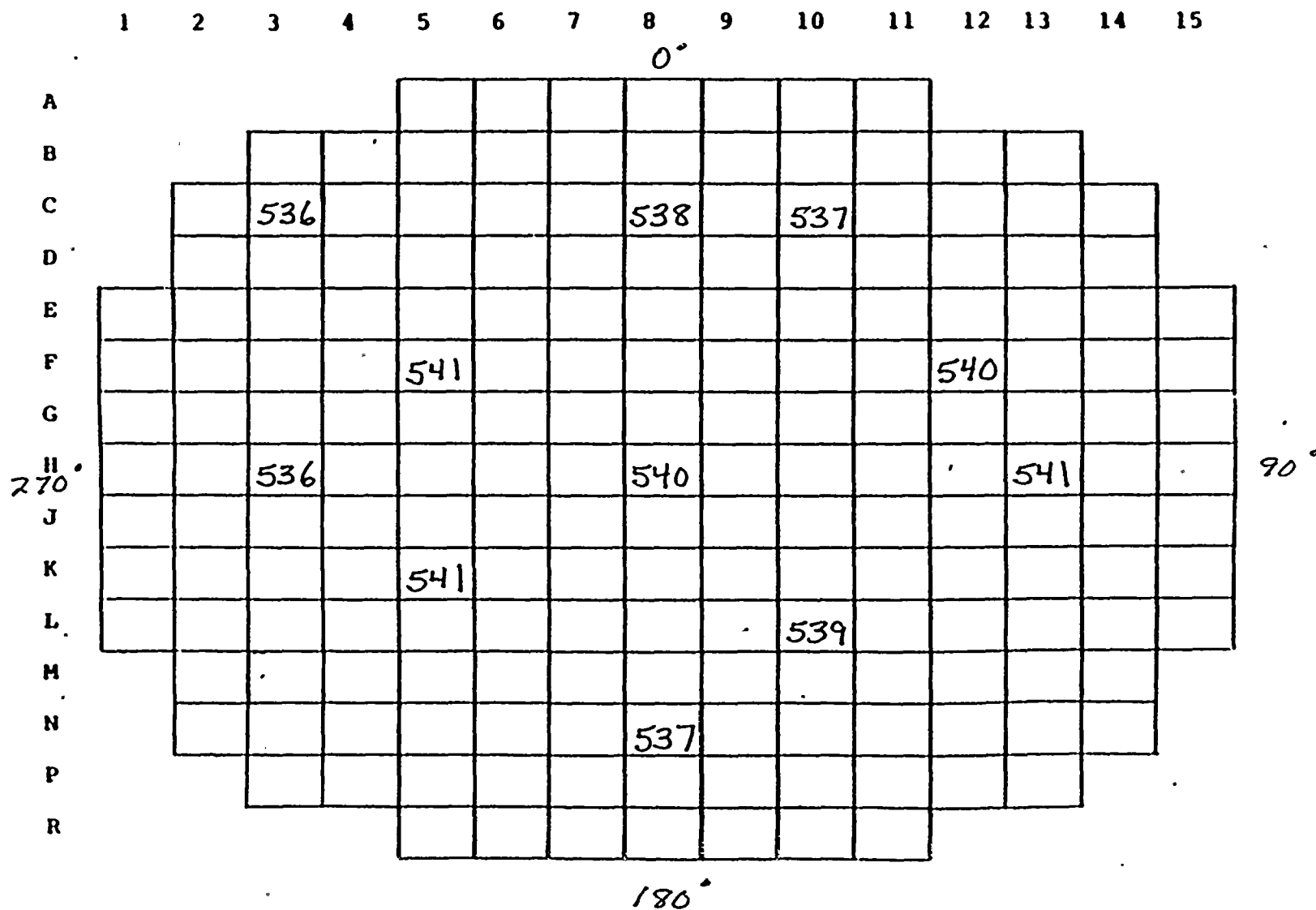


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0230



DRILL DATA

90

 180°



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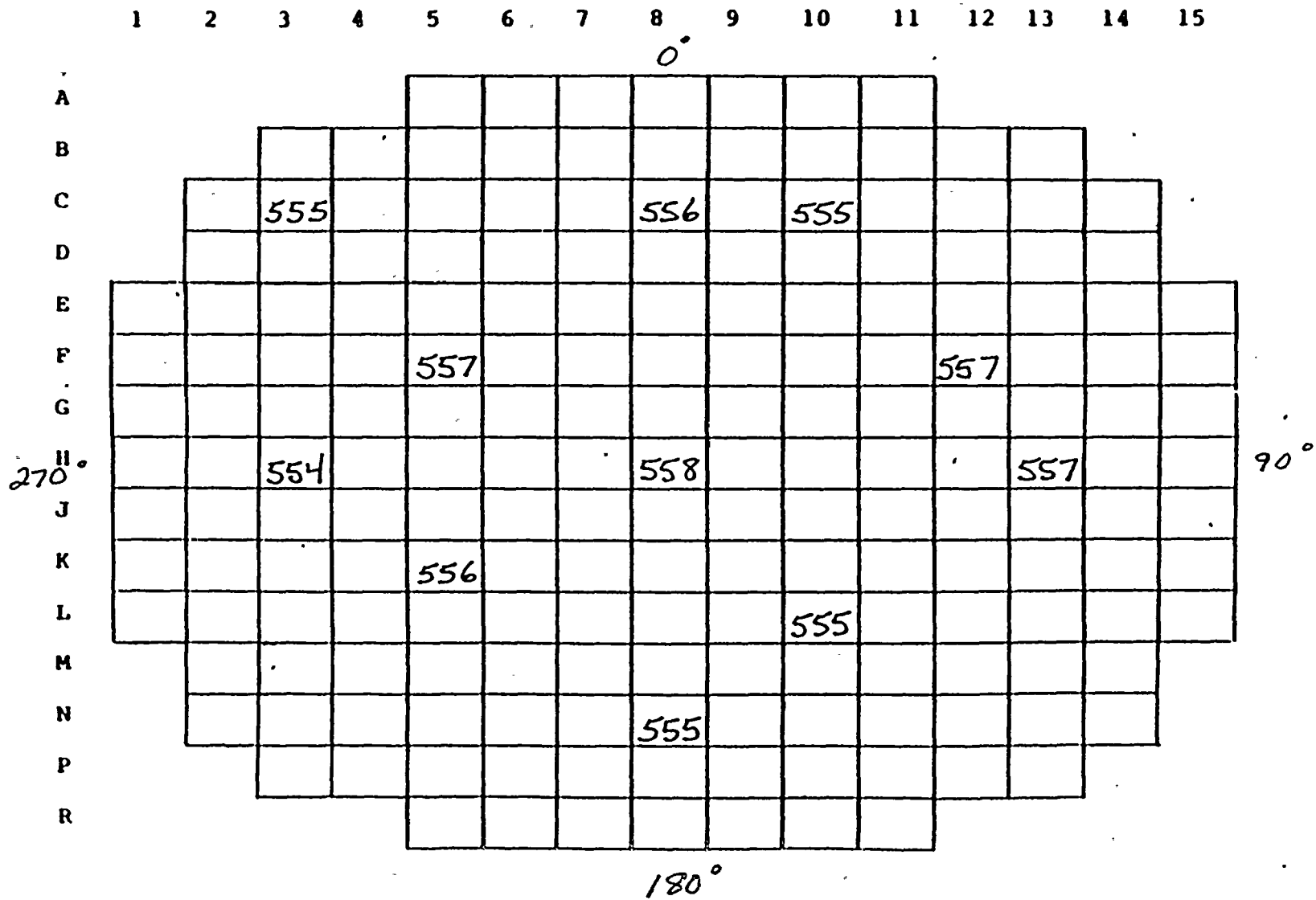


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0300





2

2

1



2

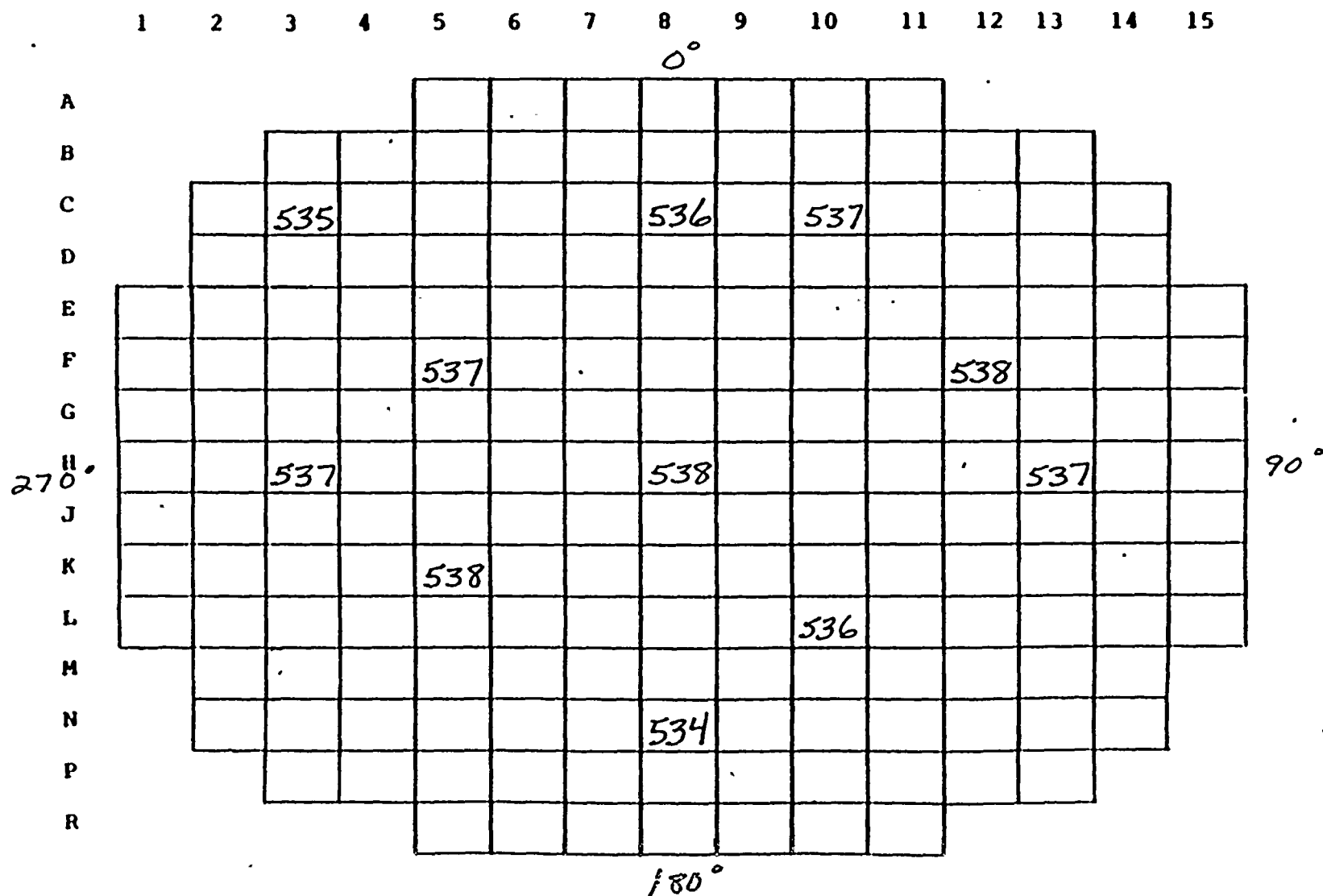
2

2



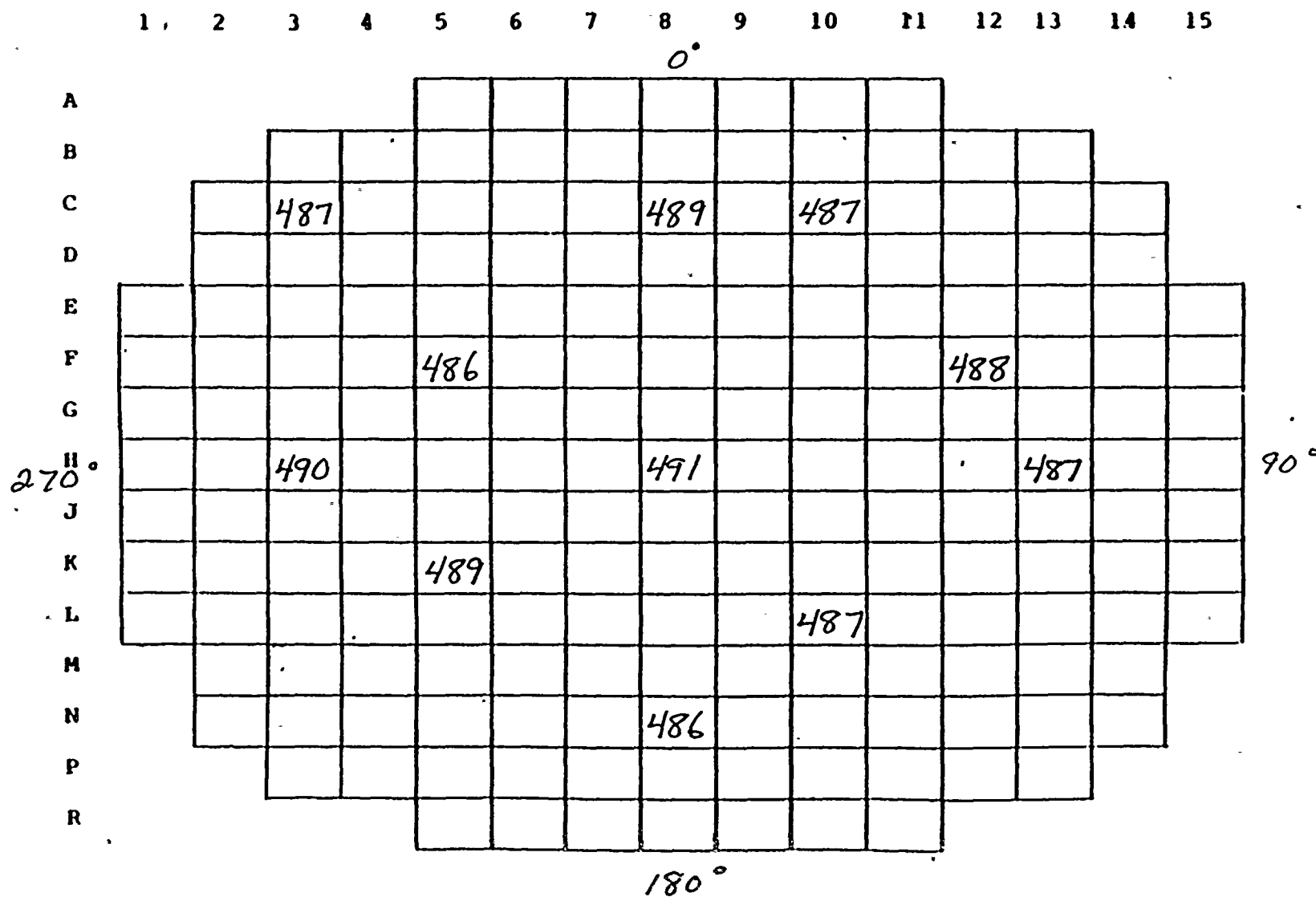
1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

Date 4/3/90 Time 0315



1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

Date 4/3/90 Time 0330





2

2.1

2.1.1



2.1.2

2.1.3

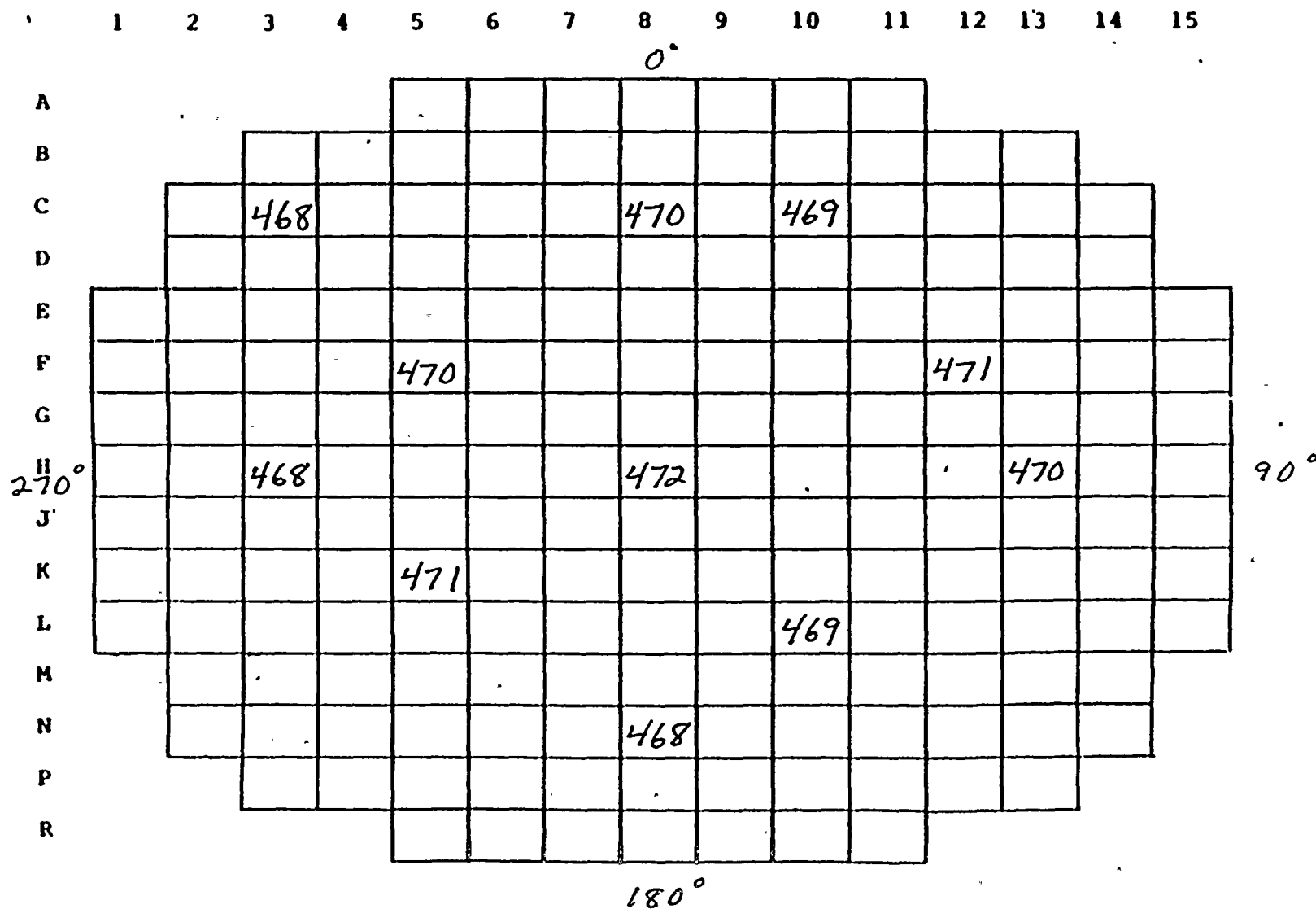


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0345





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3.4.2

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7.

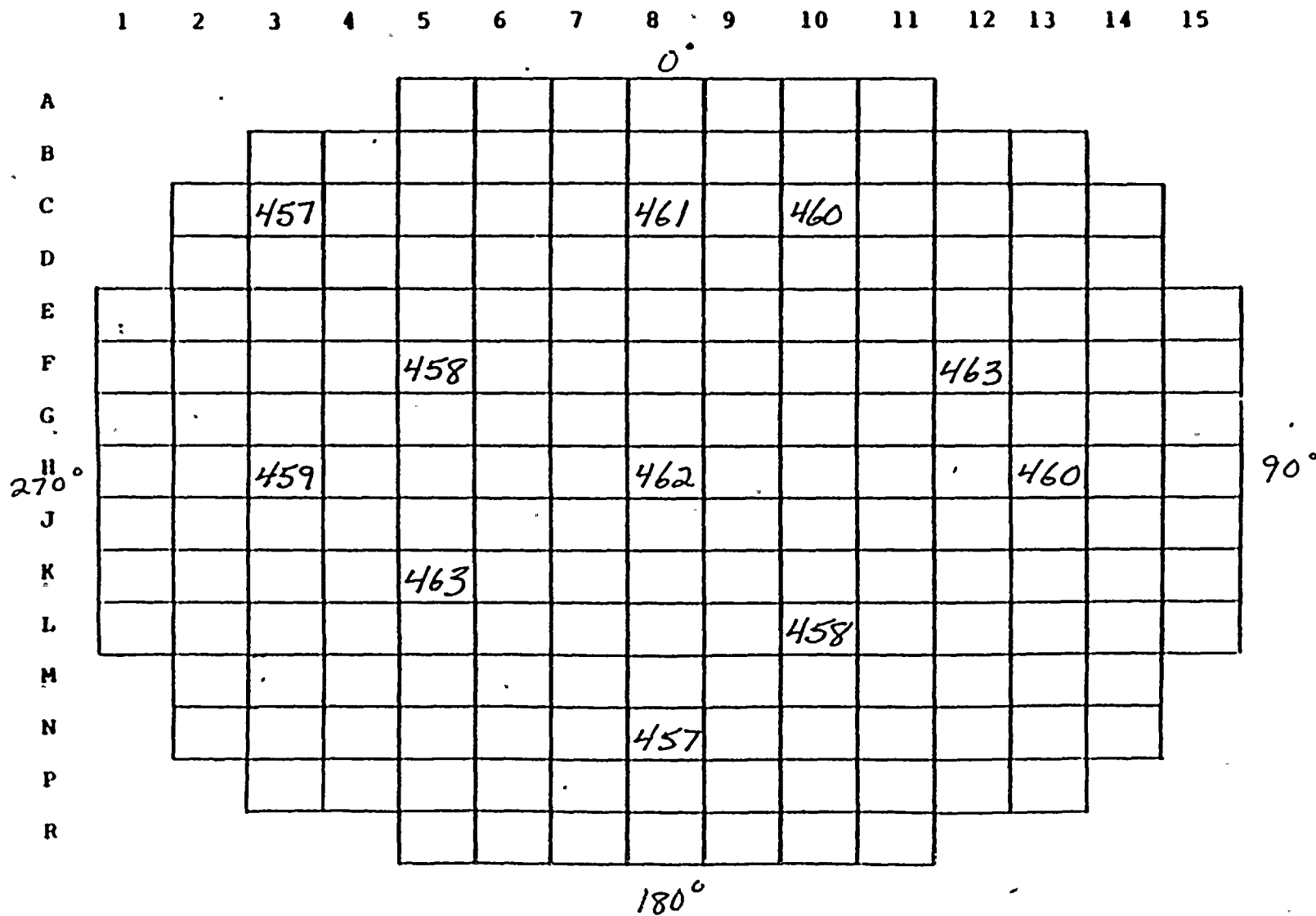


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0400



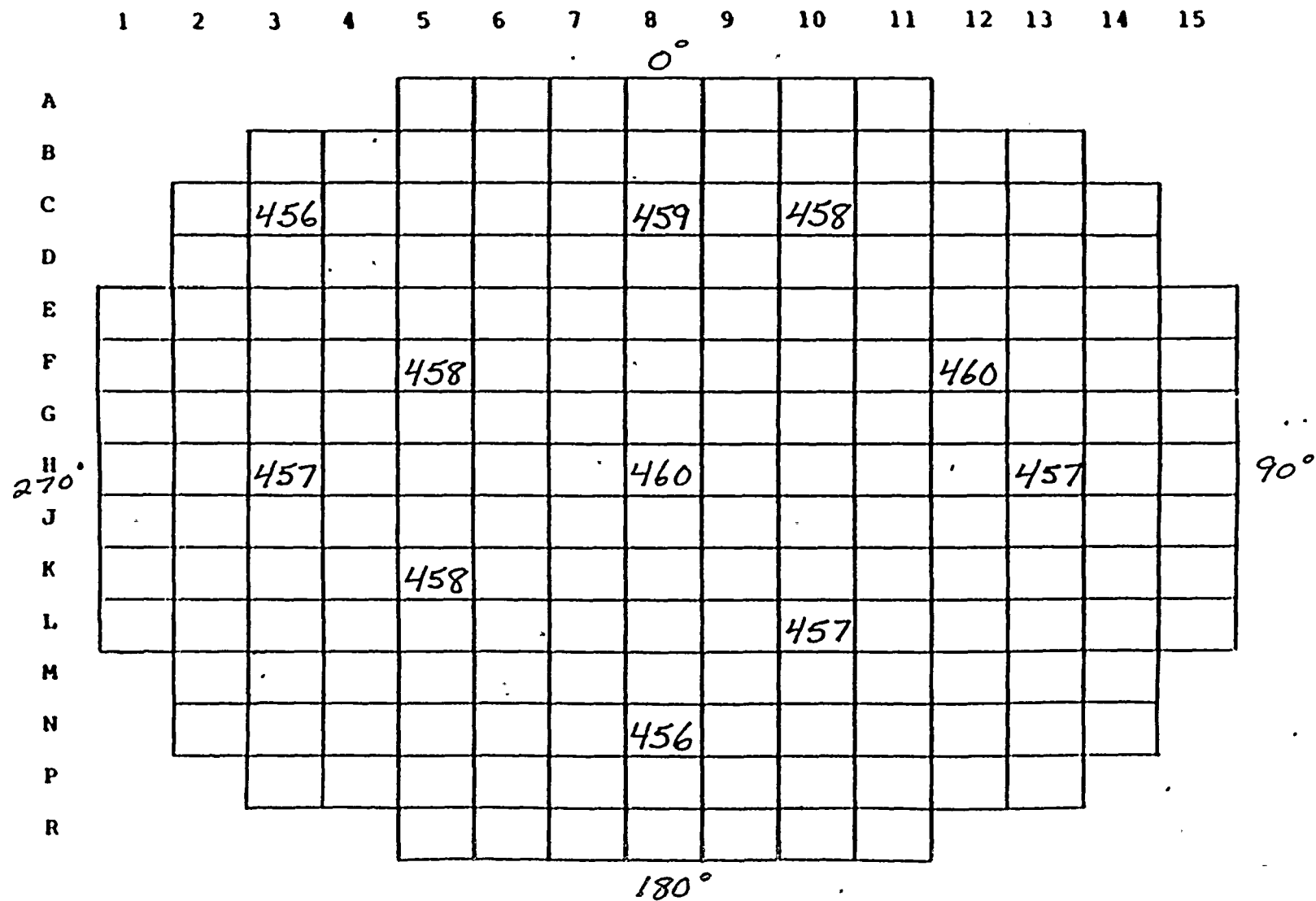


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0415



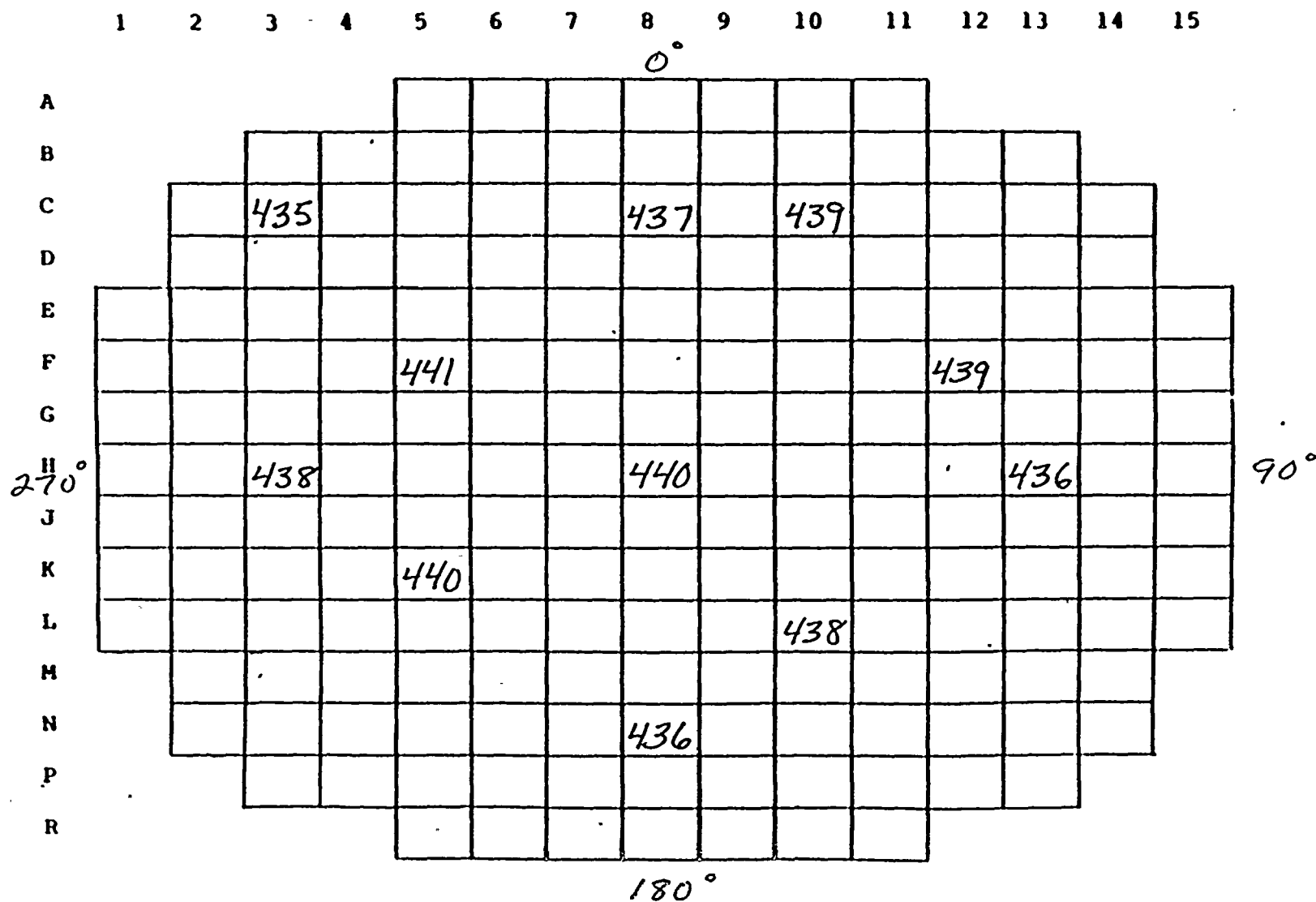


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0430





17

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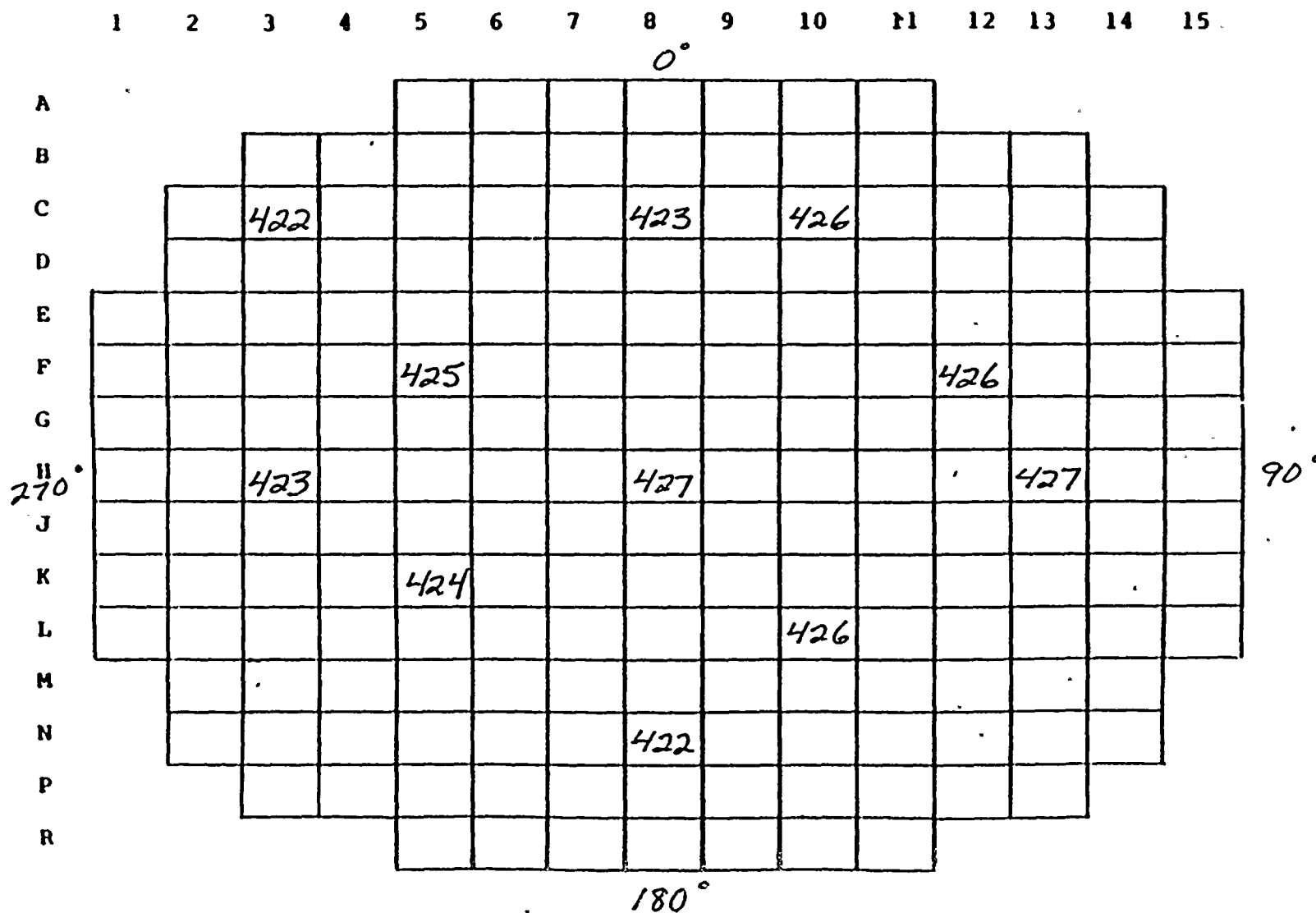


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1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0445



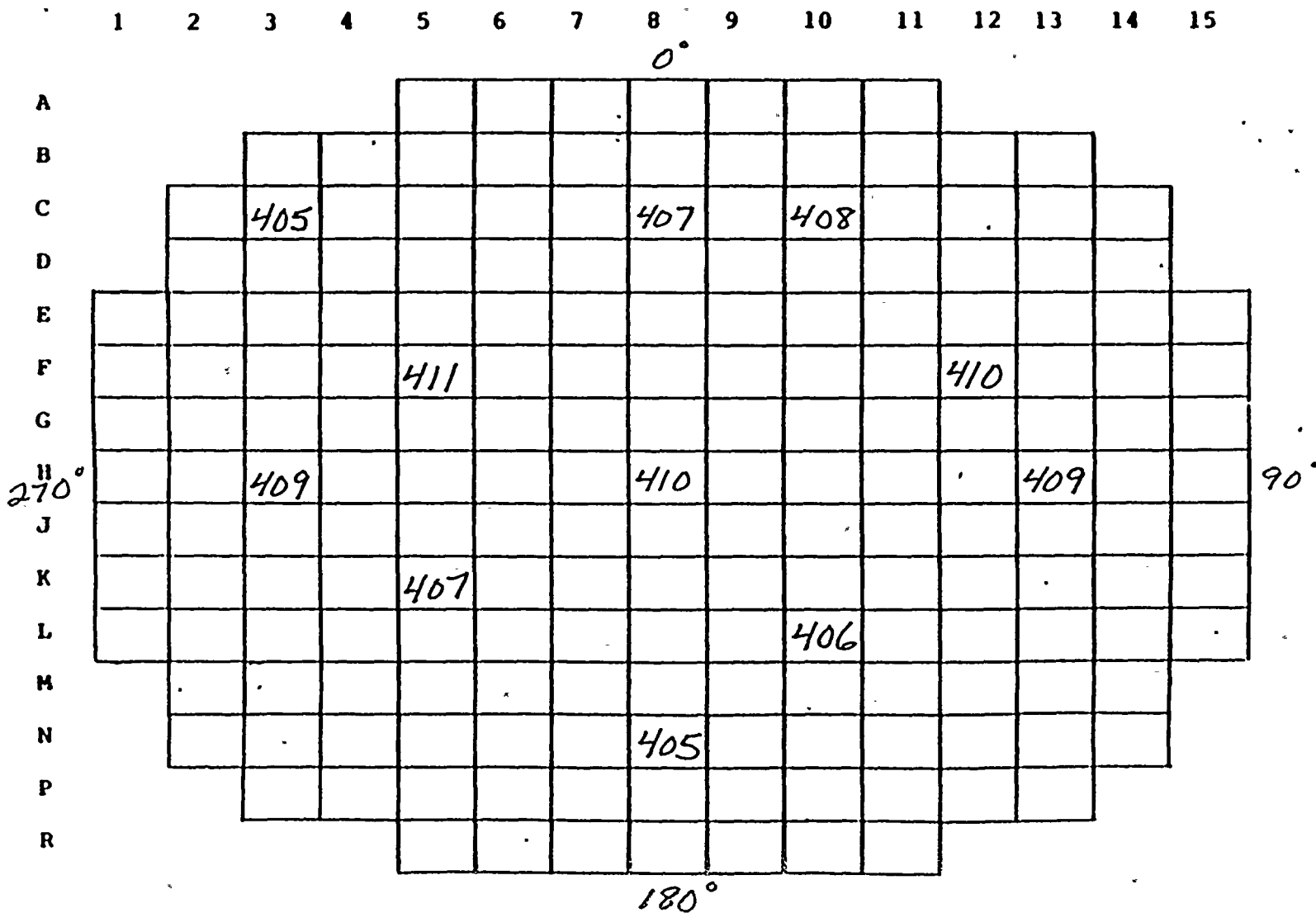


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1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0500



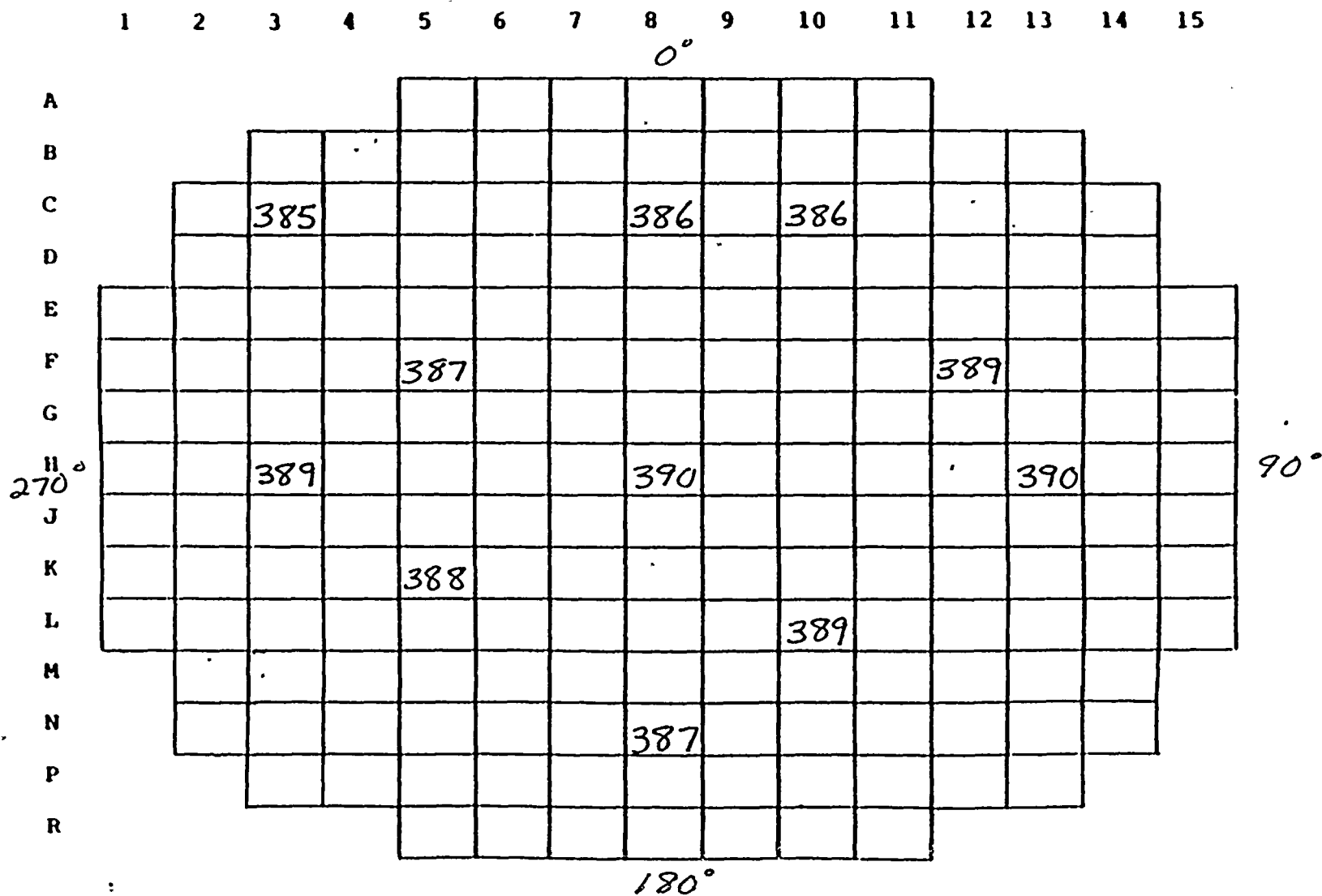


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0515

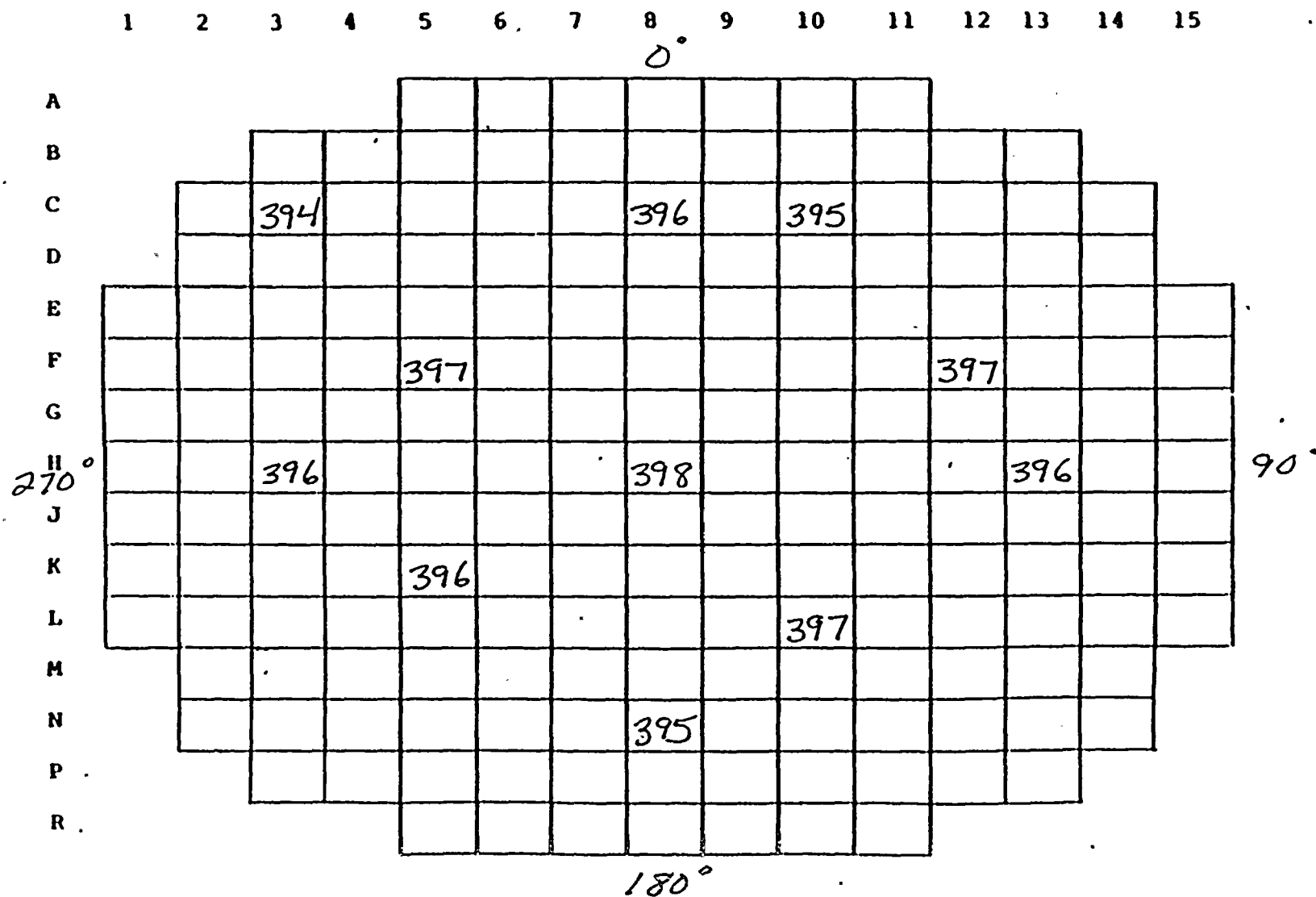


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 · Time 0530



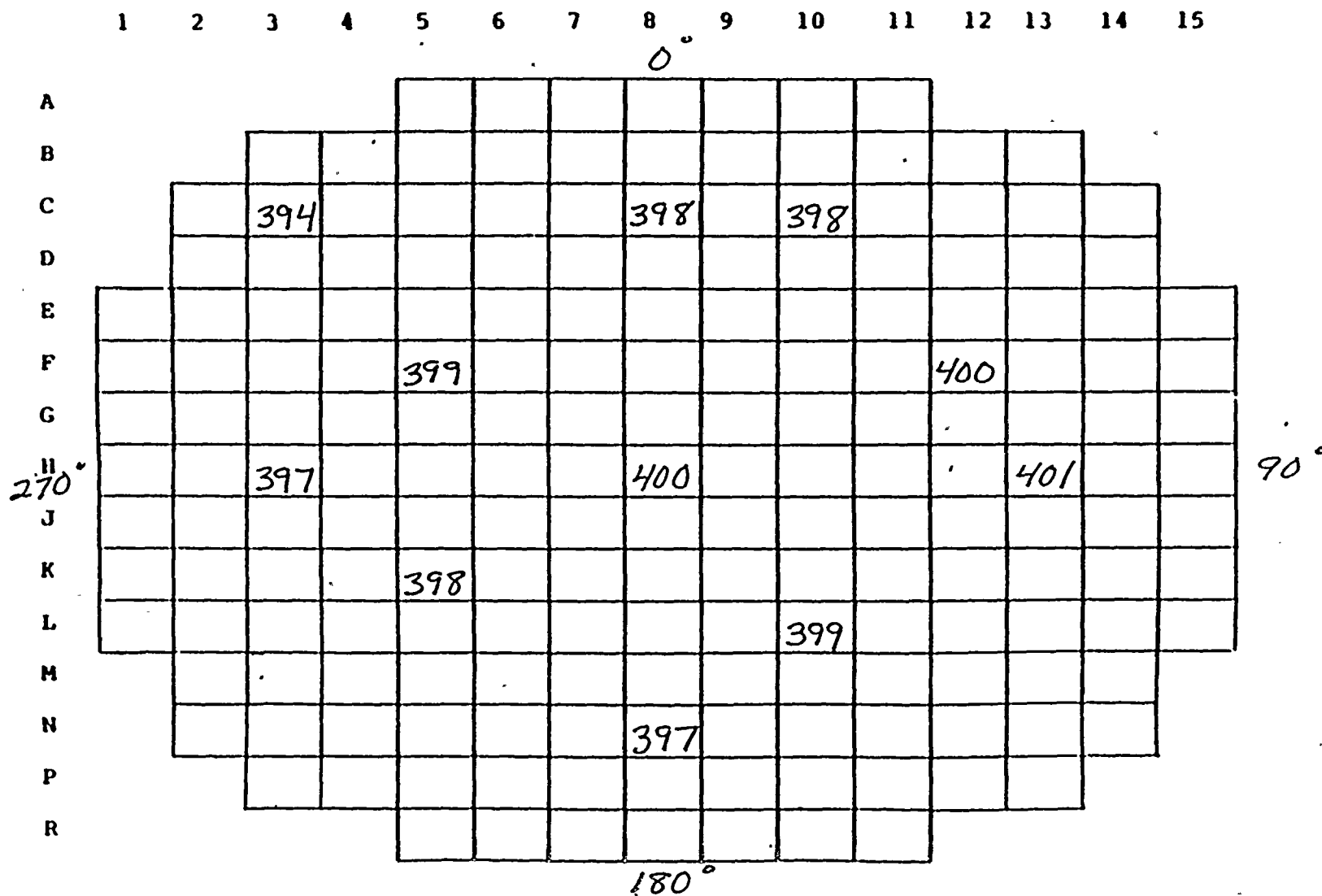


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0545





1.

2.



3.

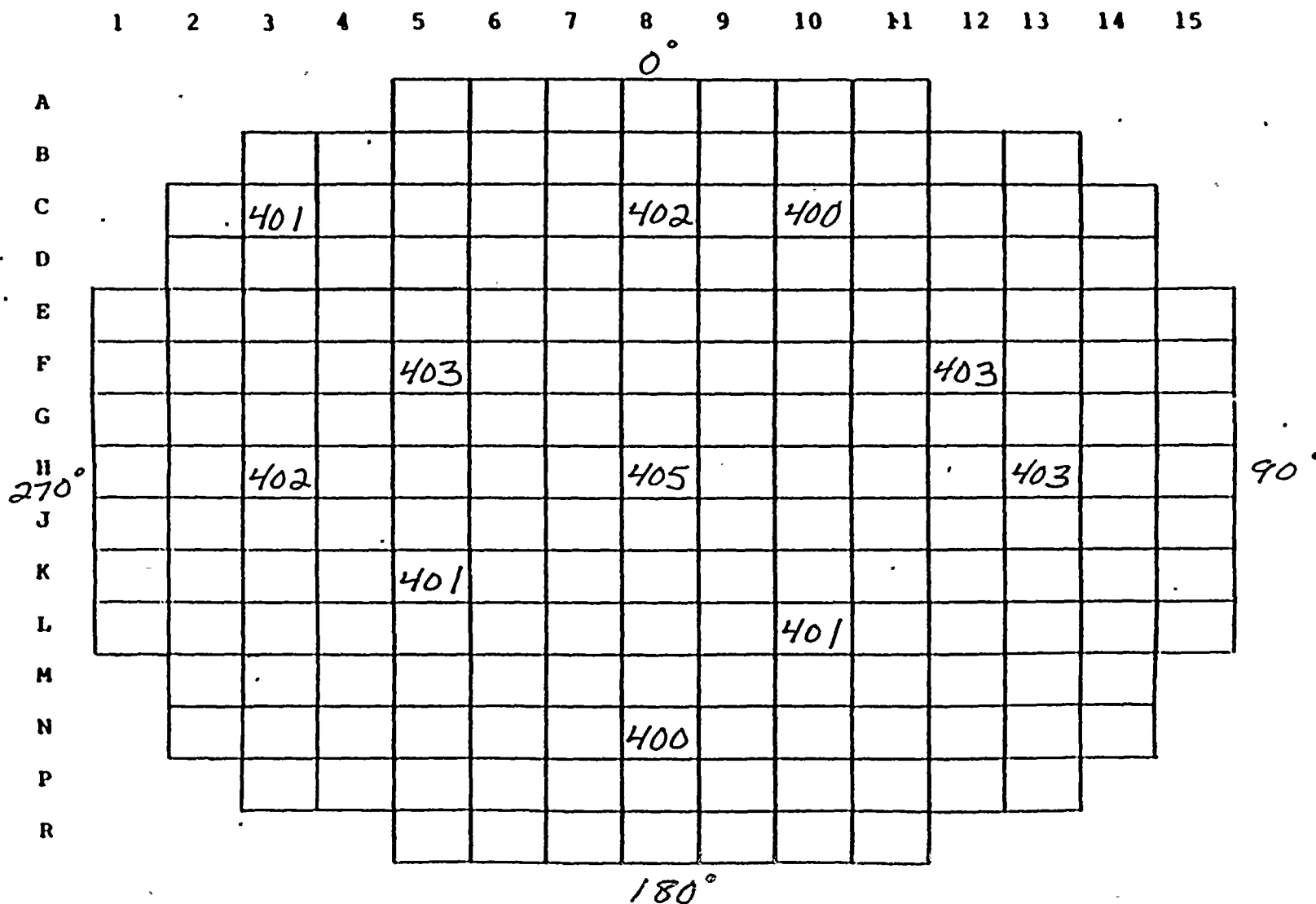


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0600





22

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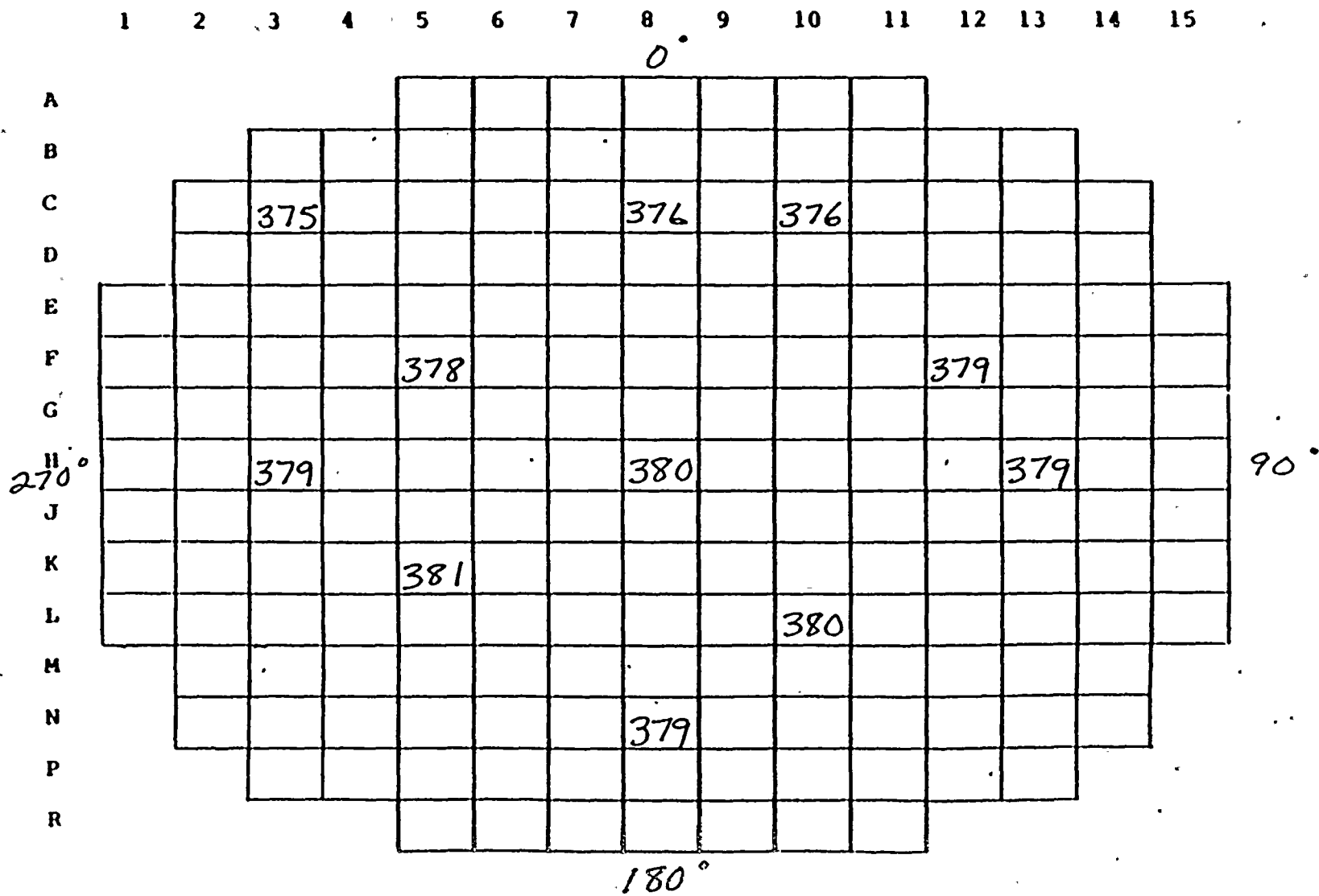


DRI LL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0615

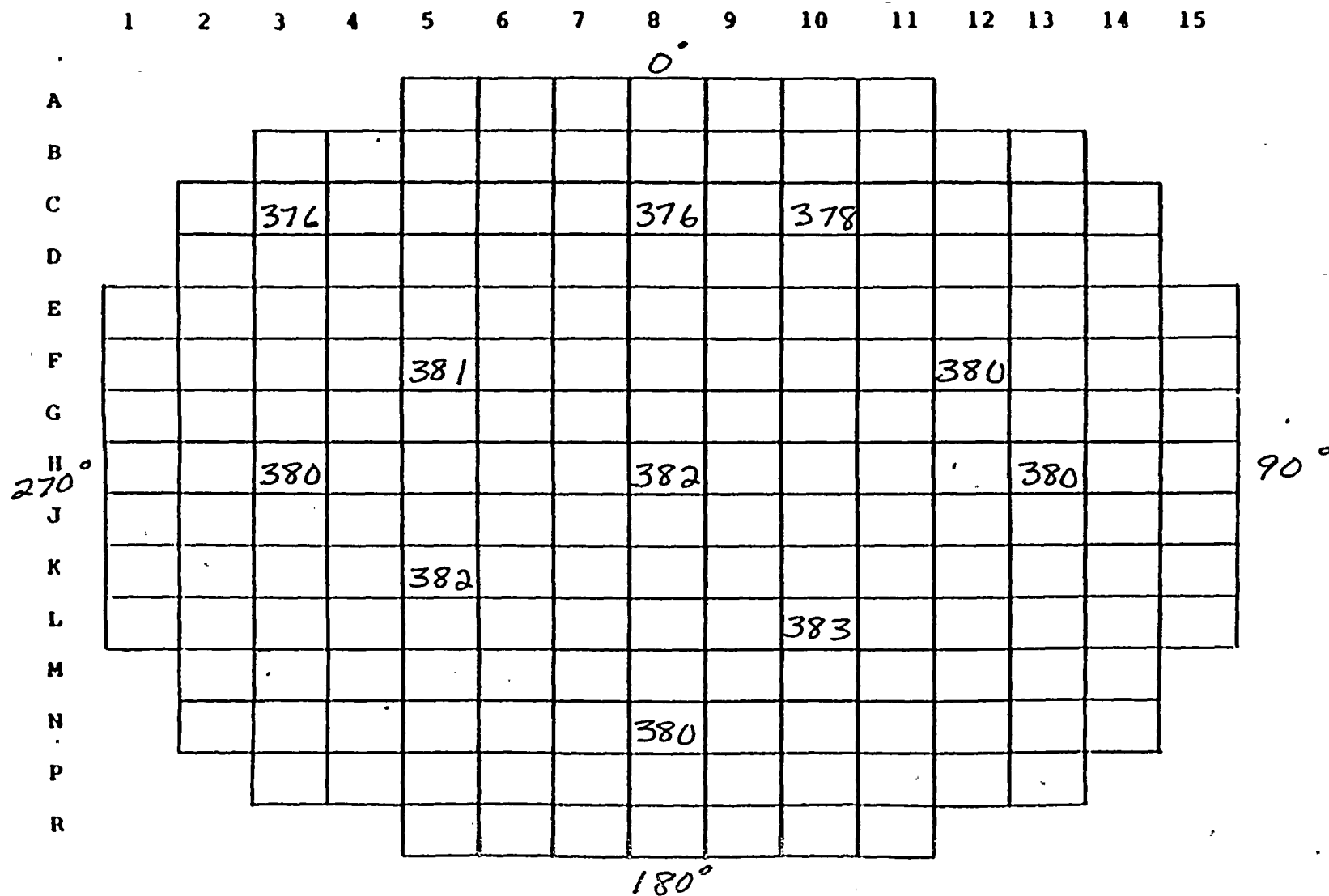


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0630

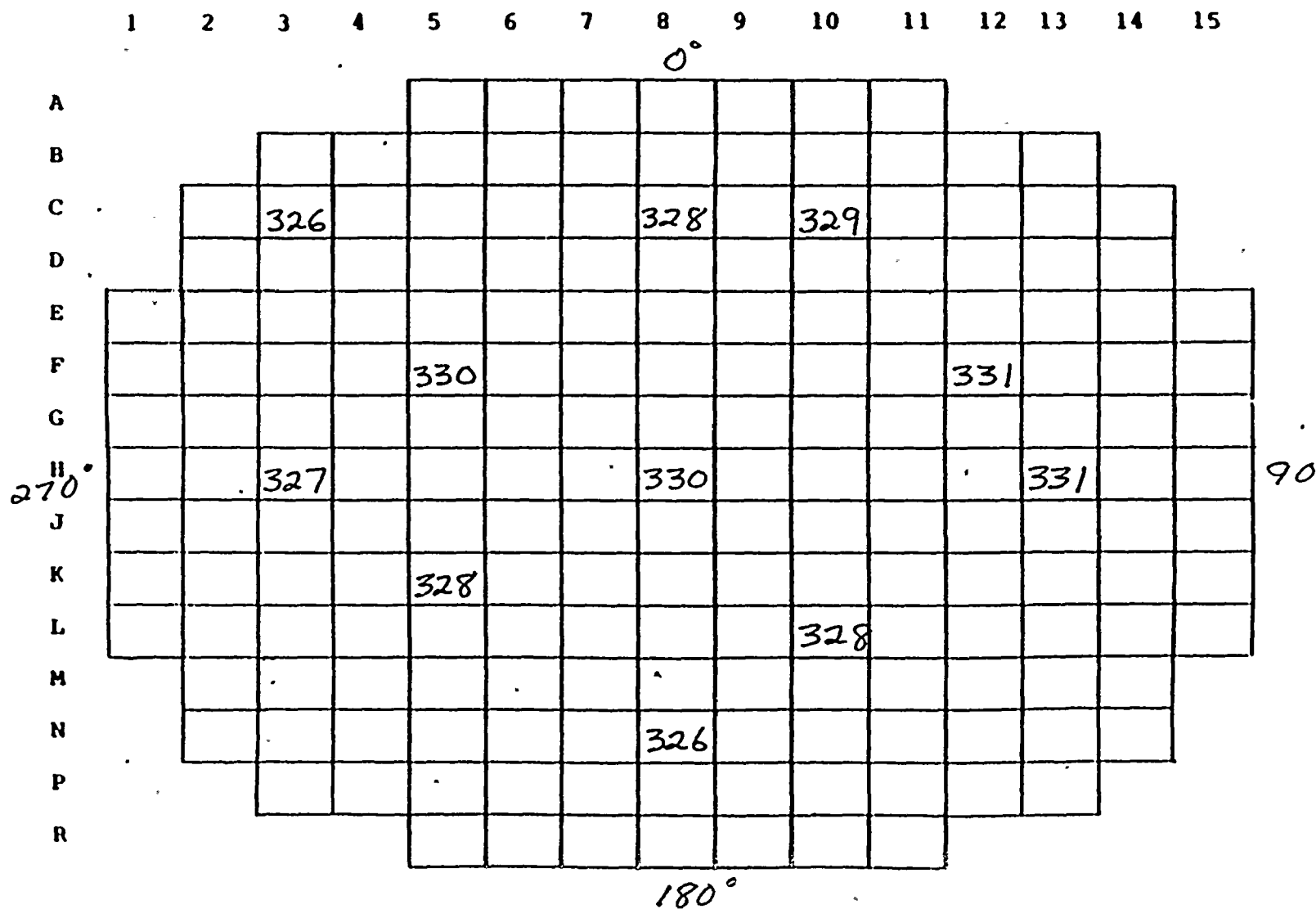


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0645



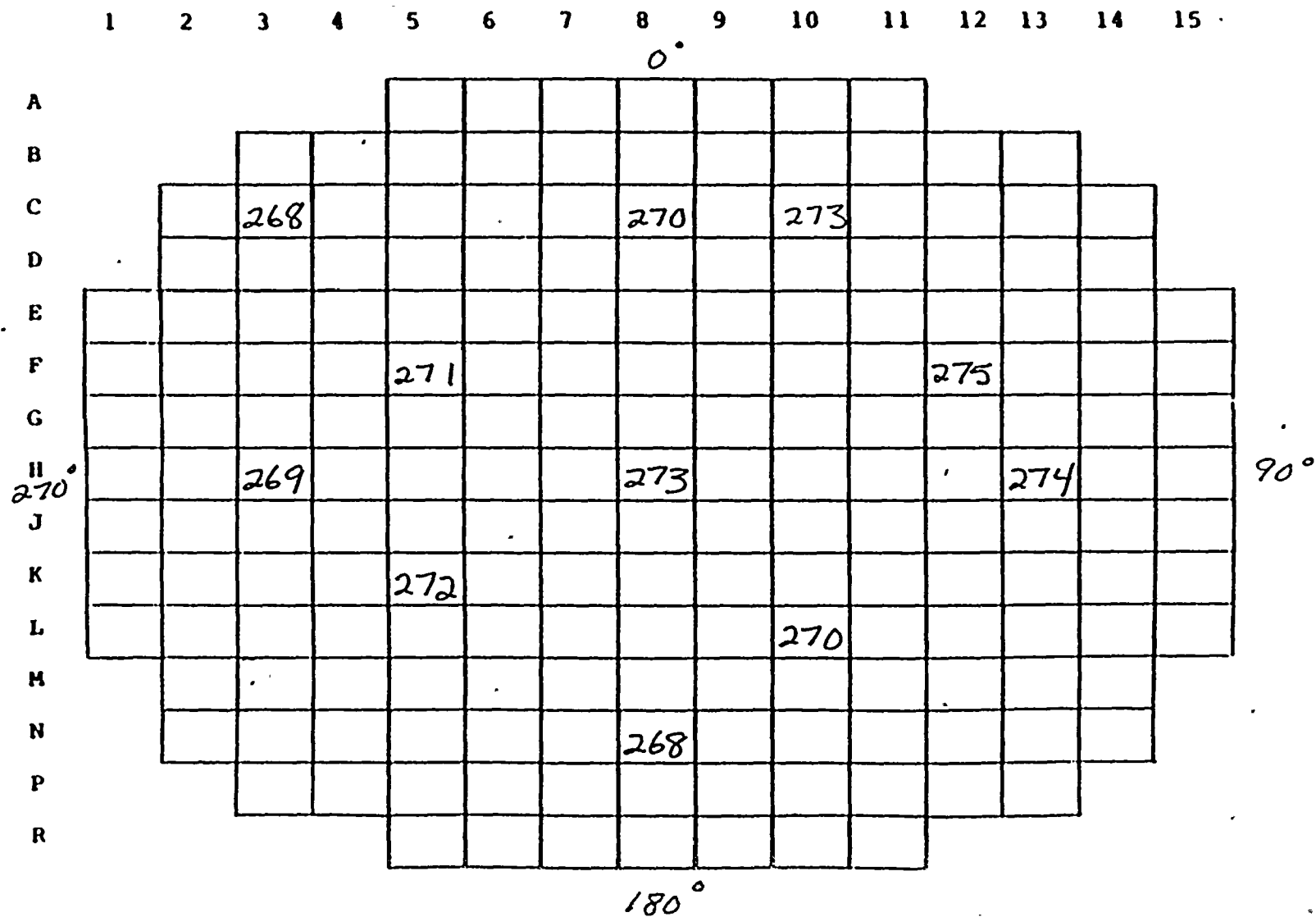


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

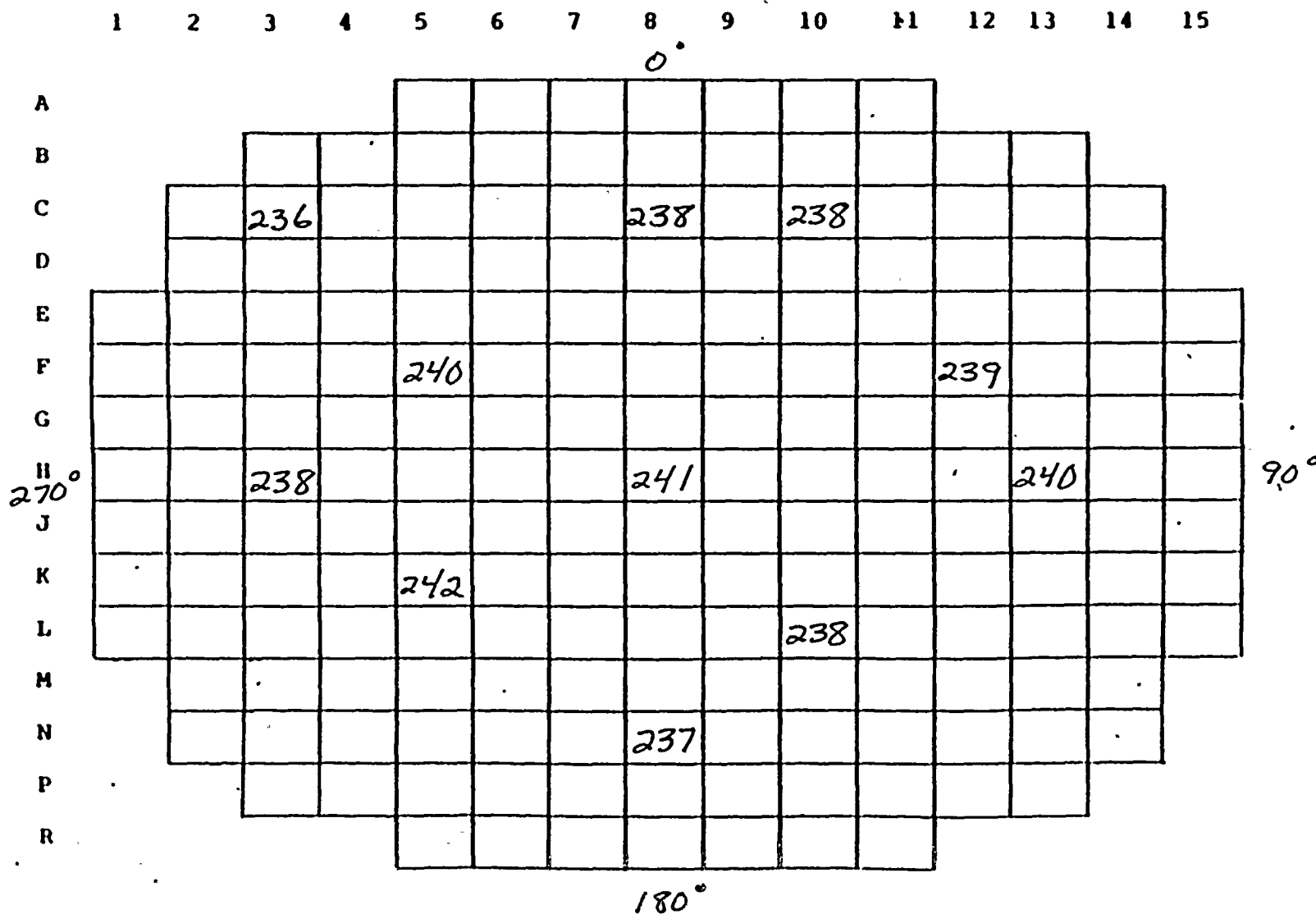
DRILL DATA

Date 4/3/90 Time 0700



1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

Date 4/3/90 Time 0715



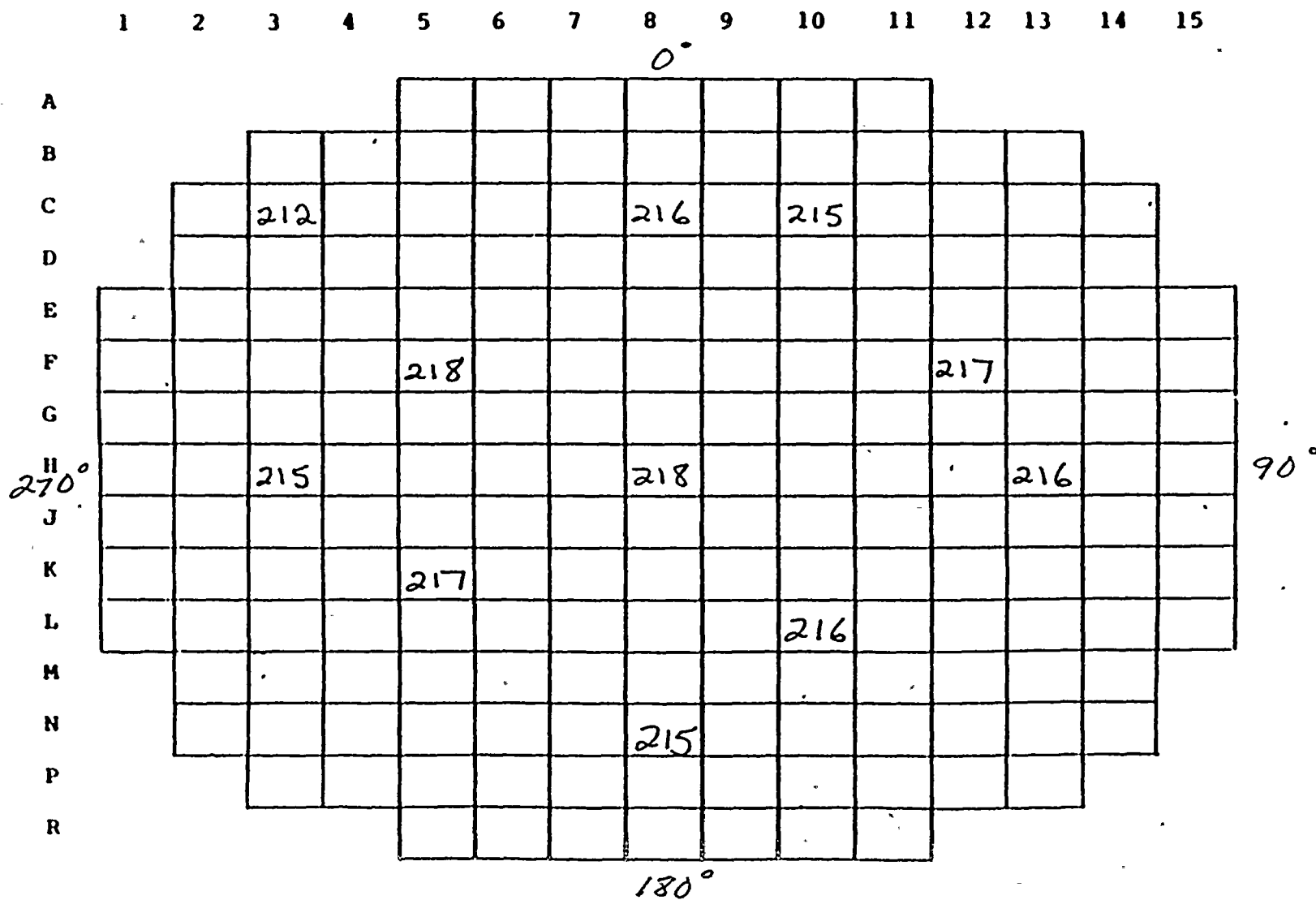


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

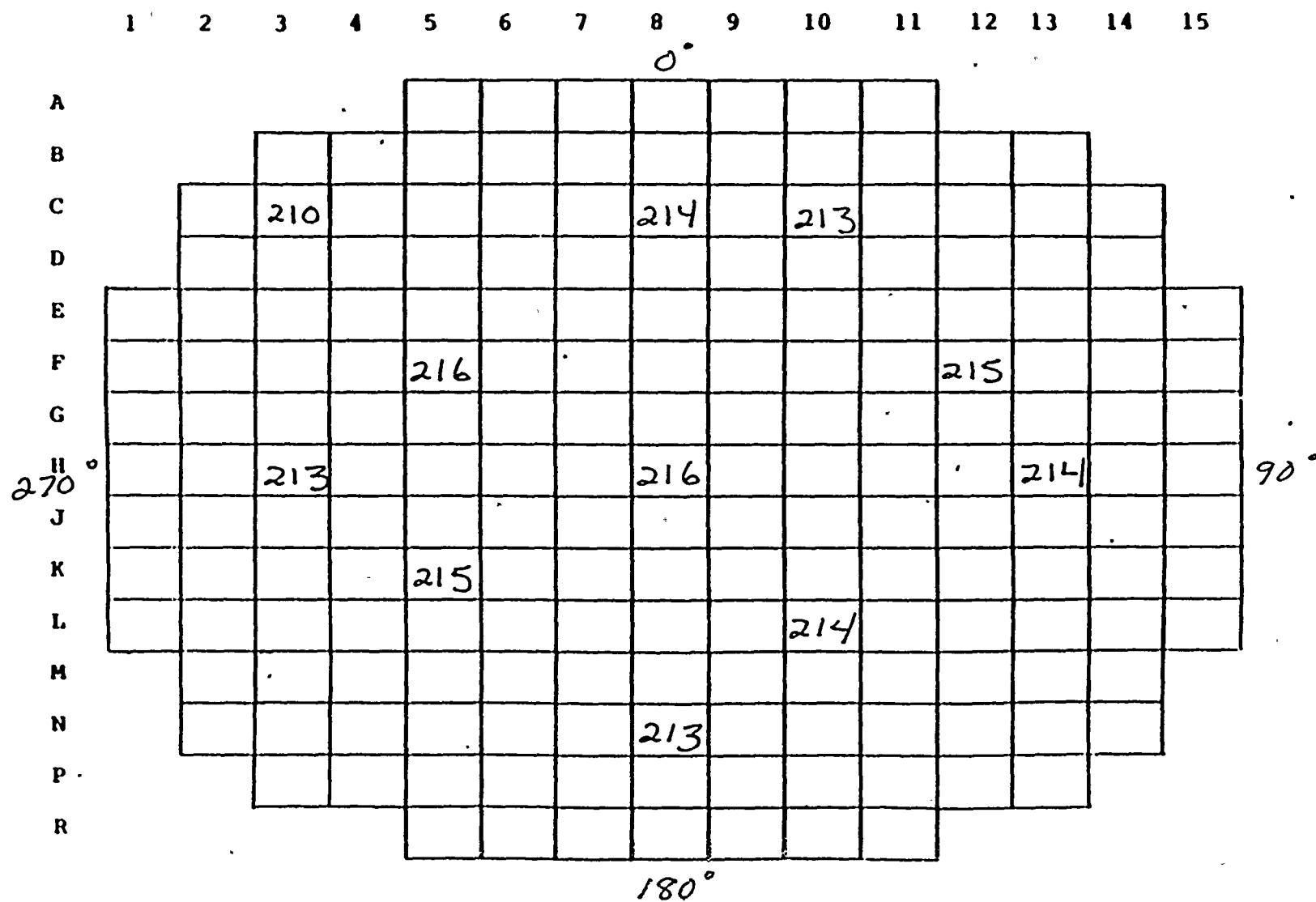
Date 4/3/90 Time 0730





1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

Date 4/3/90 Time 0745



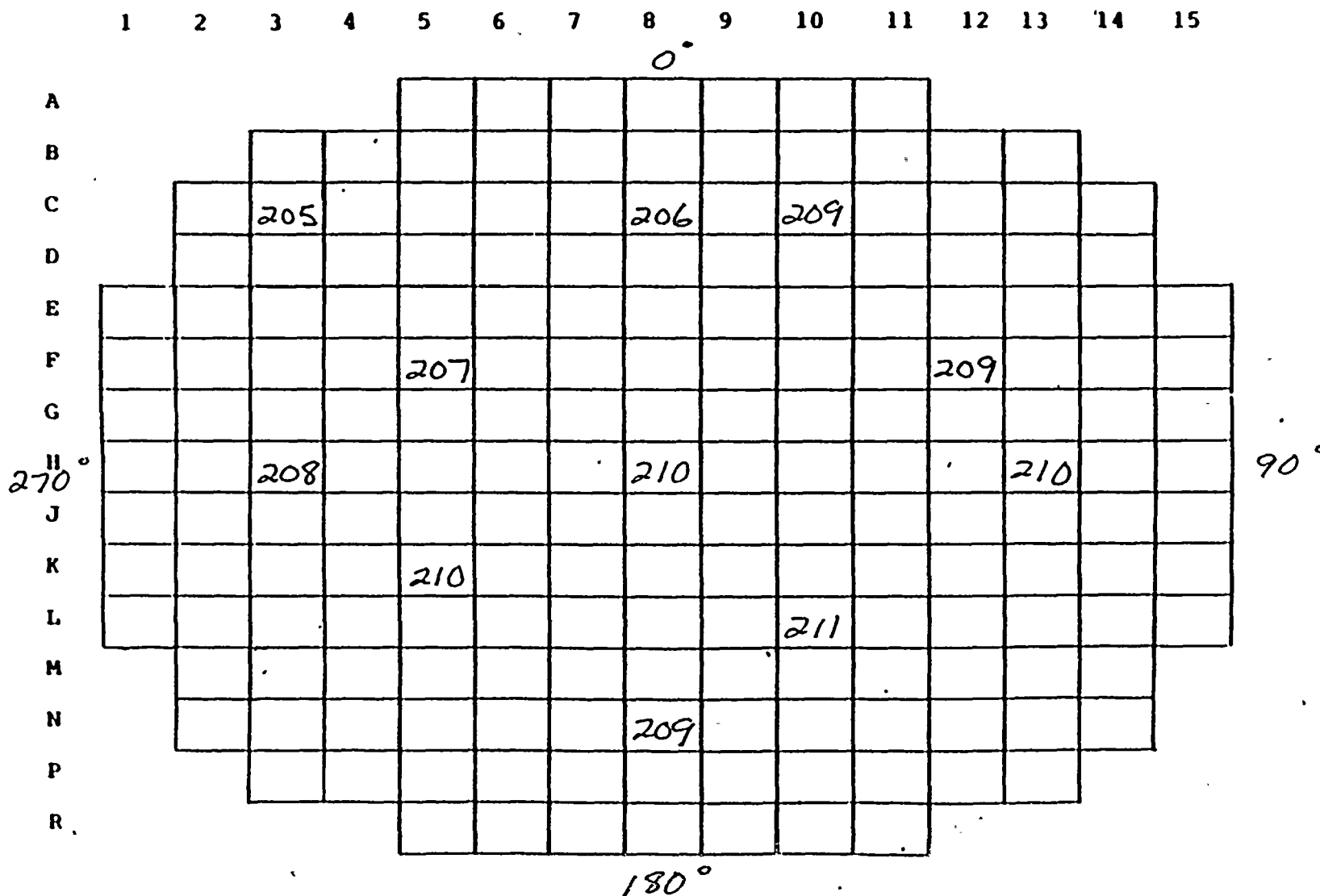


DRILL DATA

1990 COOK PLANT GRADED EXERCISE
THERMOCOUPLE DATA

DRILL DATA

Date 4/3/90 Time 0800



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. RADIATION DATA

- A. IN-PLANT RADIATION DATA
- B. ON-SITE RADIATION MONITORING TEAMS DATA
- C. DOSE PROJECTION DATA
- D. METEOROLOGICAL DATA
- E. RMS DATA
- F. PLUME EXPOSURE DATA



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. A. IN PLANT RADIATION DATA

The following maps describe the radiological contamination levels and dose rates and the various areas of the plant pertinent to exercise activities for the times shown. These data are to be provided to the player only upon request.

In addition to the maps emergency response facility habitability data is included along with contamination/decontamination data for a contaminated player.



RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REASON FOR SURVEY

REMARKS

0100 - 1000
All area dose rates are as read

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM²

SURVEYED BY

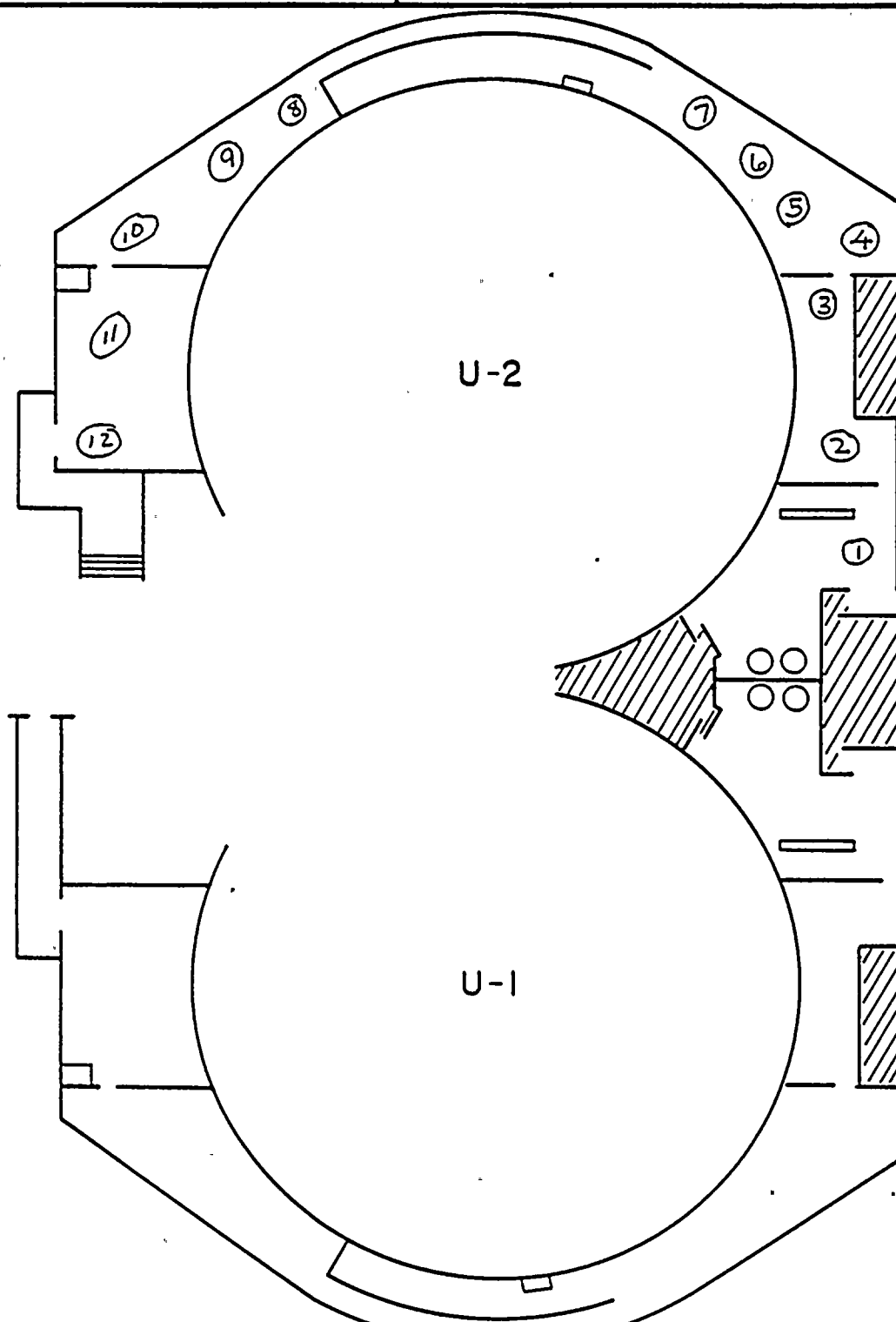
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/

REMARKS

1	<1000	/
2	<1000	/
3	<1000	/
4	<1000	/
5	<1000	/
6	<1000	/
7	<1000	/
8	<1000	/
9	<1000	/
10	<1000	/
11	<1000	/
12	<1000	/
13		/
14		/
15		/
16		/
17		/
18		/
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23		/
24		/
25		/
26		/
27		/
28		/
29		/
30		/



RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
☐ HIGH RADIATION
☐ EXTREME HIGH RADIATION
☐ CONTAMINATION
☐ AIRBORNE RADIOACTIVITY

REMARKS

0446 hr - 0515 hr

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.
DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM

SURVEYED BY

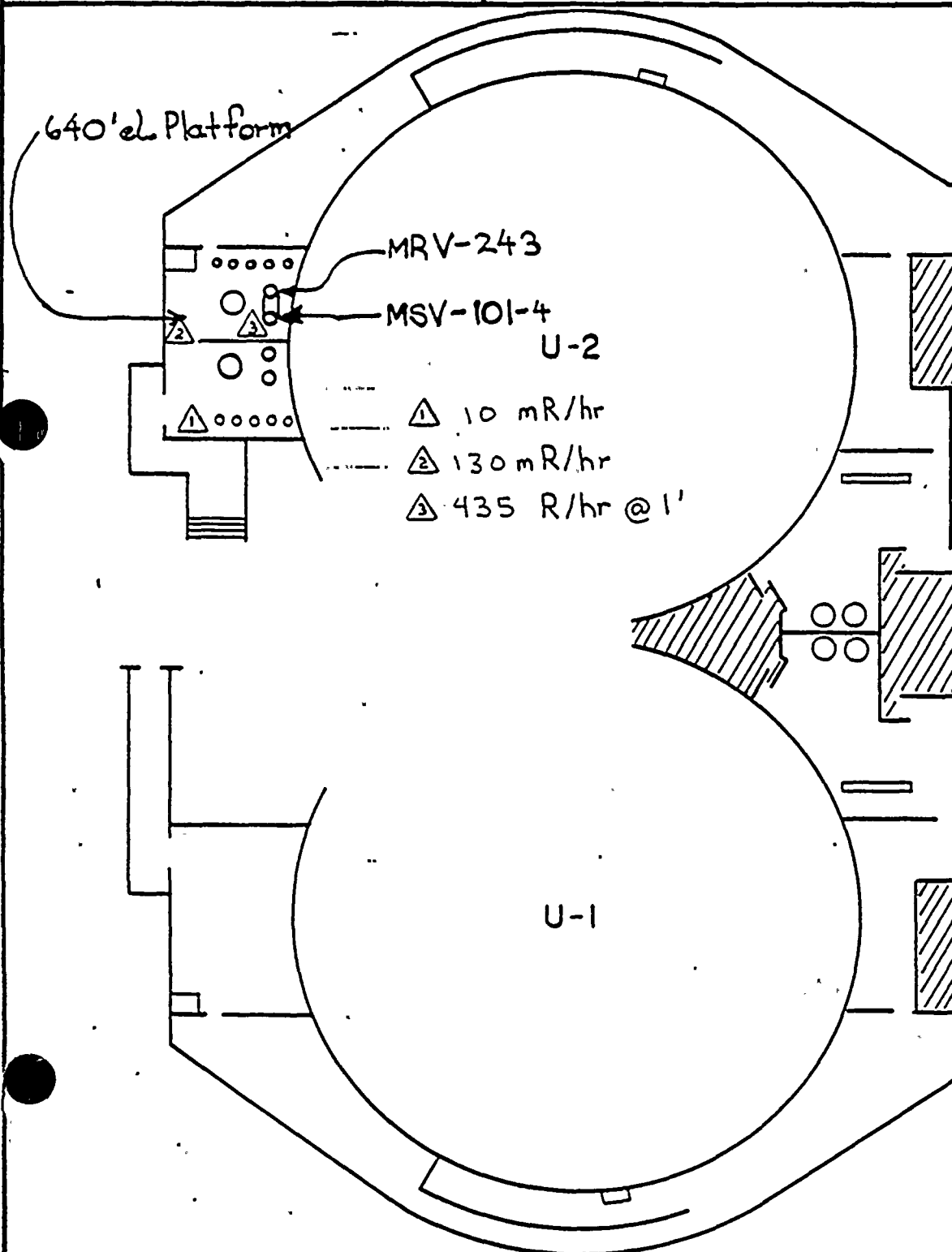
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARK:

1	/
2	/
3	/
4	/
5	/
6	/
7	/
8	/
9	/
10	/
11	/
12	/
13	/
14	/
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22	/
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25	/
26	/
27	/
28	/
29	/
30	/



RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' ΔUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

REMARKS

METER TYPE/NO.

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

0516 - 0530

UNLESS NOTED: * DENOTES CONTACT / 18" ROG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM²

REASON FOR SURVEY

SURVEYED BY

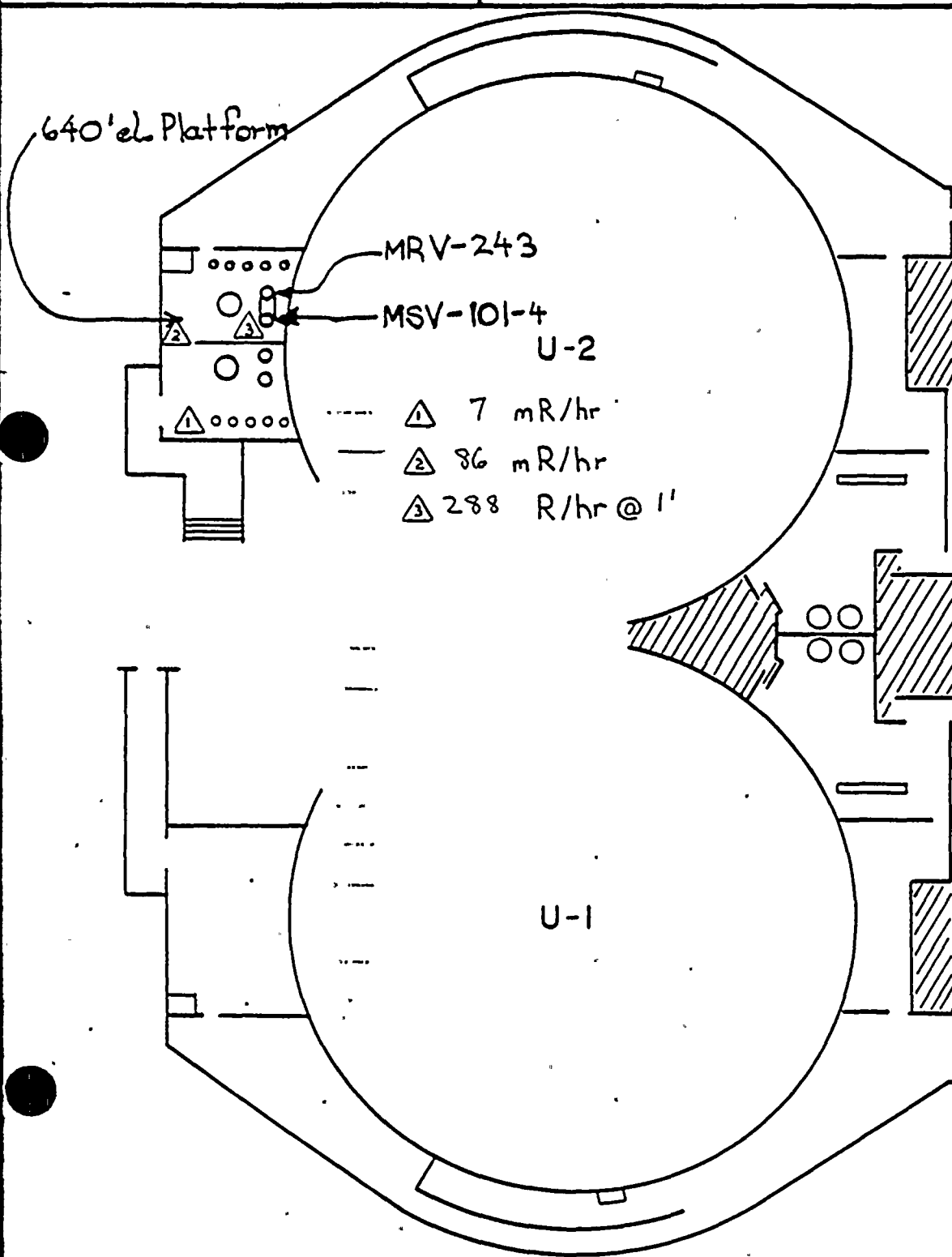
TIME

DATE

RWP USED:

REVIEWED BY

DATE



CONTAMINATION/
REMARKS

1	/
2	/
3	/
4	/
5	/
6	/
7	/
8	/
9	/
10	/
11	/
12	/
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29	/
30	/



RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0531 - 0545

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" ROG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

SURVEYED BY

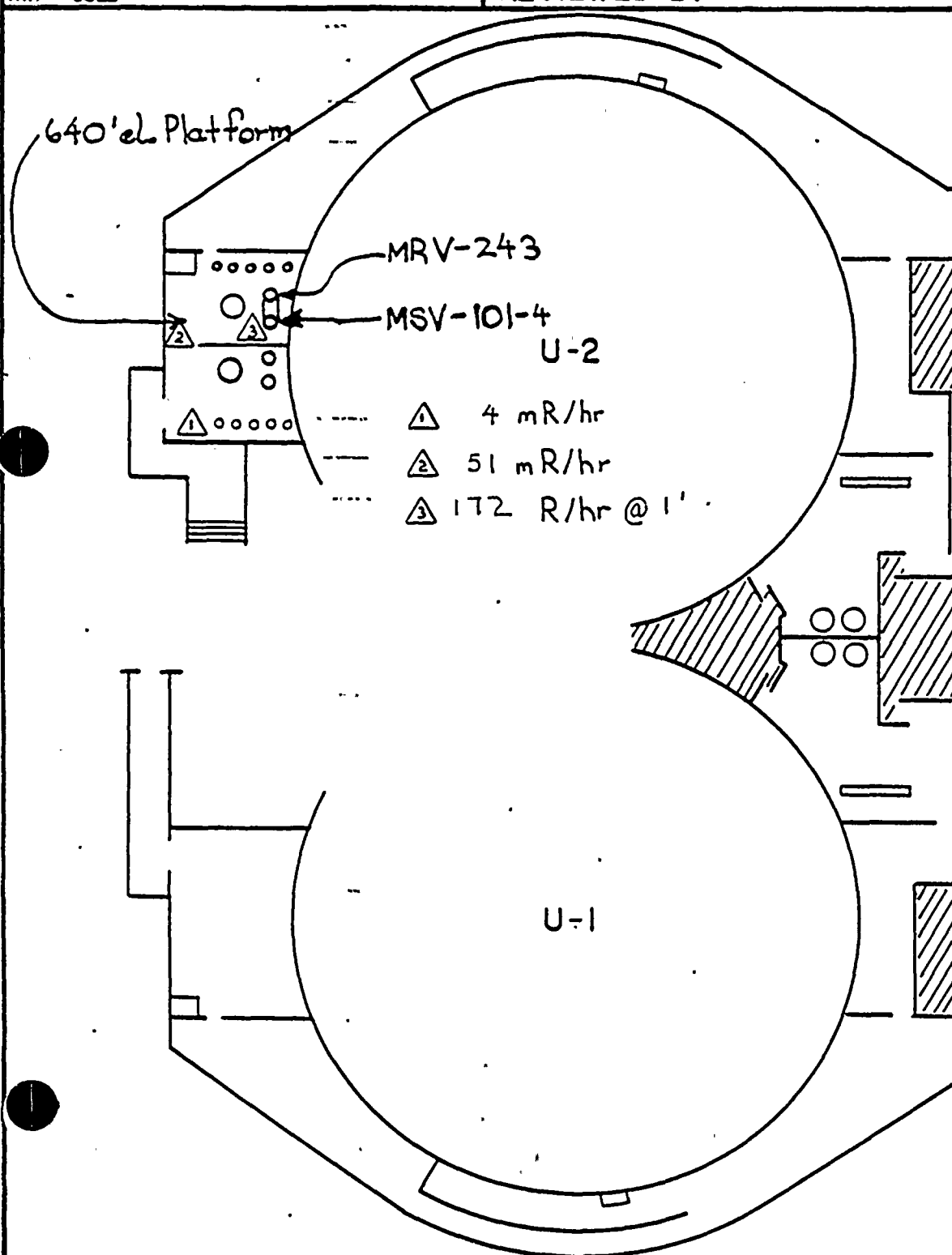
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARK

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0546-0600

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" ROD.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

SURVEYED BY

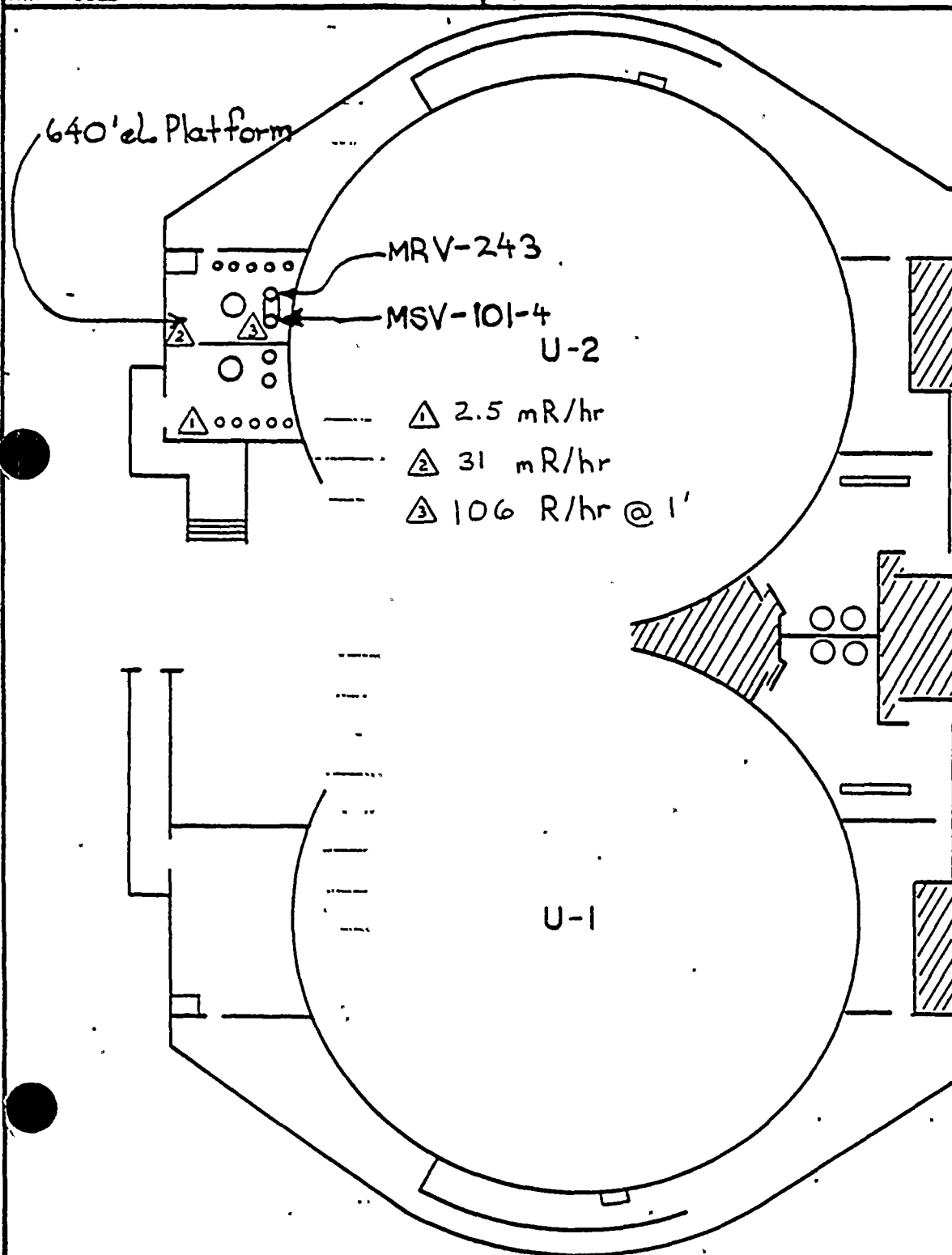
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARKS

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

REMARKS

METER TYPE/NO.

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

0601-0615

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

REASON FOR SURVEY

SURVEYED BY

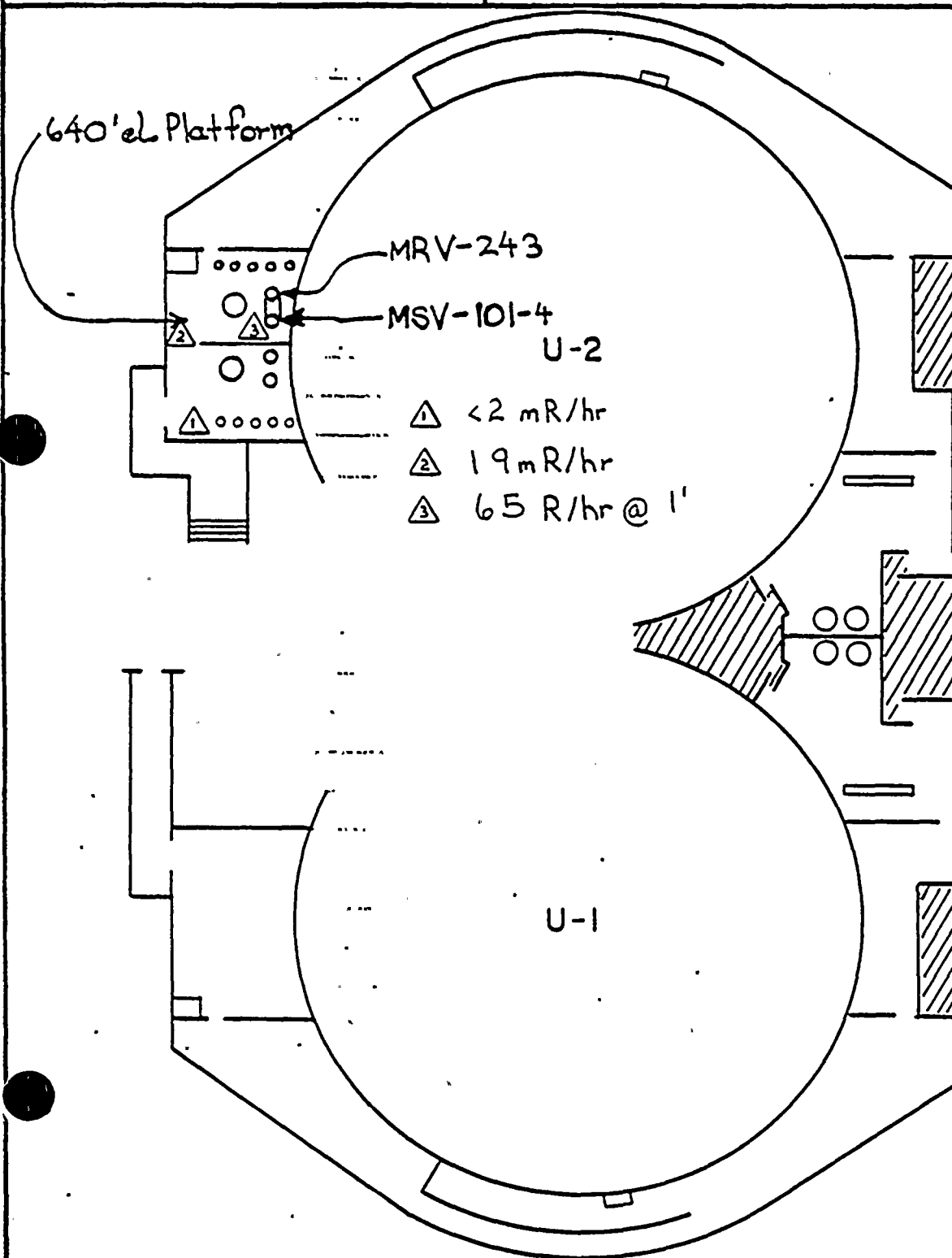
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARK

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

REMARKS

METER TYPE/NO.

- ☐ RADIATION
☐ HIGH RADIATION
☐ EXTREME HIGH RADIATION
☐ CONTAMINATION
☐ AIRBORNE RADIOACTIVITY

0616 - 0630

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM

REASON FOR SURVEY

SURVEYED BY

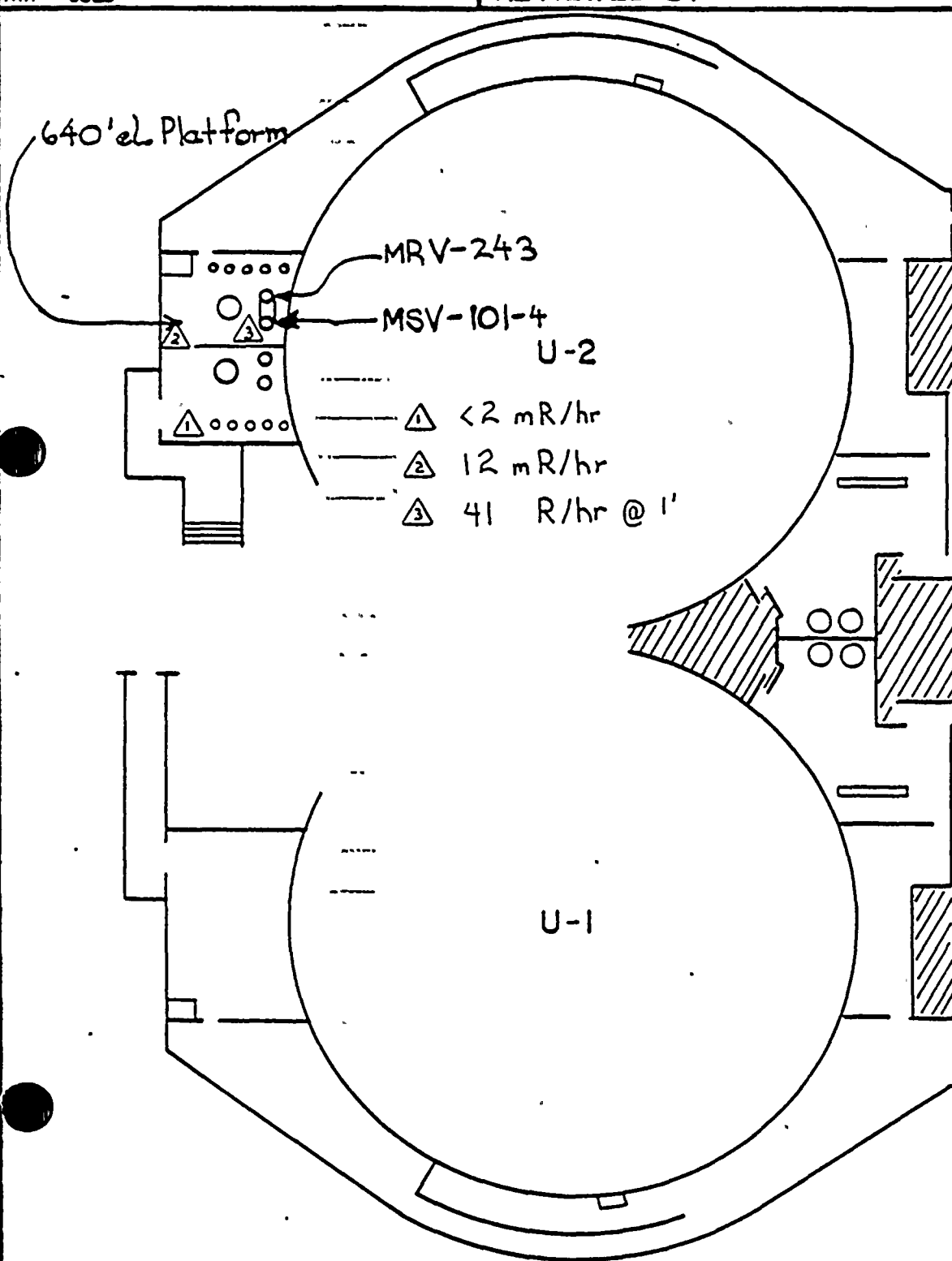
TIME

DATE

RWP USED:

REVIEWED BY

DATE



CONTAMINATION/REMARKS

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☒ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0631-0645

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

SURVEYED BY

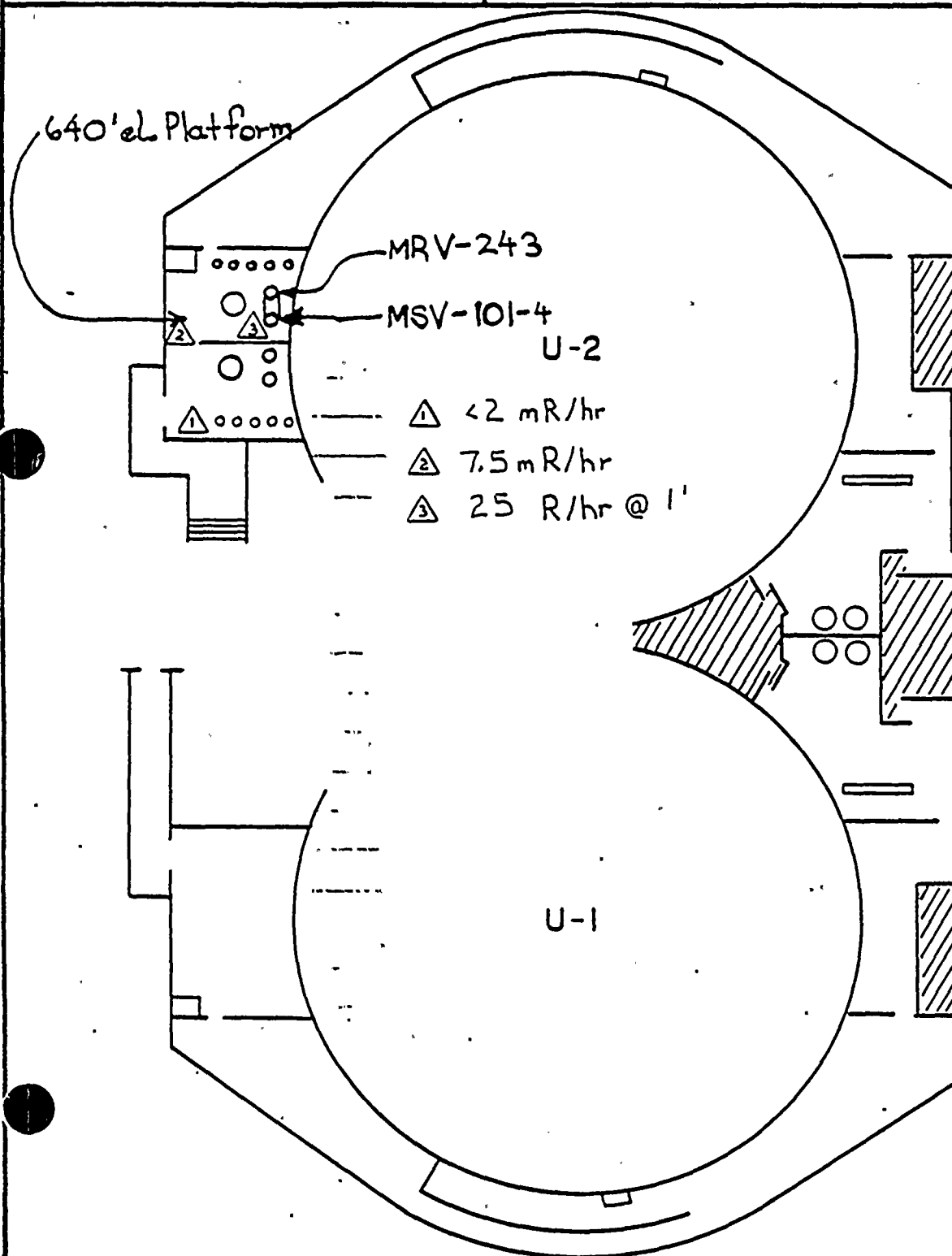
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARK

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0646 - 0700

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

SURVEYED BY

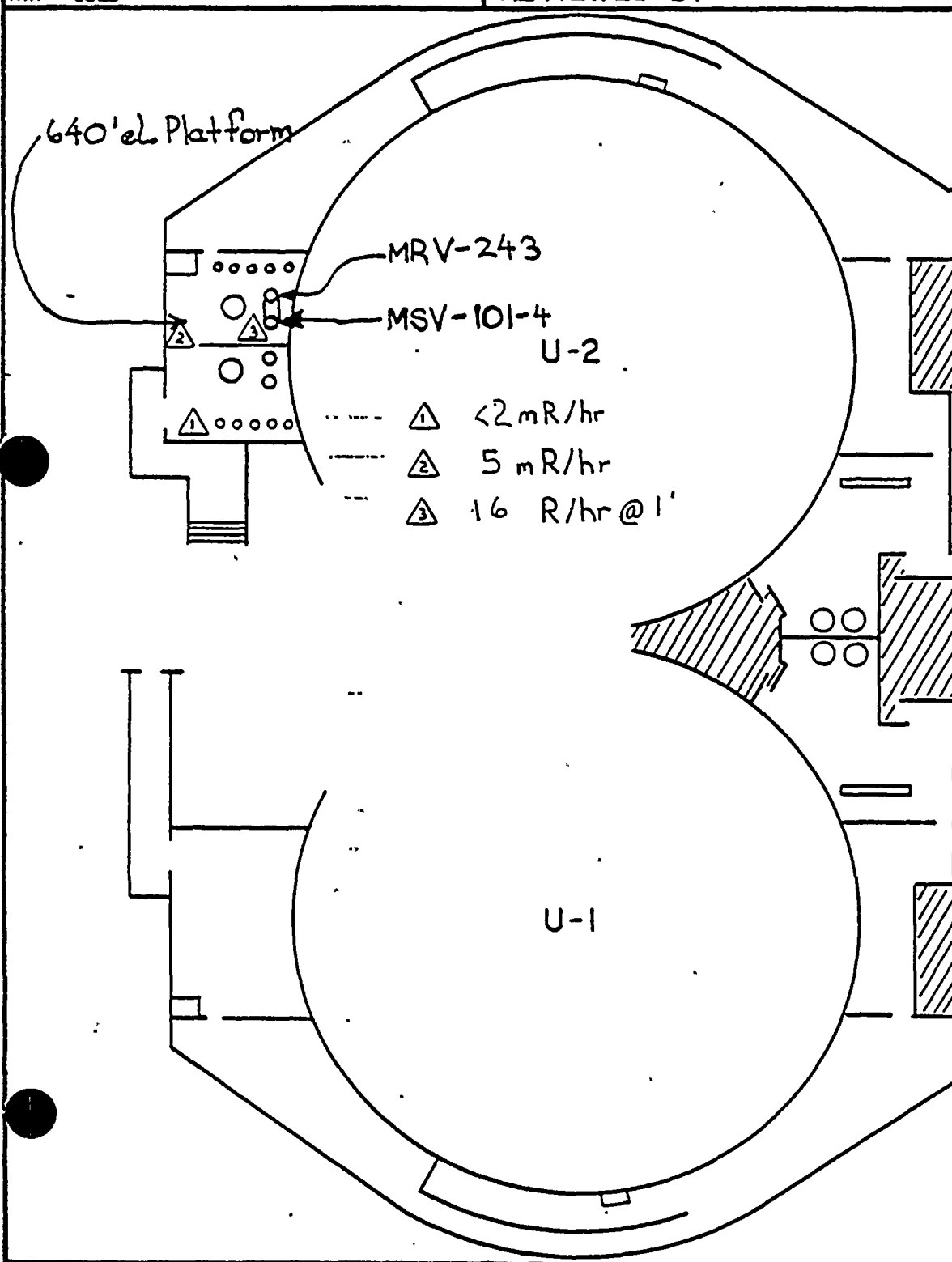
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARKS

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' ΔUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0701-0715

METER TYPE/NO

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

SURVEYED BY

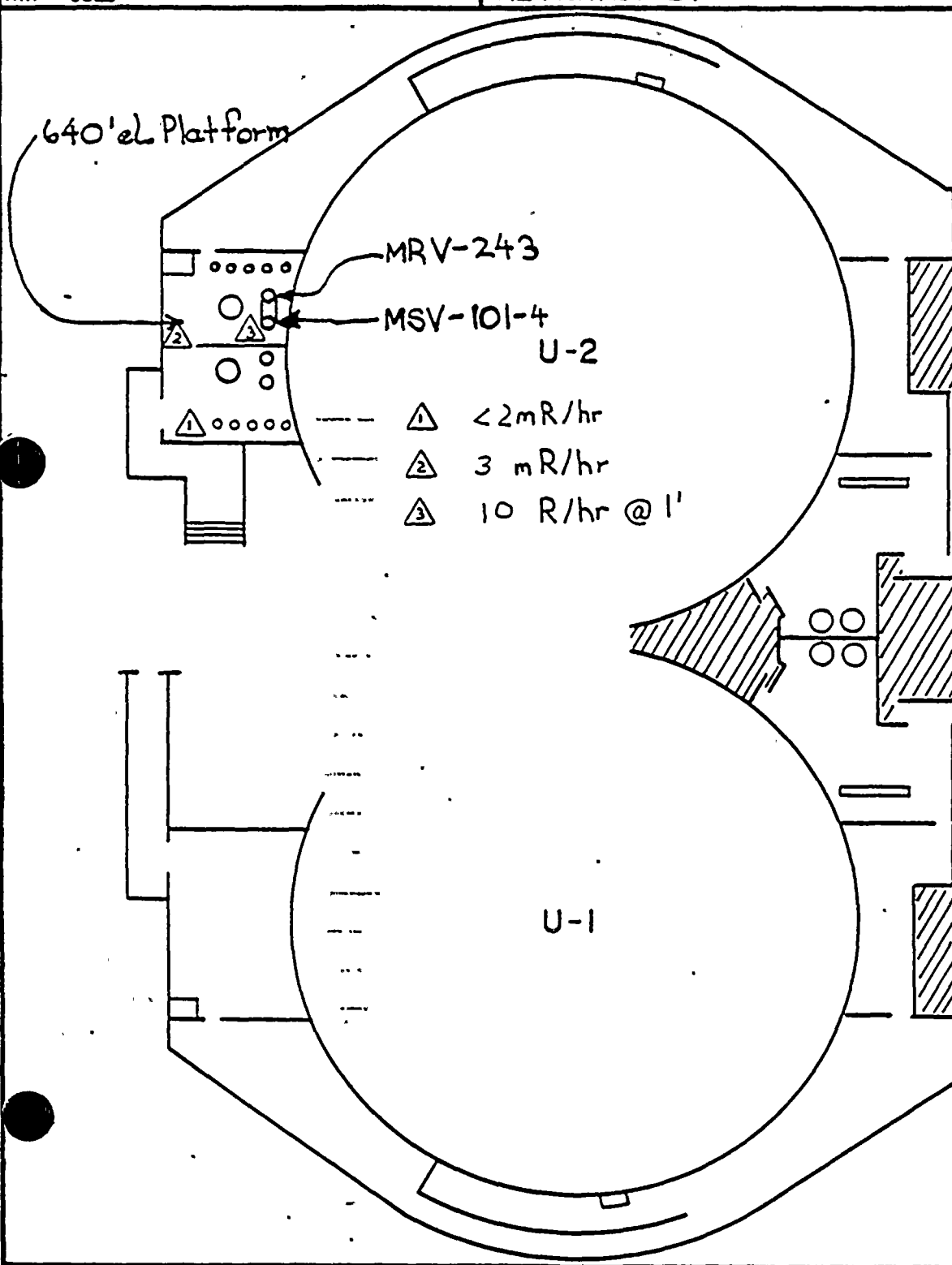
TIME

DATE

RWP USED:

REVIEWED BY

DATE



CONTAMINATION/REMARK

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0716 - 0730

METER TYPE / NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" ROG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM²

SURVEYED BY

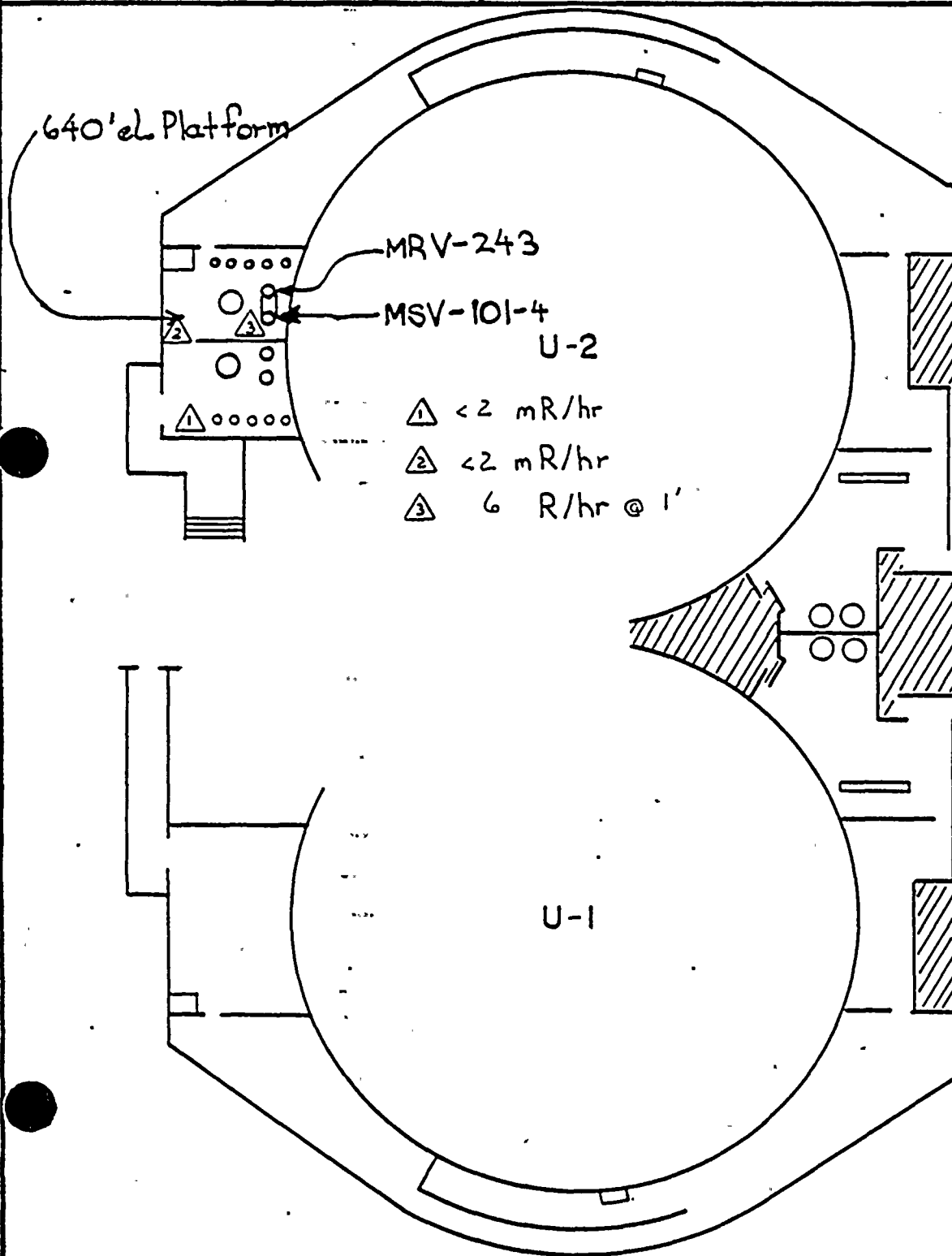
TIME

DATE

RWP USED:

REVIEWED BY

DATE



CONTAMINATION / REMARK:

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 612' AUX. FLOOR

MAP NO. 167

AREA CLASSIFICATION

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0731 - 1000

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100C

SURVEYED BY

TIME

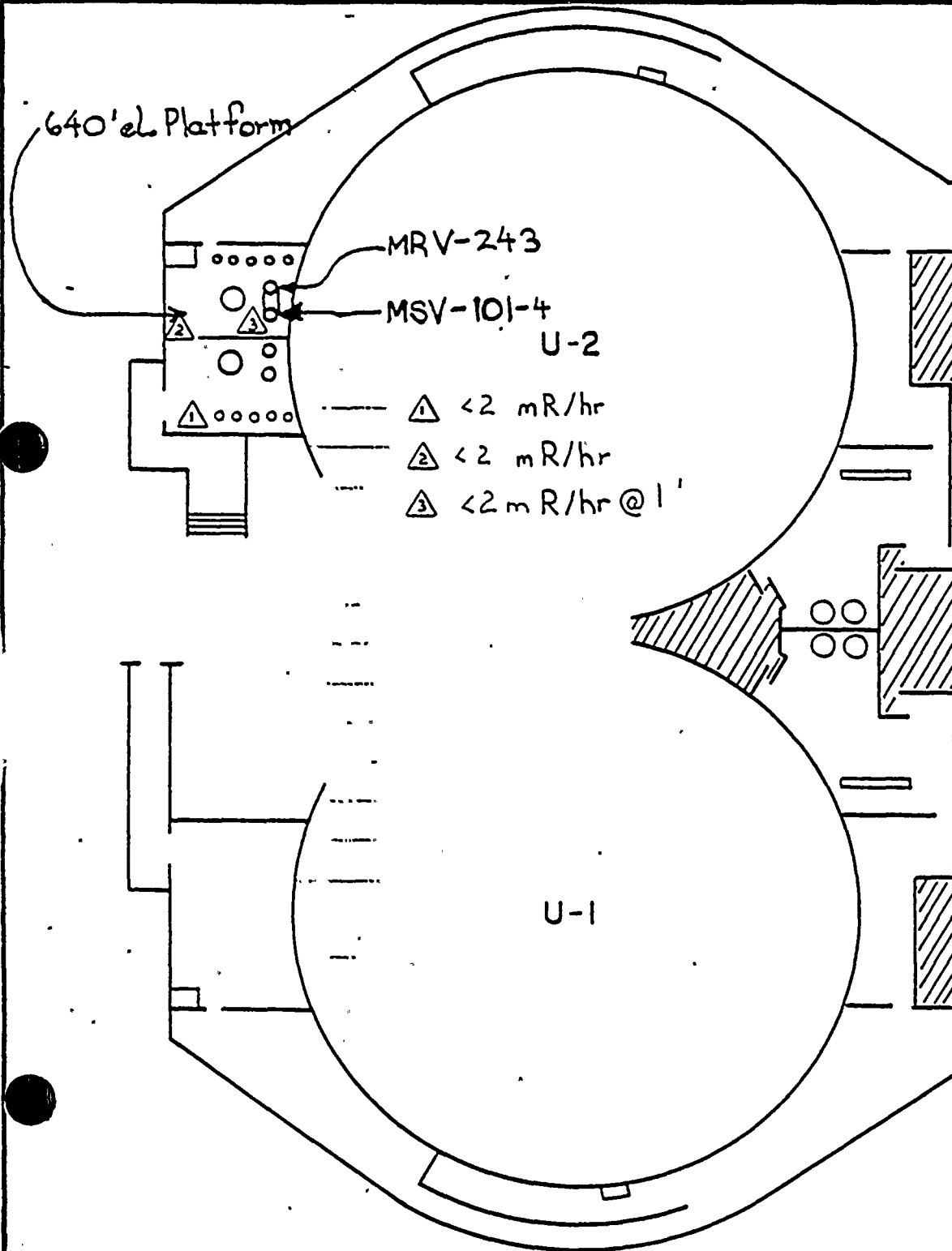
DATE

REVIEWED BY

DATE

RWP USED:

CONTAMINATION/ REMARK



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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 573' AUX. FLOOR

MAP NO. 170

EA CLASSIFICATION

REMARKS

METER TYPE/NO.

- ☐ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

0100 - 1000

All area dose rates "as read"

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM

SURVEYED BY

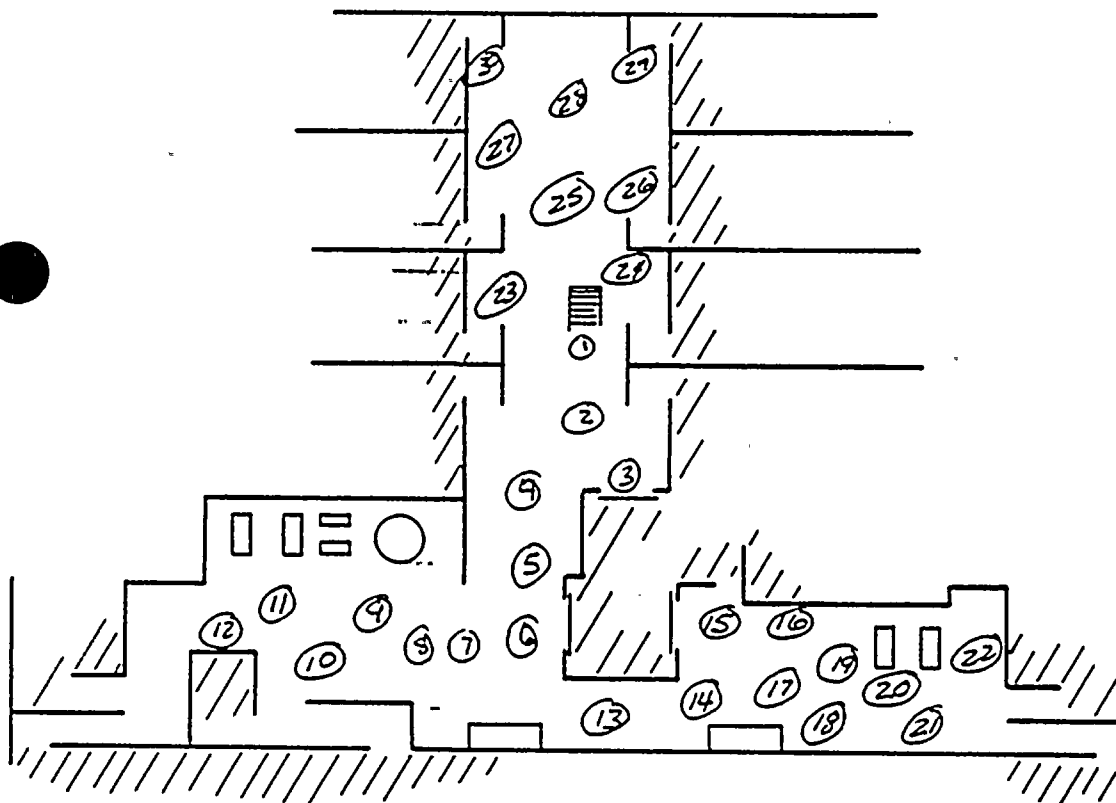
TIME

DATE

RWP USED:

REVIEWED BY

DATE



CONTAMINATION/REMARKS

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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 587/591' AUX. FLOORS

MAP NO. 169

AREA CLASSIFICATION

- ☒ RADIATION
☐ HIGH RADIATION
☐ EXTREME HIGH RADIATION
☐ CONTAMINATION
☐ AIRBORNE RADIOACTIVITY

REMARKS

* ON SAMPLE LINE for 2R-19

0133 - 1000'

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" RDG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM

SURVEYED BY

TIME

DATE

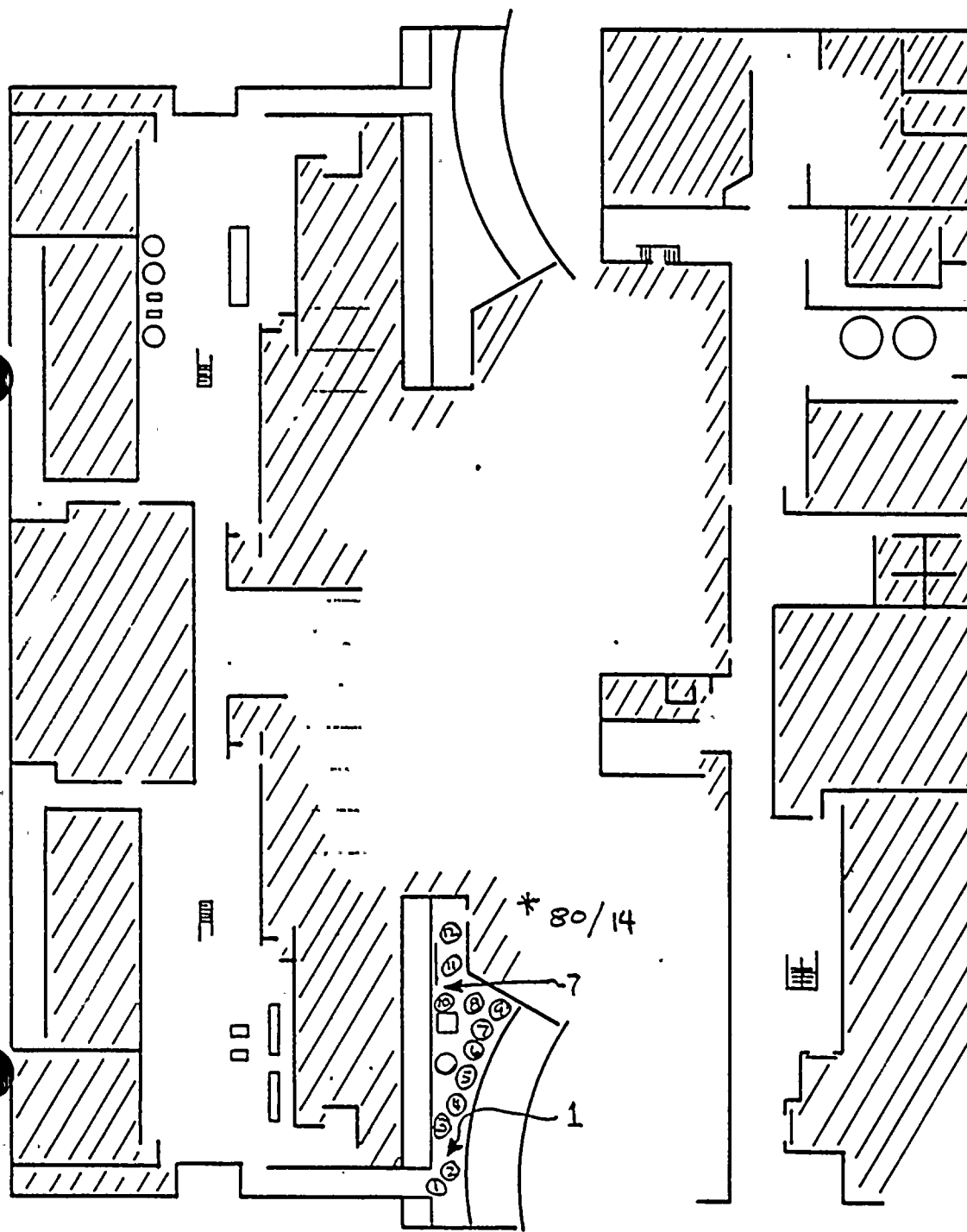
REVIEWED BY

DATE

RWP USED:

NORTH TO SOUTH

EAST TO WEST



CONTAMINATION/REMARKS

1	<1000	/
2	<1000	/
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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 609' AUX. FLOOR

MAP NO. 168

EA CLASSIFICATION

REMARKS

METER TYPE / NO.

- ☒ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

0120 - 1000

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" ROD.

DOSE RATES IN MR / HR AT WAIST LEVEL & CONTAMINATION IN DPM / 100CM

SURVEYED BY

TIME

DATE

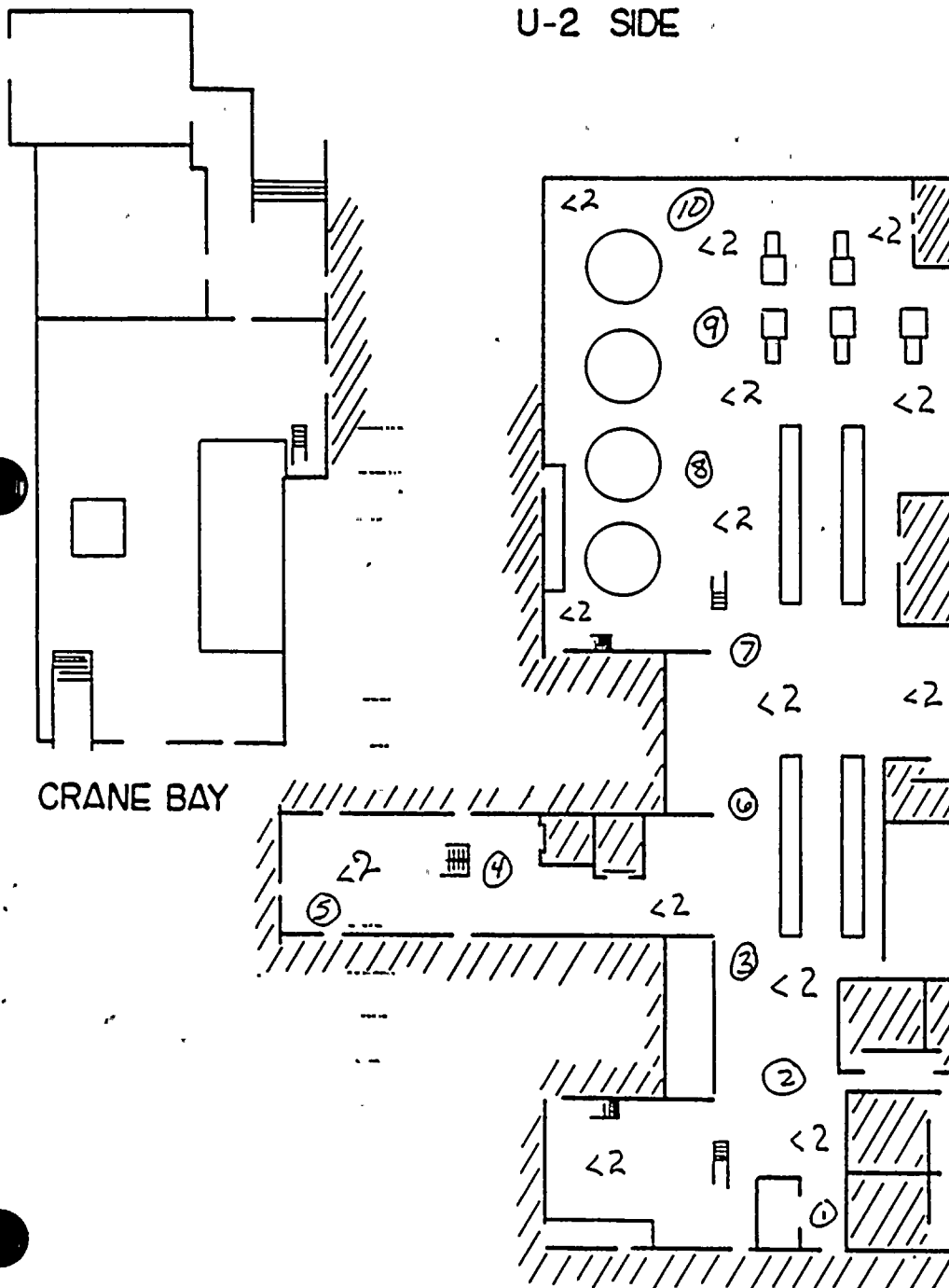
REVIEWED BY

DATE

RWP USED:

U-2 SIDE

CONTAMINATION / REMARKS



CRANE BAY

U-1 SIDE

1	<1000 /
2	<1000 /
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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 633' AUX. FLOOR

MAP NO. 166

EA CLASSIFICATION

REMARKS

METER TYPE/NO.

- ☒ RADIATION
☐ HIGH RADIATION
☐ EXTREME HIGH RADIATION
☐ CONTAMINATION
☐ AIRBORNE RADIOACTIVITY

REASON FOR SURVEY

0100 - 1000
All area dose rates as read

UNLESS NOTED: * DENOTES CONTACT / 18" ROG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM

SURVEYED BY

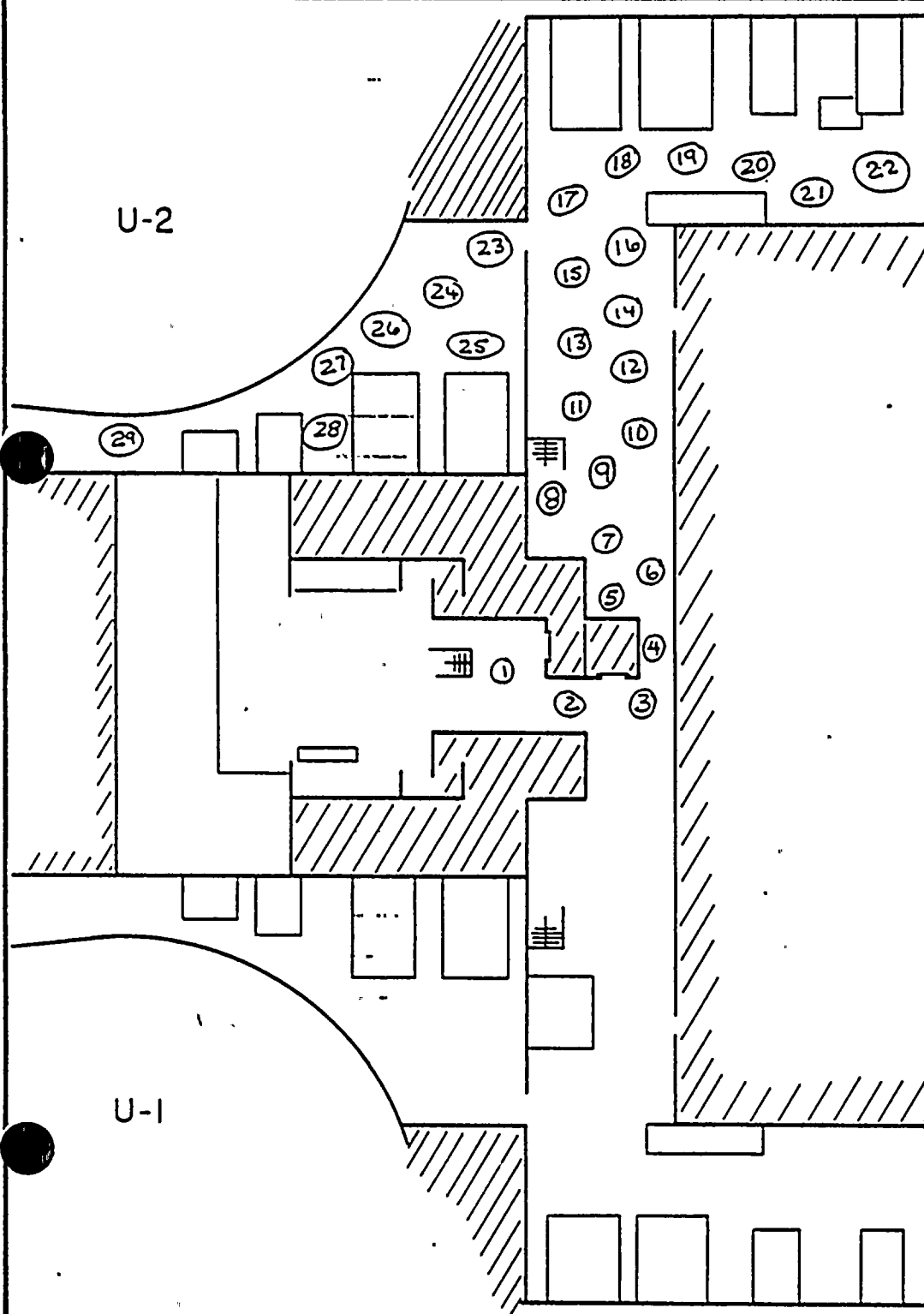
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARKS

1	<1000	/
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29	<1000	/



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RADIOLOGICAL AREA STATUS SHEET

AREA DESCRIPTION 650' AUX. FLOOR

MAP NO. 165

AREA CLASSIFICATION

- ☒ RADIATION
- ☐ HIGH RADIATION
- ☐ EXTREME HIGH RADIATION
- ☐ CONTAMINATION
- ☐ AIRBORNE RADIOACTIVITY

REMARKS

0100 - 1000

All area dose rates "as read"

METER TYPE/NO.

REASON FOR SURVEY

UNLESS NOTED: * DENOTES CONTACT / 18" ROG.

DOSE RATES IN MR/HR AT WAIST LEVEL & CONTAMINATION IN DPM/100CM

SURVEYED BY

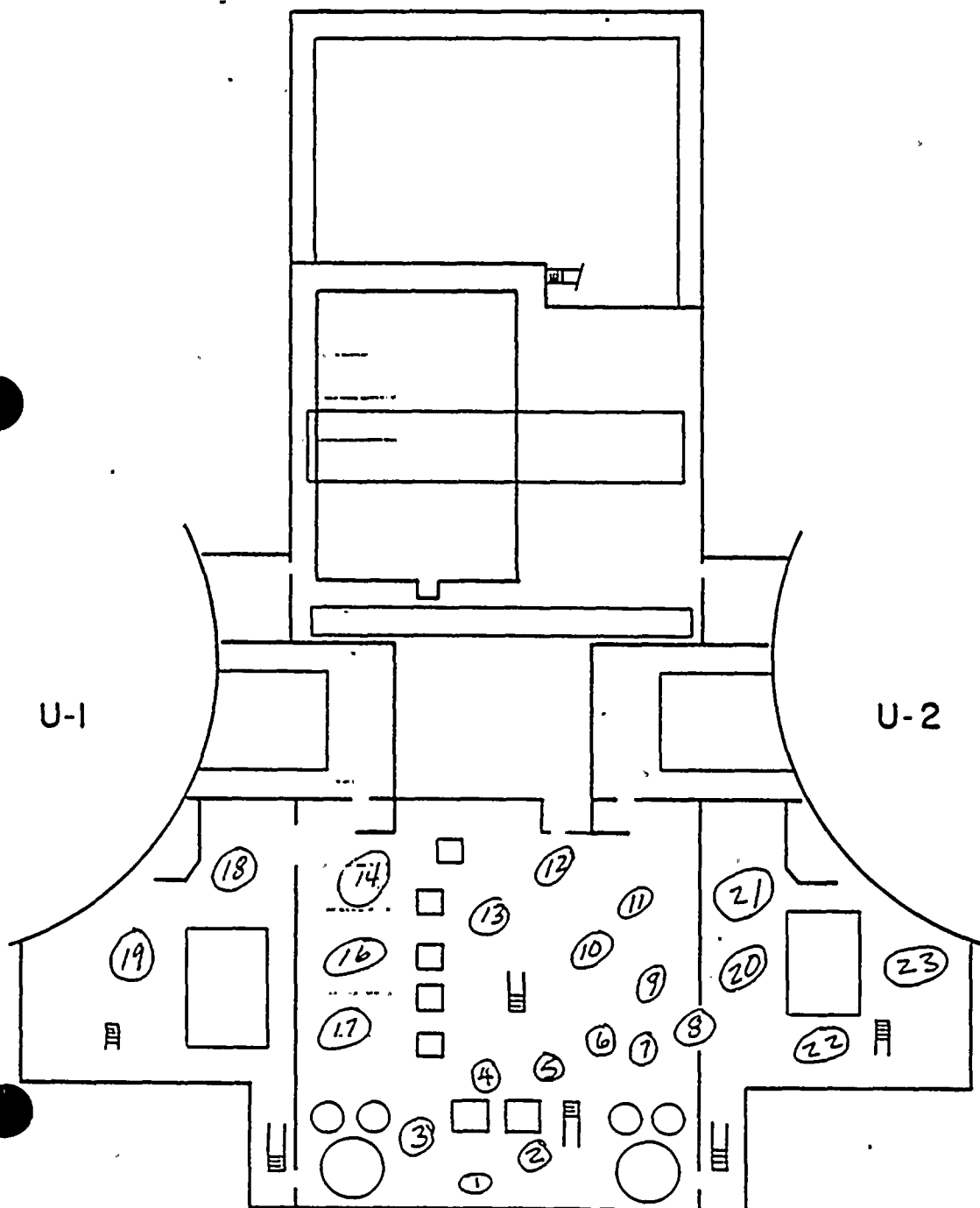
TIME

DATE

REVIEWED BY

DATE

RWP USED:



CONTAMINATION/REMARKS

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. A. IN PLANT RADIATION DATA (CONTINUED)

CONTROL ROOM OSA/TSC HABITABILITY CHECKS

<u>TIME</u>	<u>DOSE RATE (mR/h)</u>
0330	≤ 2
0345	≤ 2
0400	≤ 2
0415	≤ 2
0430	≤ 2
0445	≤ 2
0500	≤ 2
0515	≤ 2
0530	≤ 2
0545	≤ 2
0600	≤ 2
0615	≤ 2
0630	≤ 2
0645	≤ 2
0700	≤ 2
0715	≤ 2
0730	≤ 2
0745	≤ 2
0800	≤ 2

All air sample results are <MDA.

All smears ≤ 100 ncpm.



PERSONNEL CONTAMINATION REPORT

RP-700 REV

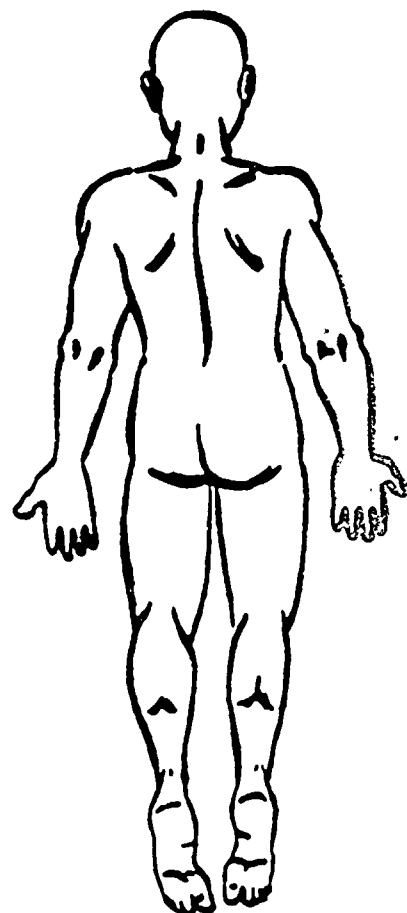
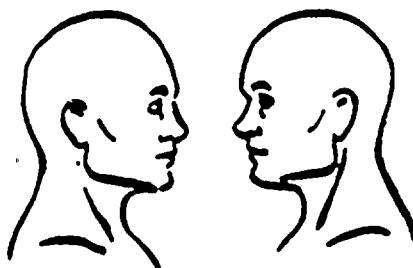
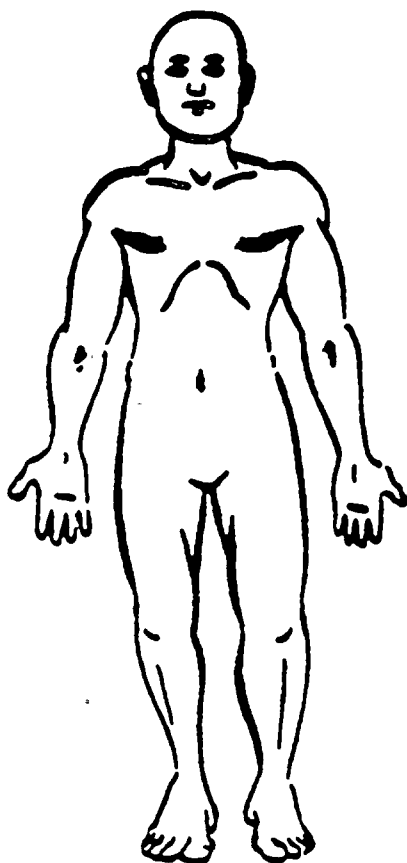
SECTION A

NAME:		COMPANY:		DEPT:	REPORT NO.:
SSN:	DATE:	TIME:	RWP NO.:	ACAD NO.:	
SUPERVISOR:		EXT:	RP TECHNICIAN:		

SECTION B

INSTRUMENT USED:	PROBE:	INSTRUMENT SERIAL NO.:	BKGD:
------------------	--------	------------------------	-------

LOCATION OF CONTAMINATION ON BODY
(DESCRIBE, OUTLINE ON BODY)



CONTAMINATION LEVEL

If applicable, Count Rate with probe adapter attached: _____ ccpm ☐ 1cm adapter ☐ 5cm adapter

(Use No. to reference drawing if more than one area)

No.	Time	Count Rate (ccpm) Before Decon	Decon Method(s)	Count Rate (ccpm) After Decon
1		23,400	As performed	9,360
2			As performed	3,740
			As performed	1,500
			As performed	500
			As performed	<100

Decon Methods: A Wash B Shower C Launder D Tape Lift E Sweating F Weak Chemical Solution G Scrub H Other _____



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. A. IN PLANT RADIATION DATA (CONTINUED)

POST ACCIDENT SAMPLING RESULTS

Total Dilution (PAS panel + Extra Dilution) 1/1000000

After PAS panel dilution sample reads 580 mR.

<u>ISOTOPE</u>	<u>ACTIVITY</u> (μ Ci/ml)
Kr-85M	3.38E-3
Kr-87	6.71E-3
Kr-88	8.79E-3
Xe-131M	9.64E-5
Xe-133	3.05E-3
Xe-133M	4.23E-3
Xe-135	5.75E-3
I-131	2.05E-2
I-132	4.88E-2
I-133	4.12E-2
I-134	2.87E-3
I-135	6.37E-2
Rb-88	1.22E-4
Cs-134	3.55E-4
Cs-137	1.69E-3
Te-129	1.01E-4
Te-132	2.06E-4
Ba-140	1.22E-4
La-140	9.81E-6
La-142	7.87E-6
Pr-144	4.21E-5



DONALD C. COOK NUCLEAR PLANT
EMERGENCY RESPONSE EXERCISE

VIII. B. ON SITE RADIATION DATA

1.0 OUT-OF-PLANT AREA

The onsite, out-of-plant radiological conditions are attributed to the release from the steam generator safety valve. The release through the steam jet air ejectors and gland leakoff systems do not contribute to the offsite radiological conditions because of the limited time the pathway exists and the low flow rate associated with the systems. Therefore, onsite, out-of-plant conditions prior to 0446 will be normal.

Table I provides the controller with out-of-plant radiation conditions in the form of time specific dose rate, airborne and contamination data. Figures 1 through 5 provide the basic plume definition for the time period 0446 to 0730.



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

ON-SITE, OUT OF PLANT RADIOLOGICAL CONDITIONS TO 100' OF CONTAINMENT

TABLE I

Air Samples

Time	DR ₁₀₀	Particulate		Iodine		Contamination Levels
		CPM	μCi/cc	cpm	μCi/cc	cpm
0100-0115	*	*		*		*
0116-0130	*	*		*		*
0131-0145	*	*		*		*
0146-0200	*	*		*		*
0201-0215	*	*		*		*
0215-0230	*	*		*		*
0231-0245	*	*		*		*
0246-0300	*	*		*		*
0301-0315	*	*		*		*
0316-0330	*	*		*		*
0331-0345	*	*		*		*
0346-0400	*	*		*		*
0401-0415	*	*		*		*
0416-0430	*	*		*		*
0431-0445	*	*		*		*
0446-0500	4.15E3	1.88E4	2.99E-7	OSH		30,000
0501-0515	4.16E3	1.88E4	2.99E-7	OSH		60,000
0516-0530	2.84E3	5.14E3	2.05E-7	OSH		91,230
0531-0545	1.72E3	7.75E3	1.23E-7	6.74E5	2.69E-5	100,108
0546-0600	1.07E3	7.22E3	1.15E-7	6.39E5	2.51E-5	101,340
0601-0615	591	2.68E3	4.27E-8	2.34E5	9.32E-6	210,000
0616-0630	375	1.70E3	2.70E-8	1.48E5	5.89E-6	210,950
0631-0645	246	1.11E3	1.77E-8	9.67E4	3.85E-6	215,234
0646-0700	139	628	1.00E-8	5.48E4	2.18E-6	215,500
0701-0715	83	377	6.01E-9	3.29E4	1.31E-6	215,750
0716-0730	58	261	4.15E-9	2.27E4	9.04E-7	215,750
0731-0745	28	130	2.07E-9	1.13E4	4.52E-7	215,850
0746-0800	32	*	*	*	*	215,850
0801-0815	28	*	*	*	*	215,850
0816-0830	28	*	*	*	*	215,850
0831-0846	28	*	*	*	*	215,850

DR₁₀₀ = Dose rate in mR/hr within 100 feet of Containment
 OSH = Off scale high

- 1) Radiological conditions are extreme due to the release rate and the stability class of E. Conditions decrease dramatically as readings are observed off centerline of the plume.



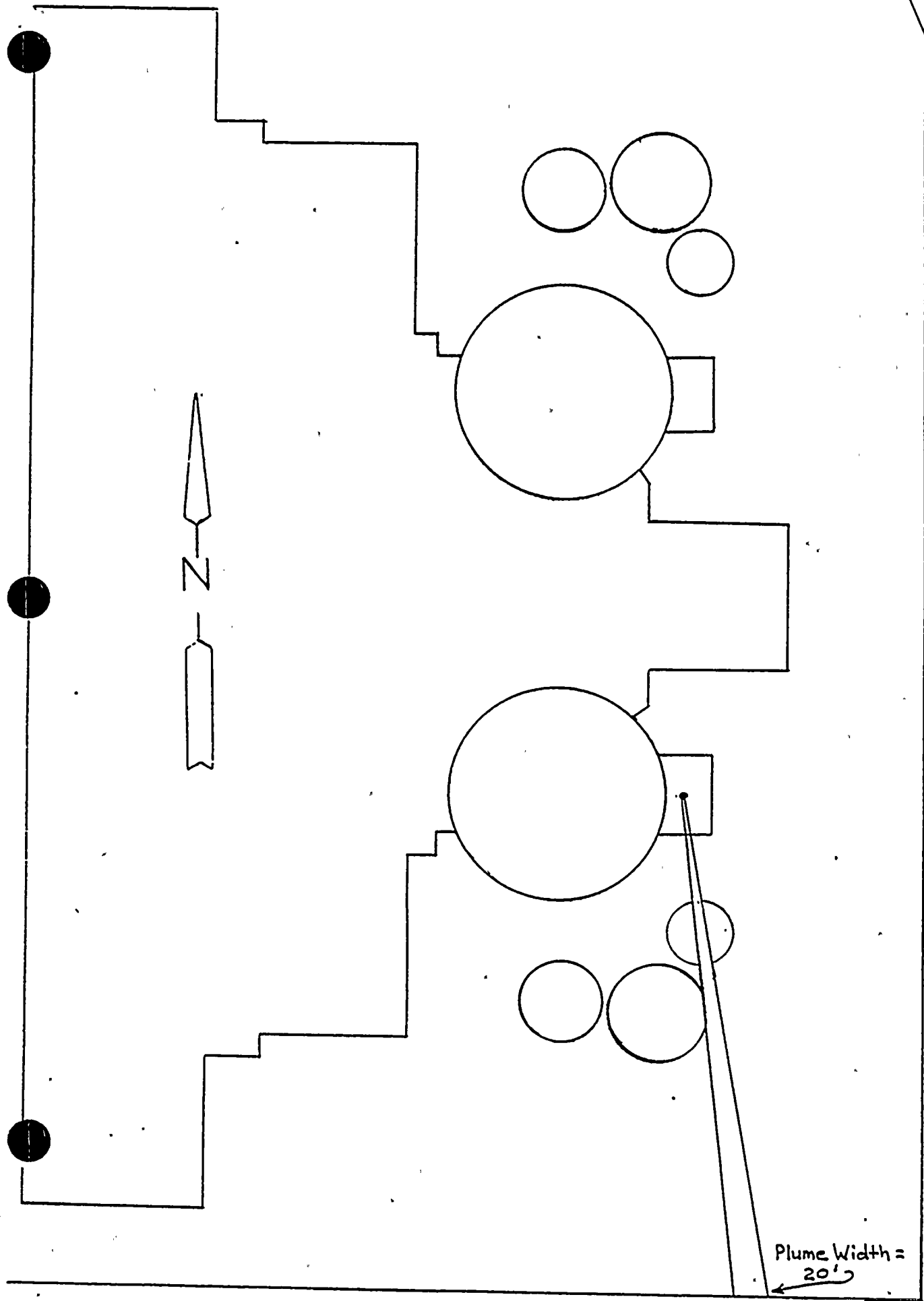


FIGURE 1.

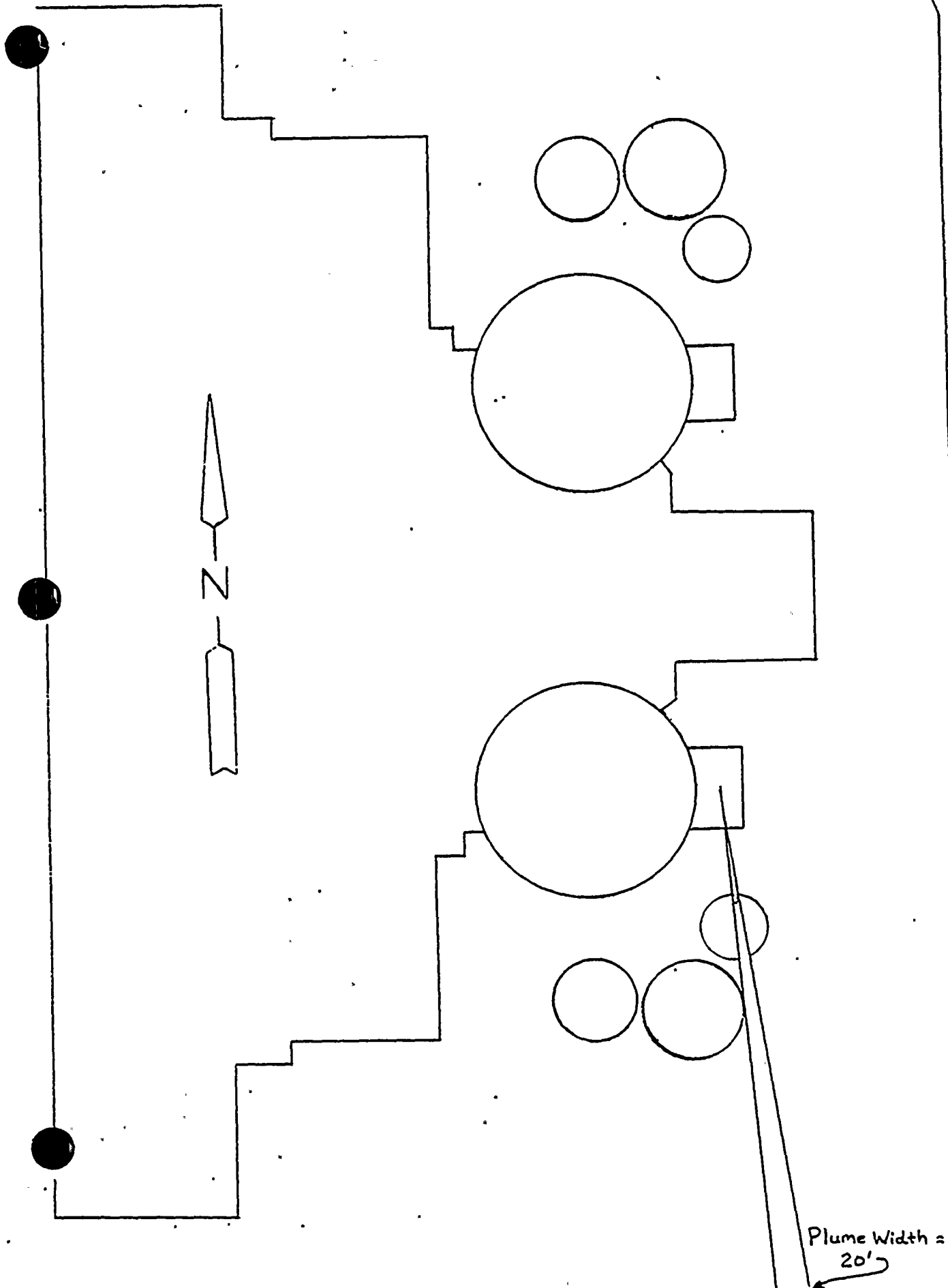


FIGURE 2.



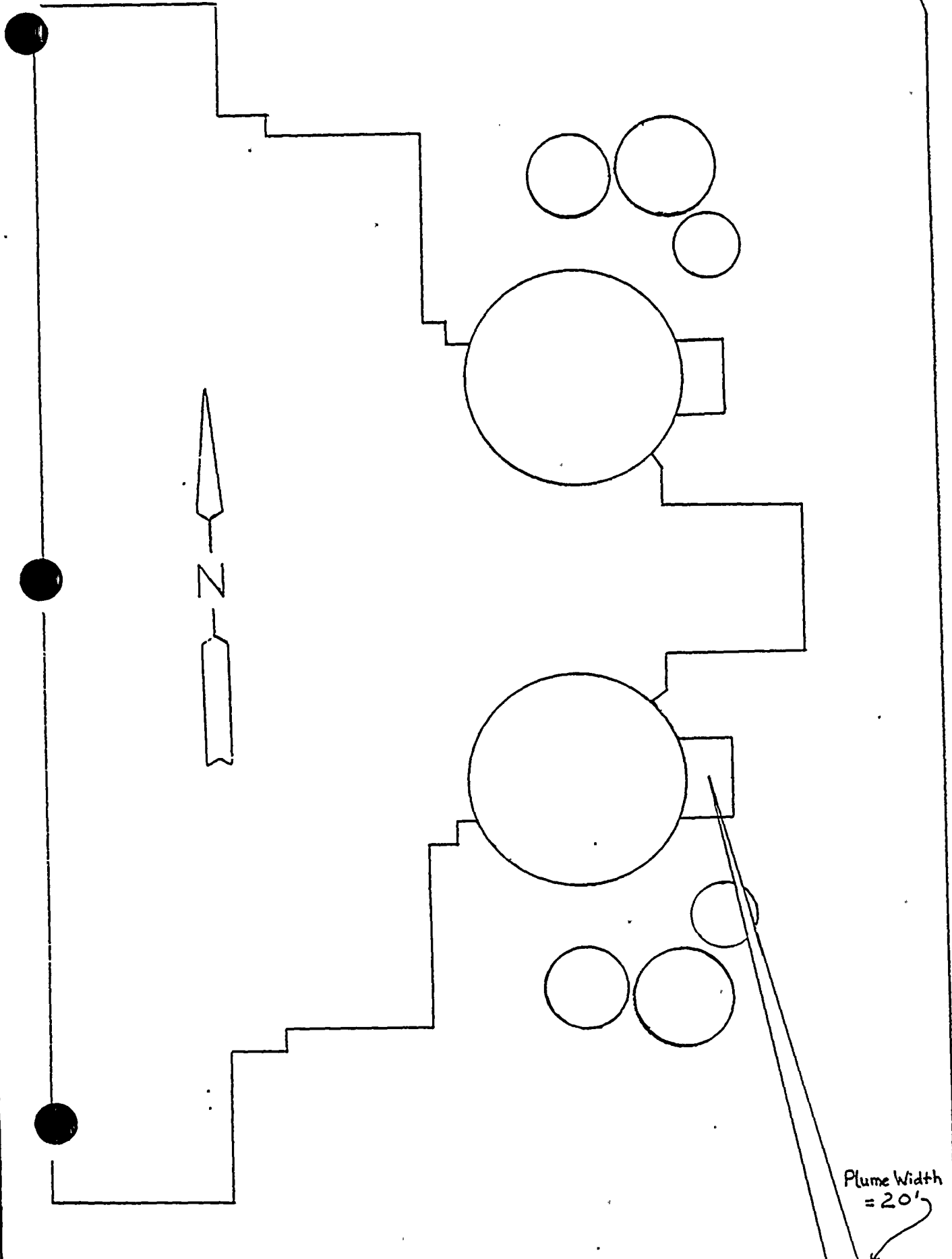


FIGURE 3.

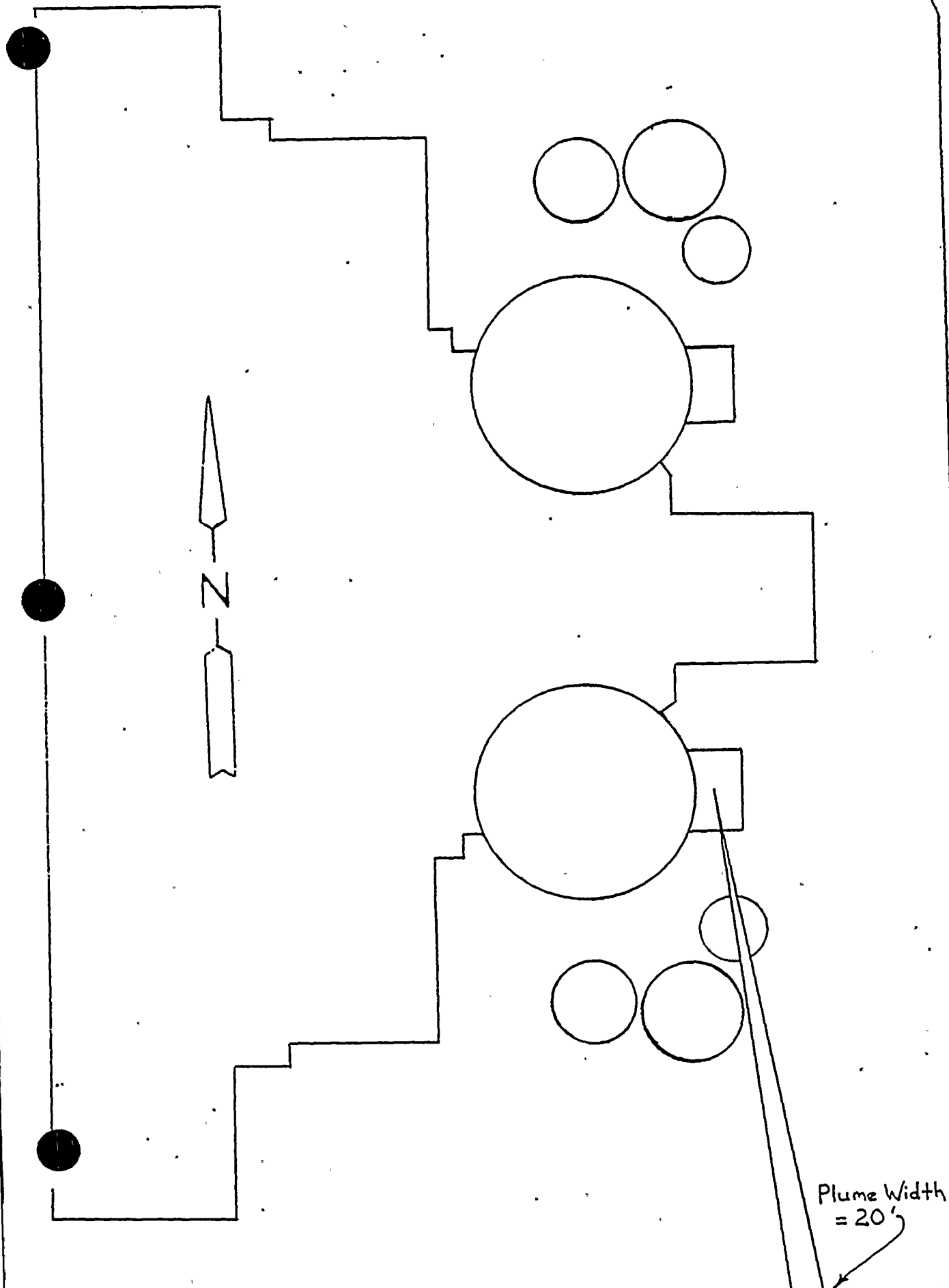


FIGURE 4.



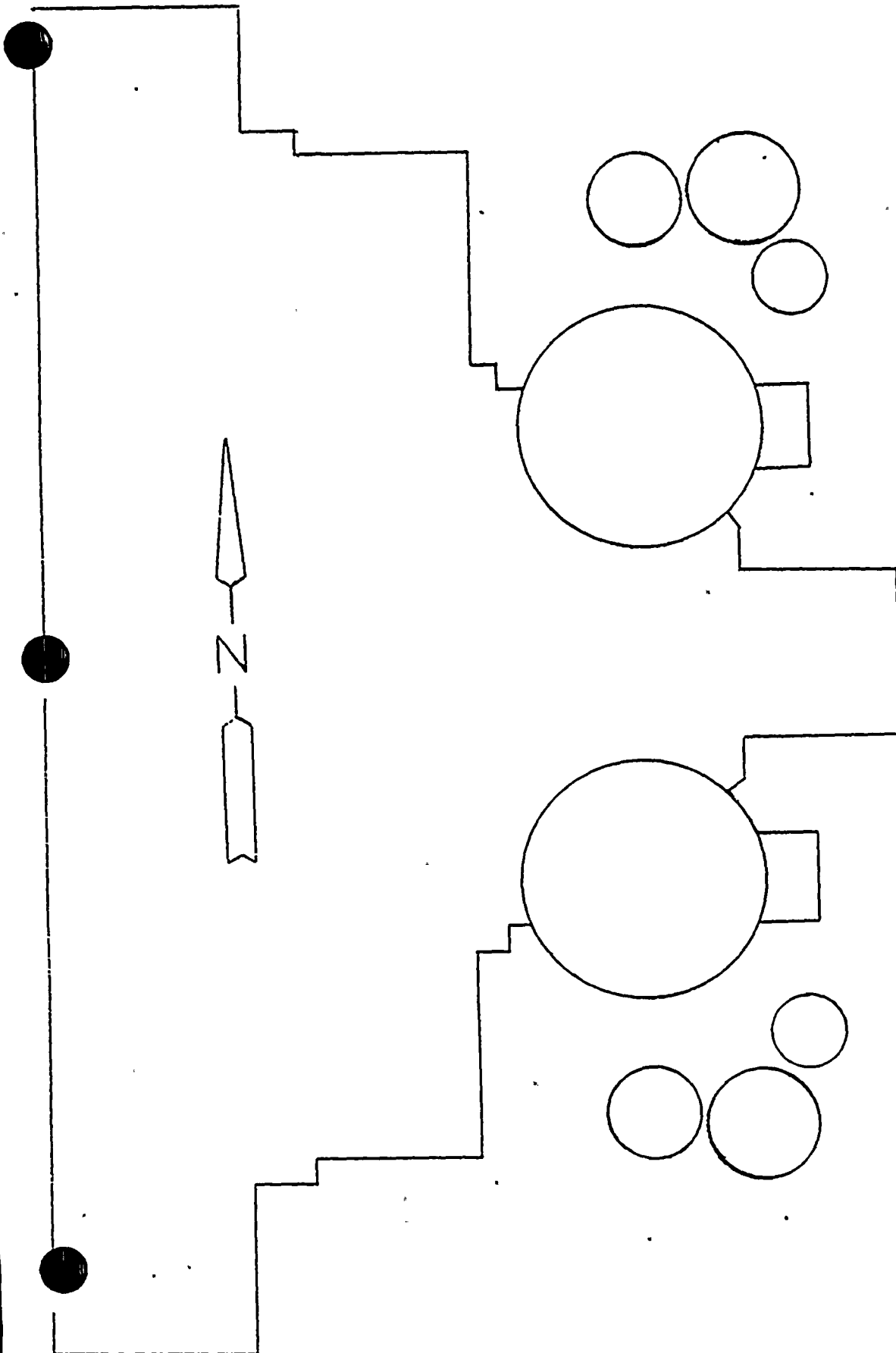


FIGURE 5.

Type of Sample Soil

Date: _____ Time: _____ Person Taking Sample: _____

Location: _____

DRAW MAP

Reference Object: _____

Direction: _____

Distance: _____

Area _____ sq. ft.

Depth _____ inches

Before Sampling:

After Sampling:

Radiation Reading @ 1cm 27.5 mR/hr

Radiation Reading @ 1cm *

@ 1 meter 8 mR/hr

@ 1 meter *

Weather Conditions: _____

Other Comments: ¹ These dose rates are applicable within Site Boundary after the plume has passed (0730) or moved. If samples are collected during the release, then, dose rates will equal the DAP generated dose rate for the Site Boundary at the time of interest. Dose rate should be increased proportional if samples are collected closer to the Plant than Site Boundary (.6 miles).

* = As read



24



25



Type of Sample Vegetation

Date: _____ Time: _____ Person Taking Sample: _____

Location: _____

DRAW MAP

Reference Object: _____

Direction: _____

Distance: _____

Area _____ sq. ft.

Depth _____ inches

1 Before Sampling:

Radiation Reading @ 1cm _____ 36

@ 1 meter _____ 11

After Sampling:

Radiation Reading @ 1cm * 27.5 mR/hr

@ 1 meter * 8 mR/hr

Weather Conditions: _____

Other Comments: 1 These dose rates are applicable within Site Boundary after the plume has passed (0730) or moved. If samples are collected during the release, then, dose rates will equal the DAP generated dose rate for the Site Boundary at the time of interest. Dose rate should be increased proportional if samples are collected closer to the Plant than Site Boundary (.6 miles).

* = As read



DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. C. DOSE PROJECTION DATA.

This section is intended to serve as a base reference for the Environmental Assessment Controller to determine the validity of dose projections performed by the players. It is not anticipated that the players will obtain the exact results contained in this scenario due to variance in the assumptions and operator actions in the simulator. The section consists of actual DAP printouts used to determine offsite radiological data and data.

The assumptions applied in the scenario dose projections are as follows:

1. RELEASE DURATION: Started at 0430, ran with 8.0 hours and decreased at 0.25 hours thereafter.
2. VALVE POSITION: Assumed 50.5% resulting in maximum flow.
3. COOLANT ACTIVITY: Selected failed fuel - gap activity.
4. TIME OF SHUTDOWN: Assumed 0210.
5. IODINE CONCENTRATION: Applied default value of E-3 Noble Gas reading.

At the initial onset of the event a radiological release is initiated through SRA-2800, Gland Steam Leak Off Monitor and SRA-2900, Steam Jet Air Ejector Monitor. This pathway will cease at approximately 0210 when Safety Injection is initiated which isolates the pathway. No further release will take place until the one noted above at 0430.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. C. DOSE PROJECTION DATA (CONTINUED)

Scenario predictions of dose projection results are given in the following table. The definition and units associated with tabulated dose projection parameters are as follows:

- DR_{wb} - Whole body dose rate in mrem/h.
- D_{wb} - Whole body dose in mrem. This is the projected dose, not the integrated dose.
- DR_{thy} - Thyroid dose rate in mrem/h.
- D_{thy} - Thyroid dose in mrem. This is the projected dose, not the integrated dose.
- " - Average gamma energy in MeV.
- Q_{ng} - Noble gas release rate in Ci/s.
- Q_i - Iodine 131 equivalent release rate in Ci/s.
- EAL - Classification mandated by dose.

In addition to the dose projection data, this section also provides meteorology data and forecast. This data should be provided only after the player has successfully demonstrated the ability to obtain it.



RECORDER

REC.

REC.

NAME _____

TITLE _____

TIME 01:45

DATE _____

TIME

PLANT COMMUNICATOR

NAME _____ TITLE _____ TEL NO. _____

2. PLANT NAME/UNIT _____ 2A. PLANT MESSAGE NO. _____

3. CLASS OF EMERGENCY

_ A. UNUSUAL EVENT _ B. ALERT _ C. SITE AREA EMERGENCY _ D. GENERAL EMERGENCY
E. THIS CLASSIFICATION DECLARED AT: TIME _____ DATE _____

4. DESCRIPTION OF EVENT/INITIATING CONDITION _____

5. PROGNOSIS

_ A. STABLE _ B. ESCALATING _ C. DE-ESCALATING _ D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: _ YES _ NO B. FIRE _____

C. POLICE _____ D. AMBULANCE _____

E. HOSPITAL _____ F. OTHER _____

G. SITE EVACUATION: _ YES _ NO LIMITED _____

H. ON-SITE RM TEAMS DISPATCHED: _ YES _ NO TIME _____

I. OFF-SITE RM TEAMS DISPATCHED: _ YES _ NO TIME _____

7. RELEASE INFORMATION

A. POTENTIAL REL. _ YES _ NO B. ACTUAL REL. _ YES _ NO C. REL. TIME _____

D. AIRBORNE _____ E. WATERBORNE _____

F. SURFACE SPILL _____ G. POTENTIAL RELEASE DURATION _____ HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON 1.06 T(DEG C)/ 50.0 Z(M) OR _____ SIGMA THETA (D)B. WIND SPEED, MPH 5.0 C. WIND DIRECTION, DEG, FROM 338 TO 158.D. DOWNWIND SECTOR(S) GHJ E. PRECIPITATION _____

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED _____ MEASURED _____ B. EFF. POINTS & HEIGHT GROUND RELEASEC. NOBLE GAS REL. RATE, CI/SEC 4.05E-04 E. AVERAGE ENERGY/DIS., E.MEV 2.06E-01E. EQUIV I-131 REL. RATE, CI/SEC 4.05E-07 F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

	S.B.	2 MI.	5 MI.	10 MI.
A. WB GAMMA DOSE RATE, MREM/HR	A1. <u>3.20E-03</u>	A2. <u>1.08E-03</u>	A3. <u>4.59E-04</u>	A4. <u>2.01E-04</u>
B. WB GAMMA DOSE, MREM	B1. <u>2.56E-02</u>	B2. <u>8.63E-03</u>	B3. <u>3.68E-03</u>	B4. <u>1.60E-03</u>
C. CT GAMMA DOSE RATE, MREM/HR	C1. <u>1.96E-01</u>	C2. <u>3.18E-02</u>	C3. <u>1.00E-02</u>	C4. <u>4.25E-03</u>
D. CT GAMMA DOSE, MREM	D1. <u>1.57E+00</u>	D2. <u>2.54E-01</u>	D3. <u>8.03E-02</u>	D4. <u>3.40E-02</u>
E. SECTOR(S) AFFECTED	E1. <u>ALL</u>	E2. <u>B-K</u>	E3. <u>GHJ</u>	E4. <u>GHJ</u>
F. ADDITIONAL DATA				

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

	S.B.	MI.	MI.	MI.
A. WB GAMMA DOSE RATE, MREM/HR	A1. _____	A2. _____	A3. _____	A4. _____
B. CT GAMMA DOSE RATE, MREM/HR	B1. _____	B2. _____	B3. _____	B4. _____
C. SECTOR(S) AFFECTED	C1. _____	C2. _____	C3. _____	C4. _____
D. ADDITIONAL DATA				

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE	<u>B-K</u>	<u>2,5,10</u>
B. IN-PLACE SHELTERING	_____	_____
C. EVACUATION	_____	_____
D. KI DISTRIBUTION	_____	_____
E. CONTAMINATION CONTROL	_____	_____
F. OTHER	_____	_____

ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT _____ SQ. FT.

B. ON-SITE _____ SQ. MI.

C. OFF-SITE _____ SQ. MI.

14. ADDITIONAL INFORMATION _____

RECORDER

REC.

REC.

NAME _____

TITLE _____

TIME 02:00

DATE _____

1 THE

1. PLANT COMMUNICATOR

NAME _____ TITLE _____ TEL NO. _____

2. PLANT NAME/UNIT _____ 2A. PLANT MESSAGE NO. _____

3. CLASS OF EMERGENCY

- A. UNUSUAL EVENT - B. ALERT - C. SITE AREA EMERGENCY - D. GENERAL EMERGENCY
E. THIS CLASSIFICATION DECLARED AT: TIME _____ DATE _____

4. DESCRIPTION OF EVENT/INITIATING CONDITION _____

5. PROGNOSIS

- A. STABLE - B. ESCALATING - C. DE-ESCALATING - D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO B. FIRE _____

C. POLICE _____ D. AMBULANCE _____

E. HOSPITAL _____ F. OTHER _____

G. SITE EVACUATION: YES NO LIMITED _____

H. ON-SITE RM TEAMS DISPATCHED: YES NO TIME _____

I. OFF-SITE RM TEAMS DISPATCHED: YES NO TIME _____

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO B. ACTUAL REL. YES NO C. REL. TIME _____

D. AIRBORNE _____ E. WATERBORNE _____

F. SURFACE SPILL _____ G. POTENTIAL RELEASE DURATION _____ HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON 1.11 T(°C)/ 50.0 Z(M) OR _____ SIGMA THETA (D)B. WIND SPEED, MPH 5.0 C. WIND DIRECTION, DEG, FROM 338 TO 158.D. DOWNWIND SECTOR(S) GHJ E. PRECIPITATION _____

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED _____ MEASURED _____ B. EFF. POINTS & HEIGHT GROUND RELEASEC. NOBLE GAS REL. RATE, CI/SEC 1.00E-01 E. AVERAGE ENERGY/DIS., E.MEV 2.06E-01E. EQUIV I-131 REL. RATE, CI/SEC 1.00E-04 F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

	S.B.	2 MI.	5 MI.	10 MI.
A. WB GAMMA DOSE RATE, MREM/HR	A1. <u>7.90E-01</u>	A2. <u>2.67E-01</u>	A3. <u>1.14E-01</u>	A4. <u>4.96E-02</u>
B. WB GAMMA DOSE, MREM	B1. <u>6.12E+00</u>	B2. <u>2.07E+00</u>	B3. <u>8.80E-01</u>	B4. <u>3.84E-01</u>
C. CT GAMMA DOSE RATE, MREM/HR	C1. <u>4.85E+01</u>	C2. <u>7.85E+00</u>	C3. <u>2.48E+00</u>	C4. <u>1.05E+00</u>
D. CT GAMMA DOSE, MREM	D1. <u>3.76E+02</u>	D2. <u>6.09E+01</u>	D3. <u>1.92E+01</u>	D4. <u>8.14E+00</u>
E. SECTOR(S) AFFECTED	E1. <u>ALL</u>	E2. <u>B-K</u>	E3. <u>GHJ</u>	E4. <u>GHJ</u>
F. ADDITIONAL DATA				

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

	S.B.	MI.	MI.	MI.
A. WB GAMMA DOSE RATE, MREM/HR	A1. _____	A2. _____	A3. _____	A4. _____
B. CT GAMMA DOSE RATE, MREM/HR	B1. _____	B2. _____	B3. _____	B4. _____
C. SECTOR(S) AFFECTED	C1. _____	C2. _____	C3. _____	C4. _____
D. ADDITIONAL DATA				

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE	<u>B-K</u>	<u>2,5,10</u>
B. IN-PLACE SHELTERING	_____	_____
C. EVACUATION	_____	_____
D. KI DISTRIBUTION	_____	_____
E. CONTAMINATION CONTROL	_____	_____
F. OTHER	_____	_____

ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT _____ SQ. FT.

B. ON-SITE _____ SQ. MI.

C. OFF-SITE _____ SQ. MI.

14. ADDITIONAL INFORMATION _____



RECORDER

REC.

REC.

NAME

TITLE

TIME

04:45

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

2. PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

C. SITE AREA EMERGENCY

X D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED: YES NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED: YES NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON

.39

T(DEG C)/

50.0

Z(M) OR

SIGMA THETA (D)

B. WIND SPEED, MPH

5.5

C. WIND DIRECTION, DEG, FROM 351. TO 171.

D. DOWNWIND SECTOR(S) HJK

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC

1.36E+02

E. AVERAGE ENERGY/DIS., E.MEV

1.17E-01

E. EQUIV I-131 REL. RATE, CI/SEC

1.36E-01

F. PARTICULATES, CI/SEC

0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 4.62E+02

A2. 1.13E+02

A3. 4.37E+01

A4. 1.92E+01

B. WB GAMMA DOSE, MREM

B1. 3.70E+03

B2. 9.08E+02

B3. 3.50E+02

B4. 1.53E+02

C. CT GAMMA DOSE RATE, MREM/HR

C1. 3.92E+04

C2. 4.48E+03

C3. 1.29E+03

C4. 5.17E+02

D. CT GAMMA DOSE, MREM

D1. 3.13E+05

D2. 3.59E+04

D3. 1.04E+04

D4. 4.14E+03

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. HJK

E4. HJK

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1.

A2.

A3.

A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1.

B2.

B3.

B4.

C. SECTOR(S) AFFECTED

C1.

C2.

C3.

C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

10

B. IN-PLACE SHELTERING

HJK

5

C. EVACUATION

B-K

2

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT

SQ. FT.

B. ON-SITE

SQ. MI.

C. OFF-SITE

SQ. MI.

14. ADDITIONAL INFORMATION

RECORDER

REC.

REC.

NAME _____

TITLE _____

TIME 05:00

DATE _____

LINE

1. PLANT COMMUNICATOR

NAME _____

TITLE _____

TEL NO. _____

2. PLANT NAME/UNIT _____

2A. PLANT MESSAGE NO. _____

3. CLASS OF EMERGENCY

☐ A. UNUSUAL EVENT ☐ B. ALERT ☐ C. SITE AREA EMERGENCY ☒ D. GENERAL EMERGENCY
E. THIS CLASSIFICATION DECLARED AT: TIME _____ DATE _____

4. DESCRIPTION OF EVENT/INITIATING CONDITION _____

5. PROGNOSIS

☐ A. STABLE ☐ B. ESCALATING ☐ C. DE-ESCALATING ☐ D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: ☐ YES ☐ NO B. FIRE _____
C. POLICE _____ D. AMBULANCE _____
E. HOSPITAL _____ F. OTHER _____

G. SITE EVACUATION: ☐ YES ☐ NO LIMITED _____H. ON-SITE RM TEAMS DISPATCHED: ☐ YES ☐ NO TIME _____I. OFF-SITE RM TEAMS DISPATCHED: ☐ YES ☐ NO TIME _____

7. RELEASE INFORMATION

A. POTENTIAL REL. ☐ YES ☐ NO B. ACTUAL REL. ☐ YES ☐ NO C. REL. TIME _____

D. AIRBORNE _____

E. WATERBORNE _____

F. SURFACE SPILL _____

G. POTENTIAL RELEASE DURATION _____ HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .44 T(DEG C)/ 50.0 Z(M) OR _____ SIGMA THETA (D)B. WIND SPEED, MPH 5.5 C. WIND DIRECTION, DEG, FROM 351 TO 171.D. DOWNWIND SECTOR(S) HJK

E. PRECIPITATION _____

RADIOLOGICAL RELEASE DATA

A. ESTIMATED _____ MEASURED _____ B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 1.36E+02 E. AVERAGE ENERGY/DIS., E.MEV 1.13E-01E. EQUIV I-131 REL. RATE, CI/SEC 1.36E-01 F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

	S.B.	2 MI.	5 MI.	10 MI.
A. WB GAMMA DOSE RATE, MREM/HR.	A1. <u>4.45E+02</u>	A2. <u>1.09E+02</u>	A3. <u>4.21E+01</u>	A4. <u>1.84E+01</u>
B. WB GAMMA DOSE, MREM	B1. <u>3.45E+03</u>	B2. <u>8.46E+02</u>	B3. <u>3.26E+02</u>	B4. <u>1.43E+02</u>
C. CT GAMMA DOSE RATE, MREM/HR	C1. <u>3.91E+04</u>	C2. <u>4.47E+03</u>	C3. <u>1.29E+03</u>	C4. <u>5.16E+02</u>
D. CT GAMMA DOSE, MREM	D1. <u>3.03E+05</u>	D2. <u>3.46E+04</u>	D3. <u>1.00E+04</u>	D4. <u>4.00E+03</u>
E. SECTOR(S) AFFECTED	E1. <u>ALL</u>	E2. <u>B-K</u>	E3. <u>HJK</u>	E4. <u>HJK</u>
F. ADDITIONAL DATA				

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

	S.B.	MI.	MI.	MI.
A. WB GAMMA DOSE RATE, MREM/HR	A1. _____	A2. _____	A3. _____	A4. _____
B. CT GAMMA DOSE RATE, MREM/HR	B1. _____	B2. _____	B3. _____	B4. _____
C. SECTOR(S) AFFECTED	C1. _____	C2. _____	C3. _____	C4. _____
D. ADDITIONAL DATA				

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE	<u>B-K</u>	<u>10</u>
B. IN-PLACE SHELTERING	<u>HJK</u>	<u>5</u>
C. EVACUATION	<u>B-K</u>	<u>2</u>
D. KI DISTRIBUTION	_____	_____
E. CONTAMINATION CONTROL	_____	_____
F. OTHER	_____	_____

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT _____ SQ. FT.
B. ON-SITE _____ SQ. MI.
C. OFF-SITE _____ SQ. MI.

14. ADDITIONAL INFORMATION _____

RECORDER

REC.

REC.

NAME

TITLE

TIME 05:15

DATE

LINE

PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT B. ALERT C. SITE AREA EMERGENCY ☒ D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT: TIME DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE B. ESCALATING C. DE-ESCALATING D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO LIMITED

H. ON-SITE RM TEAMS DISPATCHED: YES NO TIME

I. OFF-SITE RM TEAMS DISPATCHED: YES NO TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .50 T(DEG C)/ 50.0 Z(M) OR SIGMA THETA (D)

B. WIND SPEED, MPH 5.2

C. WIND DIRECTION, DEG, FROM 352. TO 172.

D. DOWNWIND SECTOR(S) HJK

E. PRECIPITATION

RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 8.62E+01

E. AVERAGE ENERGY/DIS., E.MEV 1.09E-01

E. EQUIV I-131 REL. RATE, CI/SEC 8.62E-02

F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 2.89E+02 A2. 7.08E+01 A3. 2.73E+01 A4. 1.20E+01

B. WB GAMMA DOSE, MREM

B1. 2.18E+03 B2. 5.35E+02 B3. 2.06E+02 B4. 9.03E+01

C. CT GAMMA DOSE RATE, MREM/HR

C1. 2.62E+04 C2. 3.00E+03 C3. 8.66E+02 C4. 3.46E+02

D. CT GAMMA DOSE, MREM

D1. 1.98E+05 D2. 2.26E+04 D3. 6.54E+03 D4. 2.61E+03

E. SECTOR(S) AFFECTED

E1. ALL E2. B-K E3. HJK E4. HJK

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. A2. A3. A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1. B2. B3. B4.

C. SECTOR(S) AFFECTED

C1. C2. C3. C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

10

B. IN-PLACE SHELTERING

B-K / HJK

2 / 5

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT SQ. FT.

B. ON-SITE SQ. MI.

C. OFF-SITE SQ. MI.

14. ADDITIONAL INFORMATION



RECORDER

REC.

REC.

NAME

TITLE

TIME

05:30

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

2. PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

C. SITE AREA EMERGENCY

☒

D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON

.44 T(DEG C)/ 50.0 Z(M) OR SIGMA THETA (D)

B. WIND SPEED, MPH 5.2

C. WIND DIRECTION, DEG, FROM 353. TO 173.

D. DOWNWIND SECTOR(S) HJK

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 5.16E+01

E. AVERAGE ENERGY/DIS., E.MEV 1.05E-01

E. EQUIV I-131 REL. RATE, CI/SEC 5.16E-02

F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 1.67E+02

A2. 4.10E+01

A3. 1.53E+01

A4. 6.92E+00

B. WB GAMMA DOSE, MREM

B1. 1.21E+03

B2. 2.97E+02

B3. 1.15E+02

B4. 5.02E+01

C. CT GAMMA DOSE RATE, MREM/HR

C1. 1.57E+04

C2. 1.79E+03

C3. 5.18E+02

C4. 2.07E+02

D. CT GAMMA DOSE, MREM

D1. 1.14E+05

D2. 1.30E+04

D3. 3.76E+03

D4. 1.50E+03

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. HJK

E4. HJK

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1.

A2.

A3.

A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1.

B2.

B3.

B4.

C. SECTOR(S) AFFECTED

C1.

C2.

C3.

C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

5, 10

B. IN-PLACE SHELTERING

B-K

2

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT SQ. FT.

B. ON-SITE SQ. MI.

C. OFF-SITE SQ. MI.

14. ADDITIONAL INFORMATION



11
12

13

14

15
16

RECORDER

REC.

REC.

NAME

TITLE

TIME

05:45

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

2. PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

C. SITE AREA EMERGENCY

X D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED: YES NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED: YES NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON

.44

T(DEG C)/

50.0

Z(M) OR

SIGMA THETA (D)

B. WIND SPEED, MPH 5.1

C. WIND DIRECTION, DEG, FROM 352. TO 172.

D. DOWNWIND SECTOR(S) HJK

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 3.18E+01

E. AVERAGE ENERGY/DIS., E.MEV 1.02E-01

E. EQUIV I-131 REL. RATE, CI/SEC 3.18E-02

F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 1.02E+02

A2. 2.50E+01

A3. 9.63E+00

A4. 4.22E+00

B. WB GAMMA DOSE, MREM

B1. 7.13E+02

B2. 1.75E+02

B3. 6.74E+01

B4. 2.95E+01

C. CT GAMMA DOSE RATE, MREM/HR

C1. 9.87E+03

C2. 1.13E+03

C3. 3.26E+02

C4. 1.30E+02

D. CT GAMMA DOSE, MREM

D1. 6.91E+04

D2. 7.90E+03

D3. 2.28E+03

D4. 9.12E+02

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. HJK

E4. HJK

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1.

A2.

A3.

A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1.

B2.

B3.

B4.

C. SECTOR(S) AFFECTED

C1.

C2.

C3.

C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

5, 10

B. IN-PLACE SHELTERING

B-K

2

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT

SQ. FT.

B. ON-SITE

SQ. MI.

C. OFF-SITE

SQ. MI.

14. ADDITIONAL INFORMATION

RECORDER

REC.

REC.

NAME _____

TITLE _____

TIME 06:00

DATE _____

LINE

1. PLANT COMMUNICATOR

NAME _____ TITLE _____ TEL NO. _____

PLANT NAME/UNIT _____ 2A. PLANT MESSAGE NO. _____

2. CLASS OF EMERGENCY

☐ A. UNUSUAL EVENT ☐ B. ALERT ☐ C. SITE AREA EMERGENCY ☒ D. GENERAL EMERGENCY
E. THIS CLASSIFICATION DECLARED AT: TIME _____ DATE _____

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

☐ A. STABLE ☐ B. ESCALATING ☐ C. DE-ESCALATING ☐ D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: ☐ YES ☐ NO B. FIRE _____
C. POLICE _____ D. AMBULANCE _____
E. HOSPITAL _____ F. OTHER _____

G. SITE EVACUATION: ☐ YES ☐ NO LIMITED _____H. ON-SITE RM TEAMS DISPATCHED: ☐ YES ☐ NO TIME _____I. OFF-SITE RM TEAMS DISPATCHED: ☐ YES ☐ NO TIME _____

7. RELEASE INFORMATION

A. POTENTIAL REL. ☐ YES ☐ NO B. ACTUAL REL. ☐ YES ☐ NO C. REL. TIME _____
D. AIRBORNE _____ E. WATERBORNE _____
F. SURFACE SPILL _____ G. POTENTIAL RELEASE DURATION _____ HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .44 T(DEG C)/ 50.0 Z(M) OR _____ SIGMA THETA (D)
B. WIND SPEED, MPH 5.8 C. WIND DIRECTION, DEG, FROM 353 TO 173.
D. DOWNWIND SECTOR(S) HJK E. PRECIPITATION _____

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED _____ MEASURED _____ B. EFF. POINTS & HEIGHT GROUND RELEASE
C. NOBLE GAS REL. RATE, CI/SEC 1.95E+01 E. AVERAGE ENERGY/DIS., E.MEV 9.90E-02
E. EQUIV I-131 REL. RATE, CI/SEC 1.95E-02 F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

A. WB GAMMA DOSE RATE, MREM/HR

S.B.	2 MI.	5 MI.	10 MI.
A1. <u>5.33E+01</u>	A2. <u>1.31E+01</u>	A3. <u>5.04E+00</u>	A4. <u>2.21E+00</u>

B. WB GAMMA DOSE, MREM

B1. <u>3.60E+02</u>	B2. <u>8.82E+01</u>	B3. <u>3.40E+01</u>	B4. <u>1.49E+01</u>
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C. CT GAMMA DOSE RATE, MREM/HR

C1. <u>5.32E+03</u>	C2. <u>6.09E+02</u>	C3. <u>1.76E+02</u>	C4. <u>7.03E+01</u>
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D. CT GAMMA DOSE, MREM

D1. <u>3.59E+04</u>	D2. <u>4.11E+03</u>	D3. <u>1.19E+03</u>	D4. <u>4.74E+02</u>
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E. SECTOR(S) AFFECTED

E1. <u>ALL</u>	E2. <u>B-K</u>	E3. <u>HJK</u>	E4. <u>HJK</u>
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F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

A. WB GAMMA DOSE RATE, MREM/HR

S.B.	MI.	MI.	MI.
A1. _____	A2. _____	A3. _____	A4. _____

B. CT GAMMA DOSE RATE, MREM/HR

B1. _____	B2. _____	B3. _____	B4. _____
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C. SECTOR(S) AFFECTED

C1. _____	C2. _____	C3. _____	C4. _____
-----------	-----------	-----------	-----------

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K2,5,10

B. IN-PLACE SHELTERING

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT _____ SQ. FT.

B. ON-SITE _____ SQ. MI.

C. OFF-SITE _____ SQ. MI.

14. ADDITIONAL INFORMATION

RECORDER

REC.

REC.

NAME

TITLE

TIME 06:15

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

2. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

C. SITE AREA EMERGENCY

X D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS.

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED:

YES NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED:

YES NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON

.44

T(DEG C)/

50.0

Z(M) OR

SIGMA THETA (D)

B. WIND SPEED, MPH

5.5

C. WIND DIRECTION, DEG, FROM 351. TO 171.

D. DOWNWIND SECTOR(S) HJK

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC

1.22E+01

E. AVERAGE ENERGY/DIS., E.MEV

9.61E-02

E. EQUIV I-131 REL. RATE, CI/SEC

1.22E-02

F. PARTICULATES, CI/SEC

0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 3.40E+01

A2. 8.34E+00

A3. 3.21E+00

A4. 1.41E+00

B. WB GAMMA DOSE, MREM

B1. 2.21E+02

B2. 5.42E+01

B3. 2.09E+01

B4. 9.15E+00

C. CT GAMMA DOSE RATE, MREM/HR

C1. 3.50E+03

C2. 4.00E+02

C3. 1.16E+02

C4. 4.62E+01

D. CT GAMMA DOSE, MREM

D1. 2.27E+04

D2. 2.60E+03

D3. 7.51E+02

D4. 3.00E+02

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. HJK

E4. HJK

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1.

A2.

A3.

A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1.

B2.

B3.

B4.

C. SECTOR(S) AFFECTED

C1.

C2.

C3.

C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

2,5,10

B. IN-PLACE SHELTERING

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT

SQ. FT.

B. ON-SITE

SQ. MI.

C. OFF-SITE

SQ. MI.

14. ADDITIONAL INFORMATION



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RECORDER

REC.

REC.

NAME _____

TITLE _____

TIME 06:30

DATE _____

LINE

1. PLANT COMMUNICATOR

NAME _____ TITLE _____ TEL NO. _____

PLANT NAME/UNIT _____ 2A. PLANT MESSAGE NO. _____

3. CLASS OF EMERGENCY

☐ A. UNUSUAL EVENT ☐ B. ALERT ☐ C. SITE AREA EMERGENCY ☒ D. GENERAL EMERGENCY
E. THIS CLASSIFICATION DECLARED AT: TIME _____ DATE _____

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

☐ A. STABLE ☐ B. ESCALATING ☐ C. DE-ESCALATING ☐ D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: ☐ YES ☐ NO B. FIRE _____

C. POLICE _____ D. AMBULANCE _____

E. HOSPITAL _____ F. OTHER _____

G. SITE EVACUATION: ☐ YES ☐ NO LIMITED _____H. ON-SITE RM TEAMS DISPATCHED: ☐ YES ☐ NO TIME _____I. OFF-SITE RM TEAMS DISPATCHED: ☐ YES ☐ NO TIME _____

7. RELEASE INFORMATION

A. POTENTIAL REL. ☐ YES ☐ NO B. ACTUAL REL. ☐ YES ☐ NO C. REL. TIME _____

D. AIRBORNE _____ E. WATERBORNE _____

F. SURFACE SPILL _____ G. POTENTIAL RELEASE DURATION _____ HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .50 T(DEG C)/ 50.0 Z(M) OR _____ SIGMA THETA (D)B. WIND SPEED, MPH 5.6 C. WIND DIRECTION, DEG, FROM 347. TO 167.D. DOWNWIND SECTOR(S) GHJ E. PRECIPITATION _____

RADIOLOGICAL RELEASE DATA

A. ESTIMATED _____ MEASURED _____ B. EFF. POINTS & HEIGHT GROUND RELEASEC. NOBLE GAS REL. RATE, CI/SEC 7.52E+00 E. AVERAGE ENERGY/DIS., E.MEV 9.33E-02E. EQUIV I-131 REL. RATE, CI/SEC 7.52E-03 F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR A1. 2.00E+01 A2. 4.92E+00 A3. 1.89E+00 A4. 8.30E-01B. WB GAMMA DOSE, MREM B1. 1.25E+02 B2. 3.07E+01 B3. 1.18E+01 B4. 5.19E+00C. CT GAMMA DOSE RATE, MREM/HR C1. 2.12E+03 C2. 2.43E+02 C3. 7.01E+01 C4. 2.80E+01D. CT GAMMA DOSE, MREM D1. 1.33E+04 D2. 1.52E+03 D3. 4.38E+02 D4. 1.75E+02E. SECTOR(S) AFFECTED E1. ALL E2. B-K E3. GHJ E4. GHJ

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR A1. _____ A2. _____ A3. _____ A4. _____

B. CT GAMMA DOSE RATE, MREM/HR B1. _____ B2. _____ B3. _____ B4. _____

C. SECTOR(S) AFFECTED C1. _____ C2. _____ C3. _____ C4. _____

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE B-K 2,5,10

B. IN-PLACE SHELTERING _____

C. EVACUATION _____

D. KI DISTRIBUTION _____

E. CONTAMINATION CONTROL _____

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT _____ SQ. FT.

B. ON-SITE _____ SQ. MI.

C. OFF-SITE _____ SQ. MI.

14. ADDITIONAL INFORMATION

100

100

100

100

RECORDER

REC.

REC.

NAME

TITLE

TIME

06:45

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

2. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

☒ C. SITE AREA EMERGENCY

D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .50 T(DEG C)/ 50.0 Z(M) OR SIGMA THETA (D)

B. WIND SPEED, MPH 6.2

C. WIND DIRECTION, DEG, FROM 347. TO 167.

D. DOWNWIND SECTOR(S) GHJ

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 4.60E+00

E. AVERAGE ENERGY/DIS., E.MEV 9.08E-02

E. EQUIV I-131 REL. RATE, CI/SEC 4.60E-03

F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 1.08E+01

A2. 2.64E+00

A3. 1.02E+00

A4. 4.45E-01

B. WB GAMMA DOSE, MREM

B1. 6.45E+01

B2. 1.58E+01

B3. 6.10E+00

B4. 2.67E+00

C. CT GAMMA DOSE RATE, MREM/HR

C1. 1.17E+03

C2. 1.34E+02

C3. 3.87E+01

C4. 1.55E+01

D. CT GAMMA DOSE, MREM

D1. 7.03E+03

D2. 8.04E+02

D3. 2.32E+02

D4. 9.28E+01

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. GHJ

E4. GHJ

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. _____

A2. _____

A3. _____

A4. _____

B. CT GAMMA DOSE RATE, MREM/HR

B1. _____

B2. _____

B3. _____

B4. _____

C. SECTOR(S) AFFECTED

C1. _____

C2. _____

C3. _____

C4. _____

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

2, 5, 10

B. IN-PLACE SHELTERING

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT

SQ. FT.

B. ON-SITE

SQ. MI.

C. OFF-SITE

SQ. MI.

14. ADDITIONAL INFORMATION

11

12

13

14

RECORDER

REC.

REC.

NAME

TITLE

TIME

07:00

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

☒ C. SITE AREA EMERGENCY

D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON

.22

T(DEG C)/

50.0

Z(M) OR

SIGMA THETA (D)

B. WIND SPEED, MPH

6.2

C. WIND DIRECTION, DEG, FROM 347. TO 167.

D. DOWNWIND SECTOR(S) GHJ

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC

2.90E+00

E. AVERAGE ENERGY/DIS., E.MEV

8.83E-02

E. EQUIV I-131 REL. RATE, CI/SEC

2.90E-03

F. PARTICULATES, CI/SEC

0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 6.59E+00

A2. 1.62E+00

A3. 6.23E-01

A4. 2.73E-01

B. WB GAMMA DOSE, MREM

B1. 3.79E+01

B2. 9.30E+00

B3. 3.58E+00

B4. 1.57E+00

C. CT GAMMA DOSE RATE, MREM/HR

C1. 7.38E+02

C2. 8.45E+01

C3. 2.44E+01

C4. 9.75E+00

D. CT GAMMA DOSE, MREM

D1. 4.24E+03

D2. 4.86E+02

D3. 1.40E+02

D4. 5.61E+01

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. GHJ

E4. GHJ

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1.

A2.

A3.

A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1.

B2.

B3.

B4.

C. SECTOR(S) AFFECTED

C1.

C2.

C3.

C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

2, 5, 10

B. IN-PLACE SHELTERING

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT

SQ. FT.

B. ON-SITE

SQ. MI.

C. OFF-SITE

SQ. MI.

14. ADDITIONAL INFORMATION



111

111



111



RECORDER

REC.

REC.

NAME

TITLE

TIME 07:15

DATE

LINE

1. PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

2. PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT

B. ALERT

☒ C. SITE AREA EMERGENCY

D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .28 T(DEG C)/ 50.0 Z(M) OR SIGMA THETA (D)

B. WIND SPEED, MPH 6.0

C. WIND DIRECTION, DEG, FROM 347. TO 167.

D. DOWNWIND SECTOR(S) GHJ

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 1.81E+00

E. AVERAGE ENERGY/DIS., E.MEV 8.60E-02

E. EQUIV I-131 REL. RATE, CI/SEC 1.81E-03

F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 4.14E+00 A2. 1.02E+00 A3. 3.91E-01 A4. 1.71E-01

B. WB GAMMA DOSE, MREM

B1. 2.28E+01 B2. 5.58E+00 B3. 2.15E+00 B4. 9.42E-01

C. CT GAMMA DOSE RATE, MREM/HR

C1. 4.76E+02 C2. 5.44E+01 C3. 1.57E+01 C4. 6.28E+00

D. CT GAMMA DOSE, MREM

D1. 2.62E+03 D2. 2.99E+02 D3. 8.64E+01 D4. 3.45E+01

E. SECTOR(S) AFFECTED

E1. ALL E2. B-K E3. GHJ E4. GHJ

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. A2. A3. A4.

B. CT GAMMA DOSE RATE, MREM/HR

B1. B2. B3. B4.

C. SECTOR(S) AFFECTED

C1. C2. C3. C4.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

2, 5, 10

B. IN-PLACE SHELTERING

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

13. ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT SQ. FT.

B. ON-SITE SQ. MI.

C. OFF-SITE SQ. MI.

14. ADDITIONAL INFORMATION

RECORDER

REC.

REC.

NAME

TITLE

TIME 07:30

DATE

TIME

PLANT COMMUNICATOR

NAME

TITLE

TEL NO.

2. PLANT NAME/UNIT

2A. PLANT MESSAGE NO.

3. CLASS OF EMERGENCY

A. UNUSUAL EVENT

X B. ALERT

C. SITE AREA EMERGENCY

D. GENERAL EMERGENCY

E. THIS CLASSIFICATION DECLARED AT:

TIME

DATE

4. DESCRIPTION OF EVENT/INITIATING CONDITION

5. PROGNOSIS

A. STABLE

B. ESCALATING

C. DE-ESCALATING

D. TERMINATING

6. PLANT EMERGENCY RESPONSE ACTIONS UNDERWAY

A. OFF-SITE ASSISTANCE PREV. REQUESTED: YES NO

B. FIRE

C. POLICE

D. AMBULANCE

E. HOSPITAL

F. OTHER

G. SITE EVACUATION: YES NO

LIMITED

H. ON-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

I. OFF-SITE RM TEAMS DISPATCHED:

YES

NO

TIME

7. RELEASE INFORMATION

A. POTENTIAL REL. YES NO

B. ACTUAL REL. YES NO

C. REL. TIME

D. AIRBORNE

E. WATERBORNE

F. SURFACE SPILL

G. POTENTIAL RELEASE DURATION HRS

8. METEOROLOGICAL DATA

A. STABILITY CLASS E BASED ON .06 T(DEG C)/ 50.0 Z(M) OR SIGMA THETA (D)

B. WIND SPEED, MPH 5.9

C. WIND DIRECTION, DEG, FROM 347. TO 167.

D. DOWNWIND SECTOR(S) GHJ

E. PRECIPITATION

9. RADIOLOGICAL RELEASE DATA

A. ESTIMATED MEASURED

B. EFF. POINTS & HEIGHT GROUND RELEASE

C. NOBLE GAS REL. RATE, CI/SEC 1.08E+00

E. AVERAGE ENERGY/DIS., E.MEV 8.18E-02

E. EQUIV I-131 REL. RATE, CI/SEC 1.08E-03

F. PARTICULATES, CI/SEC 0.00E+00

10. CALCULATED OFF-SITE DOSE

DISTANCE

S.B.

2 MI.

5 MI.

10 MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. 2.39E+00

A2. 5.86E-01

A3. 2.26E-01

A4. 9.90E-02

B. WB GAMMA DOSE, MREM

B1. 1.25E+01

B2. 3.08E+00

B3. 1.19E+00

B4. 5.20E-01

C. CT GAMMA DOSE RATE, MREM/HR

C1. 2.89E+02

C2. 3.31E+01

C3. 9.54E+00

C4. 3.81E+00

D. CT GAMMA DOSE, MREM

D1. 1.52E+03

D2. 1.74E+02

D3. 5.01E+01

D4. 2.00E+01

E. SECTOR(S) AFFECTED

E1. ALL

E2. B-K

E3. GHJ

E4. GHJ

F. ADDITIONAL DATA

11. MEASURED OFF-SITE DOSE RATES

DISTANCE

S.B.

MI.

MI.

MI.

A. WB GAMMA DOSE RATE, MREM/HR

A1. MI.

A2. MI.

A3. MI.

A4. MI.

B. CT GAMMA DOSE RATE, MREM/HR

B1. MI.

B2. MI.

B3. MI.

B4. MI.

C. SECTOR(S) AFFECTED

C1. MI.

C2. MI.

C3. MI.

C4. MI.

D. ADDITIONAL DATA

12. PROTECTION ACTION REC.

SECTOR(S)

MILES

A. NONE

B-K

2, 5, 10

B. IN-PLACE SHELTERING

C. EVACUATION

D. KI DISTRIBUTION

E. CONTAMINATION CONTROL

F. OTHER

ESTIMATE OF CONTAMINATED AREA

A. IN-PLANT

SQ. FT.

B. ON-SITE

SQ. MI.

C. OFF-SITE

SQ. MI.

14. ADDITIONAL INFORMATION

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. D. METEOROLOGICAL SUMMARY

The meteorological conditions are standard for early morning in April which the exception of wind direction weather forecast will predict a low pressure system approaching with possible showers in the late afternoon.

TIME	10m WIND DIRECTION(mph)	DIRECTION	DT	STABILITY CLASS	PREC.
0100	5.2	324	0.7	E	NONE
0115	5.1	325	1.5	E	NONE
0130	5.1	328	1.4	E	NONE
0145	5.0	338	1.9	E	NONE
0200	5.0	338	2.0	E	NONE
0215	5.0	338	1.9	E	NONE
0230	5.1	328	1.4	E	NONE
0245	5.1	325	1.5	E	NONE
0300	5.2	324	0.7	E	NONE
0315	5.2	330	0.7	E	NONE
0330	5.2	330	0.7	E	NONE
0345	5.3	346	0.7	E	NONE
0400	5.5	351	0.7	E	NONE
0415	5.5	351	0.7	E	NONE
0430	5.5	351	0.7	E	NONE
0445	5.5	351	0.8	E	NONE
0500	5.2	352	0.9	E	NONE
0515	5.2	353	0.8	E	NONE
0530	5.1	352	0.8	E	NONE
0545	5.8	353	0.8	E	NONE
0600	5.5	351	0.8	E	NONE
0615	5.6	347	0.9	E	NONE
0630	6.2	347	0.9	E	NONE
0645	6.2	347	0.4	E	NONE
0700	6.0	347	0.5	E	NONE
0715	6.0	350	0.6	E	NONE
0730	5.9	347	0.6	E	NONE
0745	5.9	347	0.6	E	NONE
0800	5.9	335	-0.1	E	NONE
0815	6.5	340	-0.2	E	NONE
0830	7.6	340	-0.1	E	NONE
0845	7.6	340	-0.1	E	NONE
0900	7.7	340	-0.3	E	NONE
0915	8.0	340	-0.4	E	NONE
0930	8.6	341	-0.4	E	NONE
0945	8.6	350	-0.5	E	NONE
1000	8.4	350	-0.5	E	NONE

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. E. RMS DATA

Radiation monitor data displayed by the Eberline RMS terminal will be driven by the simulator computer in accordance with simulated plant parameters during the exercise.

The attached sheets however, are reasonable facsimiles of the RMS radiation monitor channel displays at the times shown on each sheet. These are provided solely for use in the event of simulator or simulated RMS data display failure during the exercise.

STATUS : 029-00

PMP 2081 Unit 2 Effluents

0100

CHAN.	DATA
025-01	8.81E-002 uCi
025-03	2.33E-007 uCi
025-05	2.33E-007 uCi/cc
025-07	2.33E-007 uCi/cc
025-09	2.33E-007 uCi/cc

025-10 0.2301004 CFM

026-01	3.00E-006 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	3.00E-006 uCi/cc

028-01	6.04E-007 uCi/cc
028-02	6.04E-007 uCi/cc
028-03	6.04E-007 uCi/cc

028-10 1.02E+001 CFM

029-01	2.83E-006 uCi/cc
029-02	2.83E-006 uCi/cc
029-03	2.83E-006 uCi/cc

029-10 7.86E+000 CFM

Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.79E-001

High Alarm: 2.96E-001

Exit

Exit



STATUS : 029-00

PMP 2001 Unit 2 Effluents

0115

CHAN. DATA
 025-01 8.81E-002 uCi
 025-03 2.33E-007 uCi
 025-05 NOT AVAILABLE
 025-07 2.33E-007 uCi/cc
 025-09 2.33E-007 uCi/cc

025-10 0.00E+000 CFM

026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-01 0.04E-007 uCi/cc
 028-02 0.04E-007 uCi/cc
 028-03 0.04E-007 uCi/cc

028-10 1.02E+001 CFM

029-01 2.83E-006 uCi/cc
 029-02 2.83E-006 uCi/cc
 029-03 2.83E-006 uCi/cc

029-10 7.86E+000 CFM

Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.79E-001

High Alarm: 2.96E-001

Exit Exit



STATUS : 029-00

PMP 2001 Unit 2 Effluents

0130

CHAN.	DATA
025-01	8.81E-002 uCi
025-03	2.33E-007 uCi
025-05	2.33E-007 uCi/cc
025-07	2.33E-007 uCi/cc
025-09	2.33E-007 uCi/cc

025-12 0.0001004 CFM

026-01	3.00E-006 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E-006 uCi/cc
027-02	3.00E-006 uCi/cc

028-03	6.04E-007 uCi/cc
028-07	6.04E-007 uCi/cc
028-09	6.04E-007 uCi/cc

028-10 1.02E+001 CFM

029-05	2.83E-006 uCi/cc
029-07	2.83E-006 uCi/cc
029-09	2.83E-006 uCi/cc

029-12 7.95E+000 CFM

Percent of high alarm > 0

50

100

Unit 028-05 Status: Normal

Location: RSD Vent Stack

Type: beta gas

Alert Alarm: 2.64E-004

High Alarm: 4.40E-004

Exit

Exit

STATUS : 028-00

PMP 2001 Unit 2 Effluents

0133

CHAN. DATA
 025-01 8.81E-002 uCi
 025-03 2.33E-007 uCi
 025-05 2.33E-007 uCi/cc
 025-07 2.33E-007 uCi/cc
 025-09 2.33E-007 uCi/cc

025-10 0.23E+004 CFM

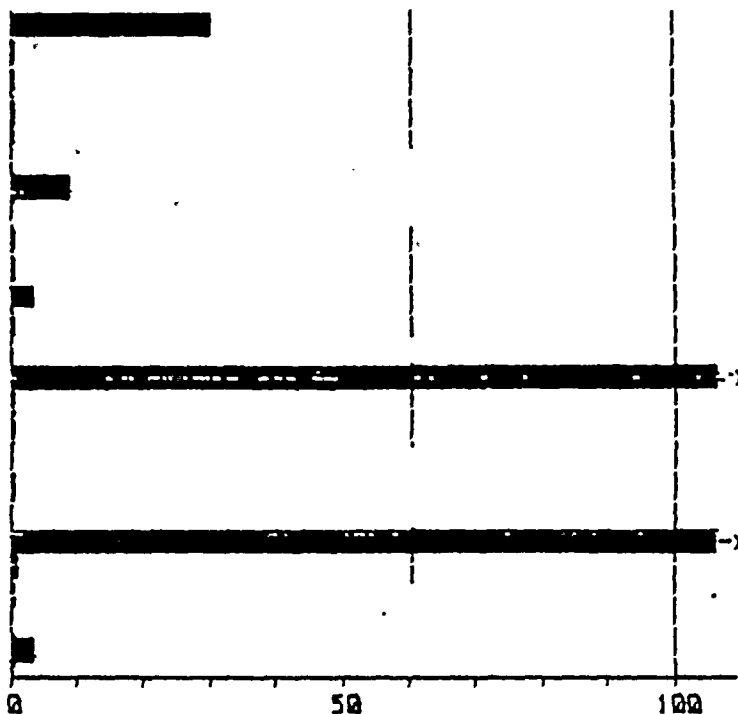
026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-01 1.77E-003 uCi/cc
 028-02 1.77E-003 uCi/cc
 028-03 2.04E-003 uCi/cc

028-10 1.02E+001 CFM

029-01 6.63E-003 uCi/cc
 029-02 7.26E-003 uCi/cc
 029-03 7.84E-003 uCi/cc

029-10 7.86E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02 Status: Normal

Location: SG Loop 4 PORV

Type: gamma gas

Alert Alarm: 6.00E+001

High Alarm: 1.00E+002

Unit: 026-02 Status: Normal Location: SG Loop 4 PORV Type: gamma gas Alert Alarm: 6.00E+001 High Alarm: 1.00E+002

STATUS : 028-00

PMP 2001 Unit 2 Effluents

0140

CHAN. DATA
 025-01 8.81E-007 uCi
 025-03 2.33E-007 uCi
 025-05 2.33E-007 uCi/cc
 025-07 2.33E-007 uCi/cc
 025-09 2.33E-007 uCi/cc

025-10 0.23E+004 CFM

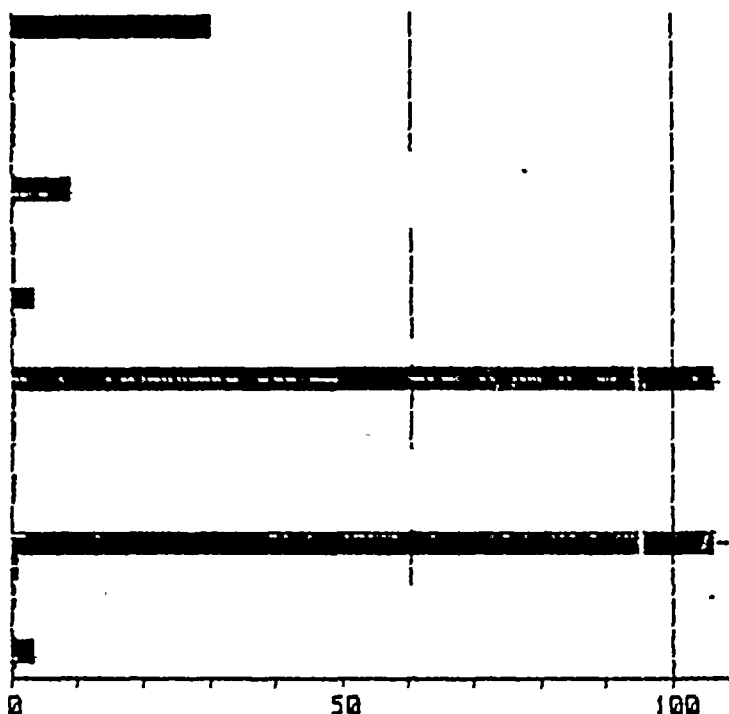
026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-03 1.77E-003 uCi/cc
 028-07 1.77E-003 uCi/cc
 028-09 2.04E-003 uCi/cc

028-10 1.02E+001 CFM

029-05 6.63E-003 uCi/cc
 029-07 7.26E-003 uCi/cc
 029-09 7.84E-003 uCi/cc

029-10 7.86E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02 Status: Normal

Location: SG Loop 4 PORV

Type: gamma gas

Alert Alarm: 5.00E+001

High Alarm: 1.00E+002

Exit

STATUS : 028-00

PMP 20B1 Unit 2 Effluents

0145

CHAN. DATA
 025-01 8.81E-002 uCi
 025-03 2.33E-007 uCi
 025-05 NOT AVAILABLE
 025-07 2.33E-007 uCi/cc
 025-09 2.33E-007 uCi/cc

025-10 0.22E+004 CFM

026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-03 5.31E-001 uCi/cc
 028-07 5.31E-001 uCi/cc
 028-09 5.33E-001 uCi/cc

028-10 1.02E+001 CFM \

029-05 5.38E-001 uCi/cc
 029-07 5.38E-001 uCi/cc
 029-09 5.35E-001 uCi/cc

029-10 7.85E+000 CFM

Percent of high alarm > 0

50

100

Unit 026-02 Status: Normal

Location: SG Loop 4 PORV

Type: gamma gas

Alert Alarm: 6.00E+001

High Alarm: 1.00E+002

Exit

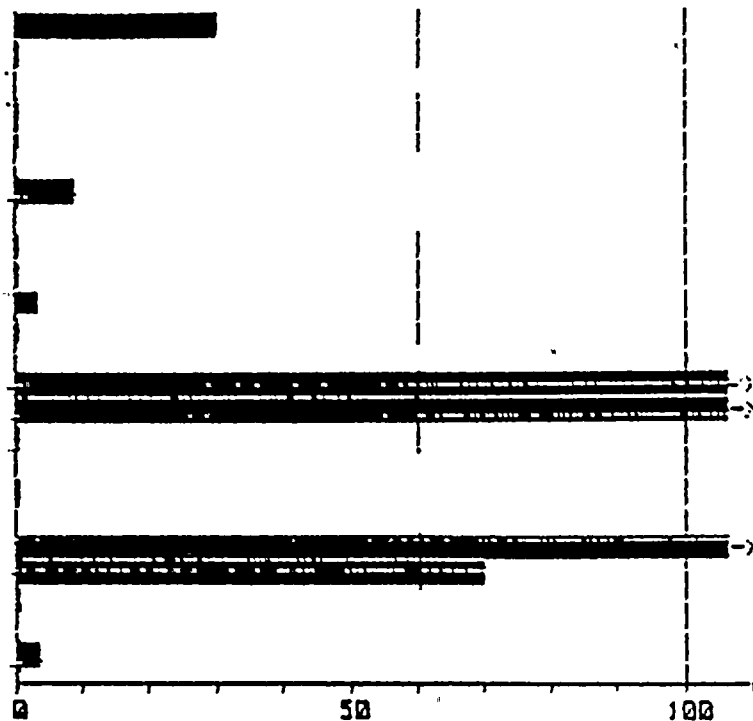


STATUS : 02A-07

PMP 20B1 Unit 2 Effluents

0146

CHAN.	DATA
025-01	8.81E-002 uCi
025-03	2.33E-007 uCi
025-05	NOT AVAILABLE
025-07	2.33E-007 uCi/cc
025-09	2.33E-007 uCi/cc
025-10	0.33E+004 CFM
026-01	3.00E-006 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	3.00E-006 uCi/cc
028-05	1.23E+000 uCi/cc
028-07	1.23E+000 uCi/cc
028-09	1.23E+000 uCi/cc
028-10	1.02E+001 CFM
029-05	6.96E-001 uCi/cc
029-07	6.96E-001 uCi/cc
029-09	6.97E-001 uCi/cc
029-10	7.05E+000 CFM



Percent of high alarm > 0 50 100

Unit 026-02	Status: Normal	Location: SG loop 4 PNRV
Type: gamma gsc	Alert Alarm: 6.00E+001	High Alarm: 1.00E+002

025-01 025-03 025-05 025-07 025-09 025-10 026-01 026-02 026-05 026-07 026-09 027-01 027-02 027-05 027-07 027-09 028-01 028-02 028-03 028-04 028-05 028-06 028-07 028-08 028-09 028-10 028-11 029-01 029-02 029-03 029-04 029-05 029-06 029-07 029-08 029-09 029-10 029-11 029-12



STATUS : 029-07

PMP 2081 Unit 2 Effluents

0150

CHAN. DATA
 025-01 8.81E-002 uCi
 025-03 2.33E-007 uCi
 025-05 2.33E-007 uCi/cc
 025-07 2.33E-007 uCi/cc
 025-09 2.33E-007 uCi/cc

025-10 0.00E+000 CFM

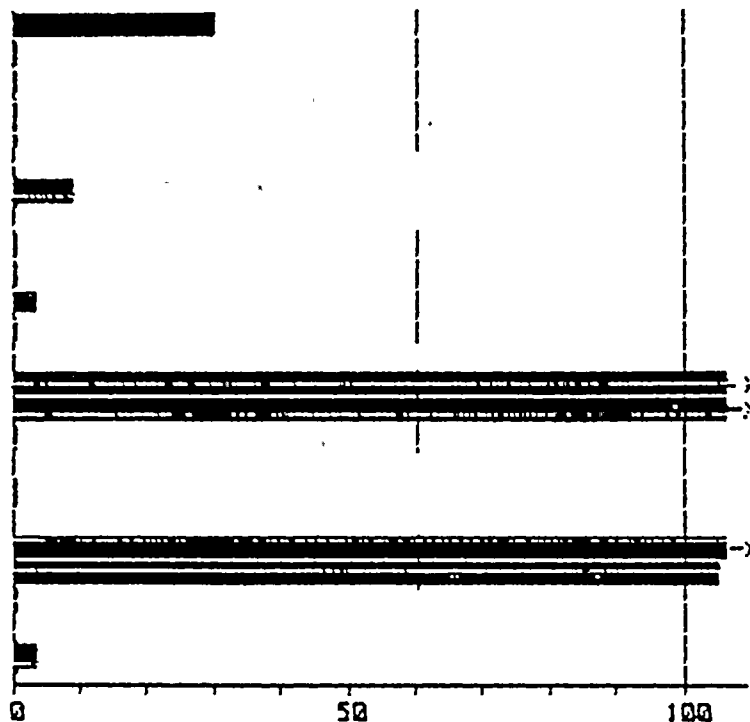
026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-05 1.67E+000 uCi/cc
 028-07 1.07E+000 uCi/cc
 028-09 1.07E+000 uCi/cc

028-10 1.02E+001 CFM

029-05 1.04E+000 uCi/cc
 029-07 1.04E+000 uCi/cc
 029-09 1.04E+000 uCi/cc

029-10 7.03E+000 CFM



Percent of high alarm > 0

50

100

Unit 028-07	Status: High Alarm	Location: GSD Vent Stack
Type: gamma gas	Alert Alarm: 6.00E-001	High Alarm: 1.00E+000

Exit

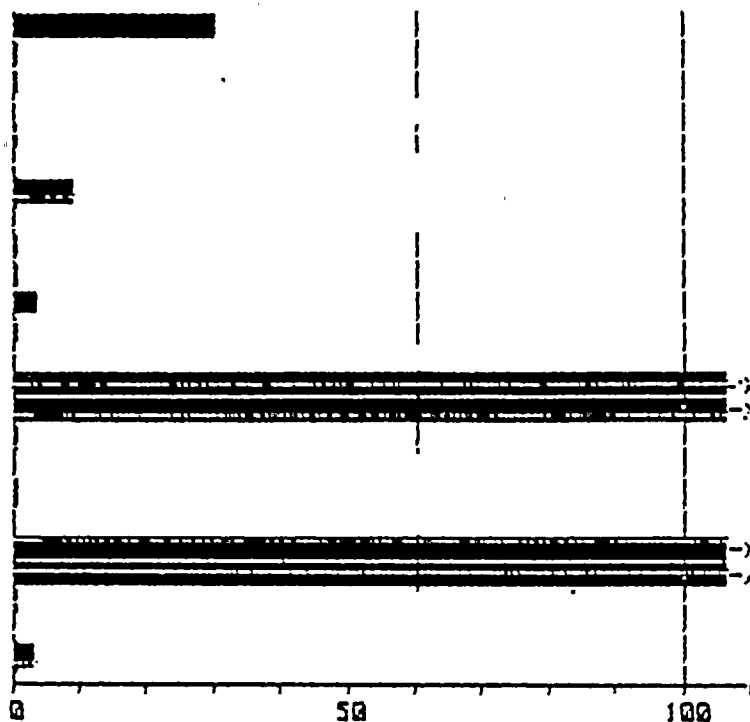


STATIS : 029-07

PMP 2081 Unit 2 Effluents

0200

CHAN.	DATA
025-01	8.80E-007 uCi
025-03	2.33E-007 uCi
025-05	2.33E-007 uCi/cc
025-07	
025-09	2.33E-007 uCi/cc
025-10	0.33E+004 CFM
026-01	3.00E-006 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	3.00E-006 uCi/cc
028-01	3.50E+000 uCi/cc
028-02	3.50E+000 uCi/cc
028-03	3.50E+000 uCi/cc
028-10	1.02E+001 CFM
029-05	1.93E+000 uCi/cc
029-07	1.93E+000 uCi/cc
029-09	1.93E+000 uCi/cc
029-10	7.32E+000 CFM



Percent of high alarm > 0

50

100

Unit 029-10

Status: Normal

Location: SIAF Vent Stack

Type: flow

(cc)

Low Limit: 0.00E+000

High Limit: 2.00E+002

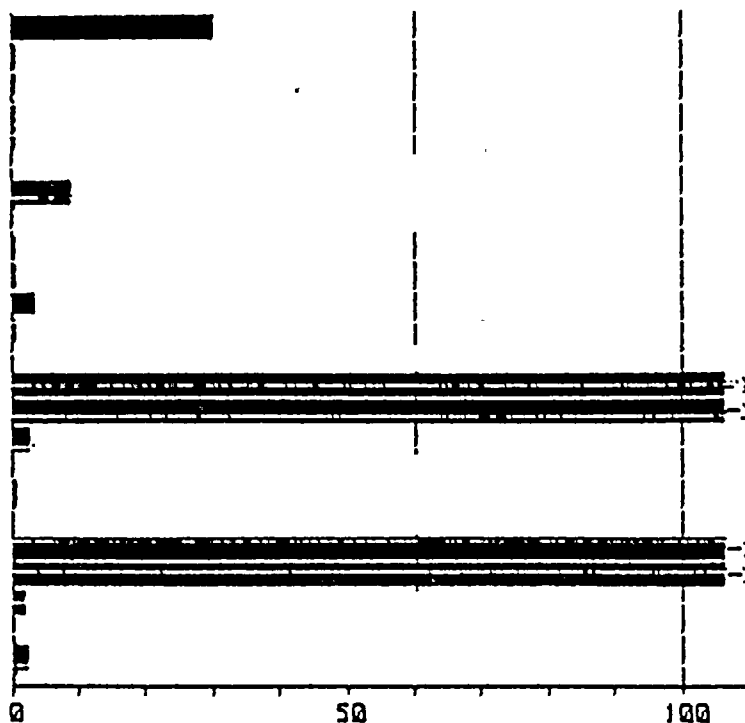
Exit Exit Exit Exit Exit Exit Exit Exit Exit Exit

STATUS : 029-07

PMP 2081 Unit 2 Effluents

0215

CHAN.	DATA
025-01	8.77E-002 uCi
025-03	2.32E-007 uCi
025-05	2.32E-007 uCi/cc
025-07	2.32E-007 uCi/cc
025-09	2.32E-007 uCi/cc
025-10	0.00E+000 CFM
026-01	3.00E-006 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	3.00E-006 uCi/cc
028-05	2.21E+001 uCi/cc
028-07	2.21E+001 uCi/cc
028-09	2.21E+001 uCi/cc
028-10	1.02E+001 CFM
029-05	1.30E+001 uCi/cc
029-07	1.30E+001 uCi/cc
029-09	1.30E+001 uCi/cc
029-10	5.32E+000 CFM



Percent of high alarm > 0

50

100

Unit 029-10	Status: Normal	Location: SIAF Vent Stack
Type: flow	(cc)	Low Limit: 0.00E+000 High Limit: 2.90E+000

Exit

Exit



STATUS : 025-00

PHP 2081 Unit 2 Effluents

0230

CHARM. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 0.00E+000 CFM

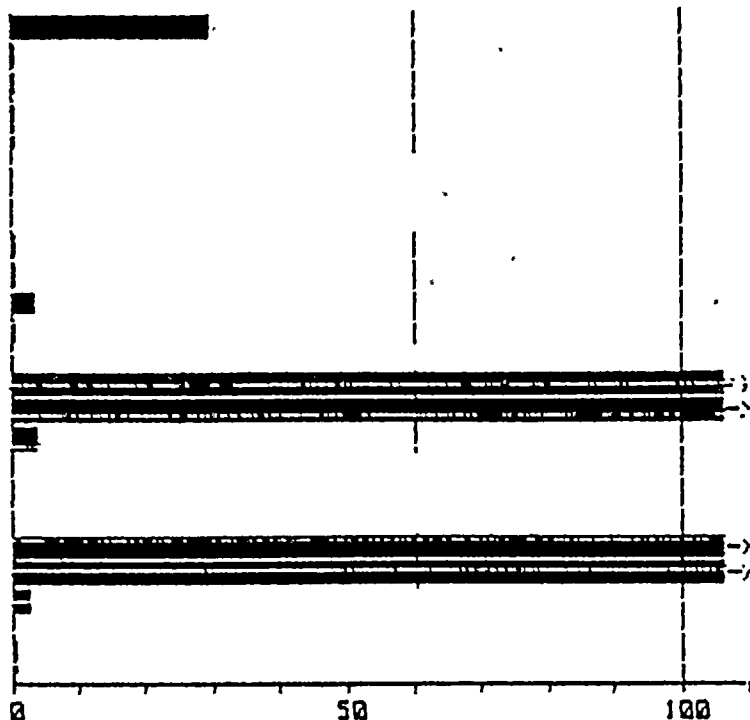
026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-05 3.43E+001 uCi/cc
 028-07 3.43E+001 uCi/cc
 028-09 3.43E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 2.00E+001 uCi/cc
 029-07 2.00E+001 uCi/cc
 029-09 2.00E+001 uCi/cc

029-10 1.15E-001 CFM



Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.70E-001

High Alarm: 2.96E-001

Unit 025-01 Status: Normal Location: Unit Vent Type: beta part. Alert Alarm: 1.70E-001 High Alarm: 2.96E-001



STATUS : 025-00

PMP 2081 Unit 2 Effluents

0245

CHAN.	DATA
025-01	8.70E-002 uCi
025-03	2.30E-007 uCi
025-05	2.30E-007 uCi/cc
025-07	2.30E-007 uCi/cc
025-09	2.30E-007 uCi/cc

025-10 0.00E+000 CFM

026-01	3.00E-006 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	5.14E-003 uCi/cc

026-03 3.25E+001 uCi/cc

026-07 3.25E+001 uCi/cc

026-09 3.25E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.90E+001 uCi/cc

029-07 1.90E+001 uCi/cc

029-09 1.90E+001 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.79E-001

High Alarm: 2.96E-001

Exit

Exit

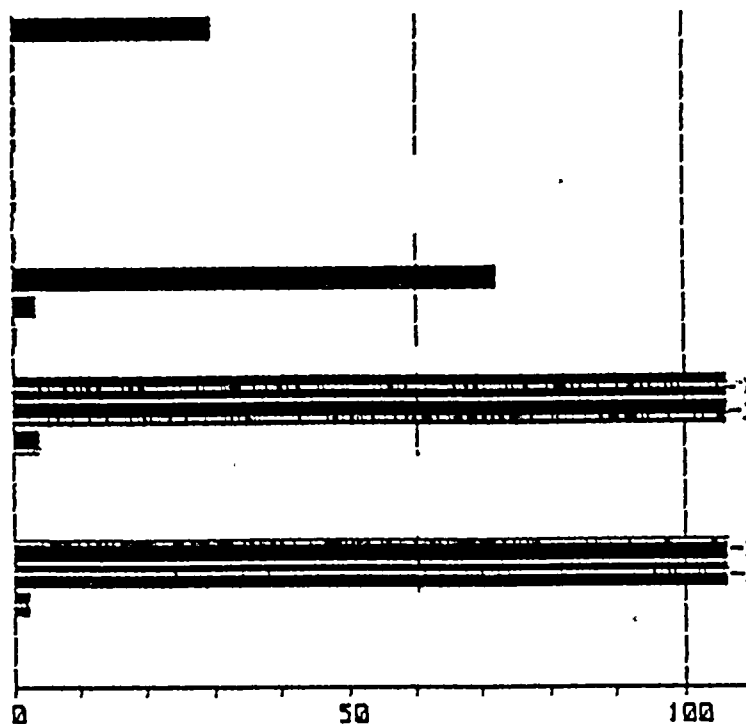


STATUS : 025-00

PMP 20B1 Unit 2 Effluents

0252

CHAN.	DATA
025-01	8.70E-002 uCi
025-03	2.30E-007 uCi
025-05	2.30E-007 uCi/cc
025-07	2.30E-007 uCi/cc
025-09	2.30E-007 uCi/cc
025-10	1.77E+000 CFM
026-01	3.00E-006 uCi/cc
026-02	7.17E+001 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	3.00E-006 uCi/cc
028-05	3.17E+001 uCi/cc
028-07	3.17E+001 uCi/cc
028-09	3.17E+001 uCi/cc
028-10	0.00E+000 CFM
029-05	1.84E+001 uCi/cc
029-07	1.84E+001 uCi/cc
029-09	1.84E+001 uCi/cc
029-10	0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.79E-001

High Alarm: 2.96E-001

Exit

Exit

STATUS : 025-00

PMP 2081 Unit 2 Effluents

0253

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 NOT AVAILABLE
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 1.77E+002 CFM

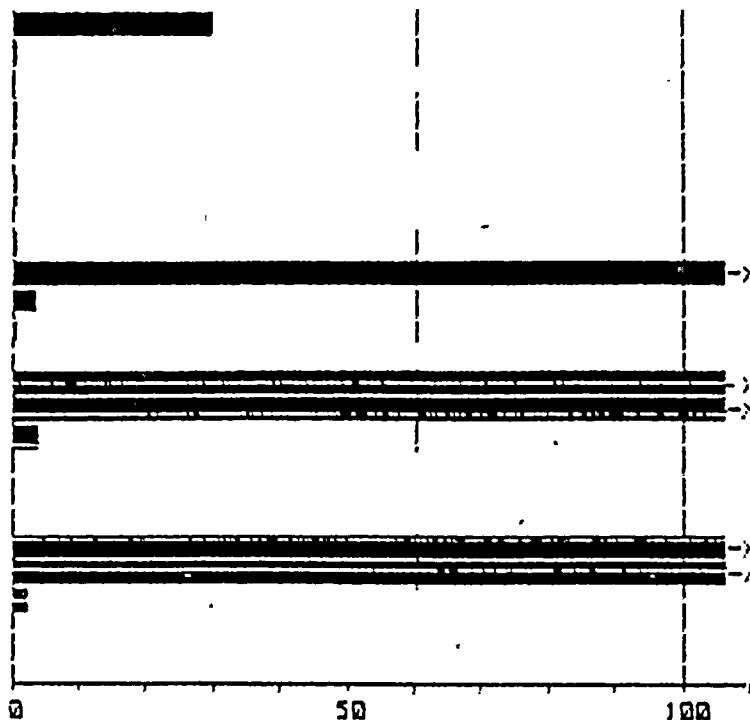
026-01 3.00E-006 uCi/cc
 026-02 1.46E+002 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-03 3.15E+001 uCi/cc
 028-07 3.15E+001 uCi/cc
 028-09 3.15E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.83E+001 uCi/cc
 029-07 1.83E+001 uCi/cc
 029-09 1.83E+001 uCi/cc

029-10 0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.79E-001

High Alarm: 2.96E-001

Unit 025-01 Status: Normal Location: Unit Vent Type: beta part. Alert Alarm: 1.79E-001 High Alarm: 2.96E-001

STATUS : 025-00

PMP 2081 Unit 2 Effluents

0300

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 1.77E+003 CFM

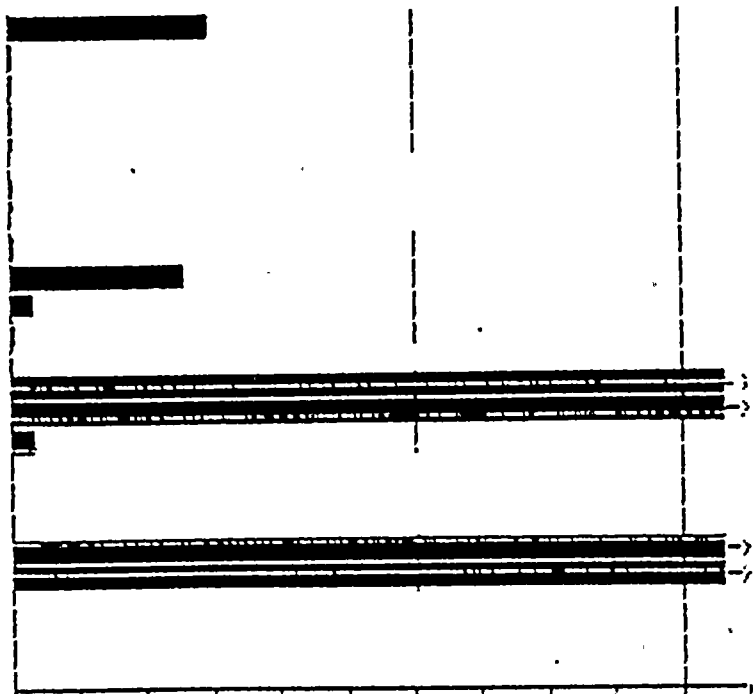
026-01 3.00E-006 uCi/cc
 026-02 2.55E+001 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.00E-006 uCi/cc

028-03 3.03E+001 uCi/cc
 028-07 3.03E+001 uCi/cc
 028-09 3.03E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.76E+001 uCi/cc
 029-07 1.76E+001 uCi/cc
 029-09 1.76E+001

029-10 0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.79E-001

High Alarm: 2.96E-001

Exit



STATUS : 025-00

PMP 2081 Unit 2 Effluents

0315

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 1.77E+002 CFM

026-01 3.00E-006 uCi/cc
 026-02 4.27E+001 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 8.46E-002 uCi/cc

028-03 2.92E+001 uCi/cc
 028-07 2.92E+001 uCi/cc
 028-09 2.92E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.70E+001 uCi/cc
 029-07 1.70E+001 uCi/cc
 029-09 1.70E+001 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.70E-001

High Alarm: 2.90E-001

Exit

STATUS : 025-00

PHP 2001 Unit 2 Effluents

0319

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 1.77E+000 CFM

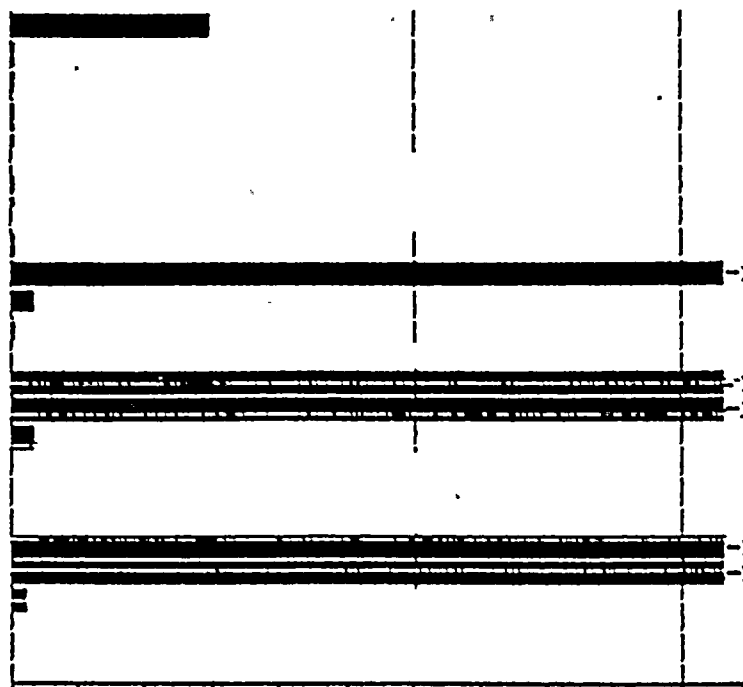
026-01 3.00E-005 uCi/cc
 026-02 1.53E+002 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 6.77E-002 uCi/cc

028-05 2.67E+001 uCi/cc
 028-07 2.07E+001 uCi/cc
 028-09 2.87E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.67E+001 uCi/cc
 029-07 1.67E+001 uCi/cc
 029-09 1.67E+001 uCi/cc

029-10 0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.70E-001

High Alarm: 2.96E-001

Exit

Exit

STATUS : 025-00

PMP 2081 Unit 2 Effluents

0330

CHAN.	DATA
025-01	8.70E-002 uCi
025-03	2.30E-007 uCi
025-05	2.30E-007 uCi/cc
025-07	2.30E-007 uCi/cc
025-09	2.30E-007 uCi/cc

025-10 2.20E+000 CFM

026-01	2.21E-001 uCi/cc
026-02	3.00E-006 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	4.80E-002 uCi/cc

028-05	2.76E+001 uCi/cc
028-07	2.76E+001 uCi/cc
028-09	2.76E+001 uCi/cc

028-10 0.00E+000 CFM

029-05	1.61E+001 uCi/cc
029-07	1.61E+001 uCi/cc
029-09	1.61E+001 uCi/cc

029-10 2.00E+000 CFM

Percent of high alarm > 0 50 100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

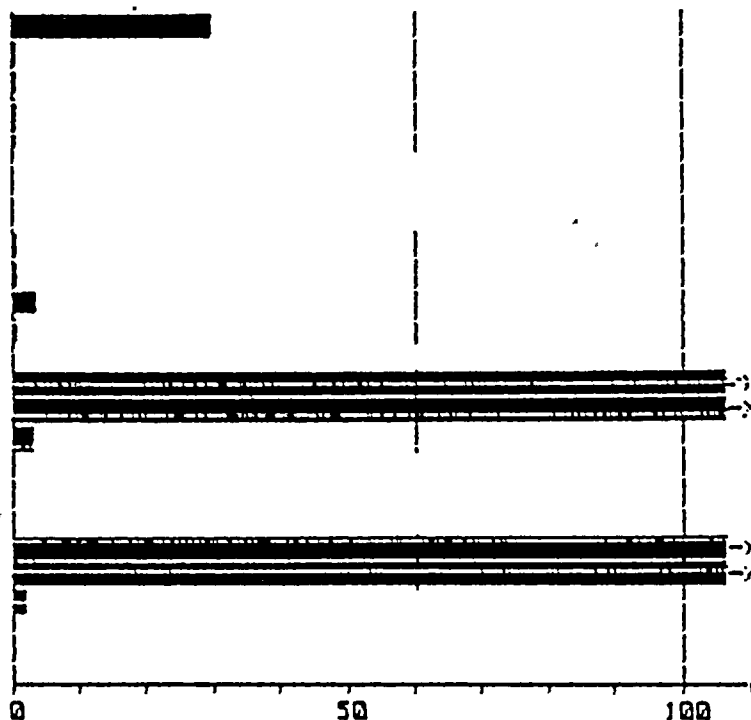
Alert Alarm: 1.78E-001

High Alarm: 2.96E-001

Exit Exit Exit Exit Exit Exit Exit Exit

0345

22-12 2,225,222 C53



Percent of high alarm > 0

Unit A26-A2 Status: Normal

Location: SG Loan 4 PD RV

Type: GENERAL YES

Alert Alarm: 5.005+001

High Alarm: 1.00E+002

Subj							Page 4
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STATIS : 025-00

PMP 2081 Unit 2 Effluents

0400

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 1.77E+002 CFM

026-01 3.00E-006 uCi/cc
 026-02 3.00E-006 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 3.23E-002 uCi/cc

028-03 2.40E+001 uCi/cc
 028-07 2.40E+001 uCi/cc
 028-09 2.40E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.44E+001 uCi/cc
 029-07 1.44E+001 uCi/cc
 029-09 1.44E+001 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 025-02 Status: Normal

Location: SG Loop 4 PORV

Type: gamma gas

Alert Alarm: 5.00E+001

High Alarm: 1.00E+002

531+ 531+ 531+ 531+ 531+ 531+ 531+ 531+ 531+ 531+

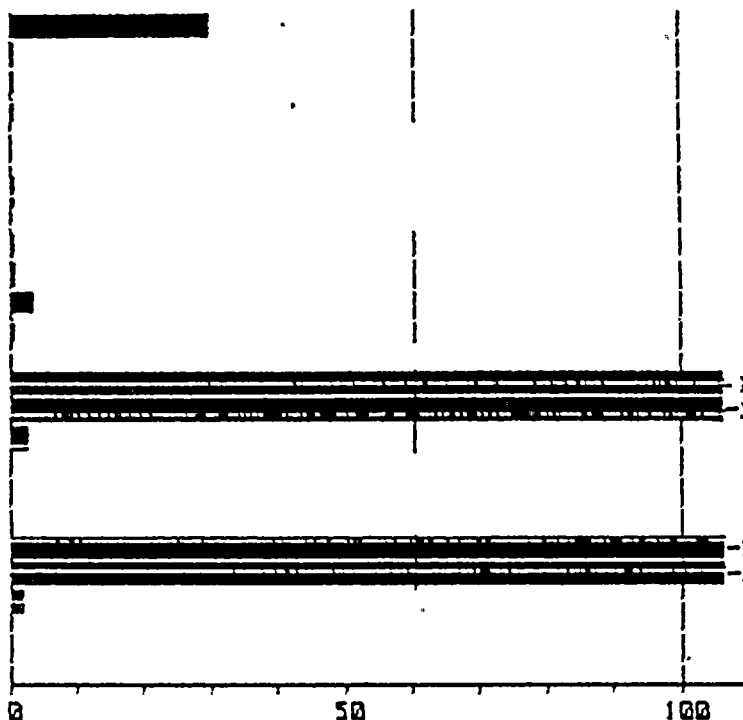


STATUS : A26-00

PMP 2081 Unit 2 Effluents

0415

CHRN. DATA
 Q25-Q1 8.70E-002 uCi
 Q25-Q3 2.30E-007 uCi
 Q25-Q5 2.30E-007 uCi/cc
 Q25-Q7 2.30E-007 uCi/cc
 Q25-Q9 NOT MEASURABLE
 Q25-10 1.77E+003 CFM
 Q26-Q1 3.00E-006 uCi/cc
 Q26-Q2 3.00E-006 uCi/cc
 Q27-Q1 3.00E+000 uCi/cc
 Q27-Q2 2.70E-002 uCi/cc
 Q28-Q3 2.32E+001 uCi/cc
 Q28-Q7 2.32E+001 uCi/cc
 Q28-Q9 2.32E+001 uCi/cc
 Q28-10 0.00E+000 CFM
 Q29-Q5 1.35E+001 uCi/cc
 Q29-Q7 1.35E+001 uCi/cc
 Q29-Q9 1.35E+001 uCi/cc
 Q29-10 0.00E+000 CFM



Percent of high alarm -> 0 50 100

Unit A26-02	Status: High Alarm	Location: SG loop 4 PORV
Type: gamma gas	Alert Alarm: 5.00E+001	High Alarm: 1.00E+002

Exit Exit



347

STATUS : 025-AA

PMP 2081 Unit 2 Effluents

0430

CHAN. DATA
 025-A1 8.70E-002 uCi
 025-A3 2.30E-007 uCi
 025-A5 2.30E-007 uCi/cc
 025-A7 2.30E-007 uCi/cc
 025-A9 2.30E-007 uCi/cc

025-10 0.00E+000 CFM

026-A1 2.47E-002 uCi/cc
 026-A2 3.00E-006 uCi/cc
 027-A1 3.00E+000 uCi/cc
 027-A2 1.87E-002 uCi/cc

028-A3 1.34E+001 uCi/cc
 028-A7 1.34E+001 uCi/cc
 028-A9 1.34E+001 uCi/cc

028-10 0.00E+000 CFM

029-A5 1.13E+001 uCi/cc
 029-A7 1.13E+001 uCi/cc
 029-A9 1.13E+001 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 026-A2	Status: High Alarm	Location: SG Loop 4 PORV
Type: gamma gas	Alert Alarm: 5.00E+001	High Alarm: 1.00E+002

Exit

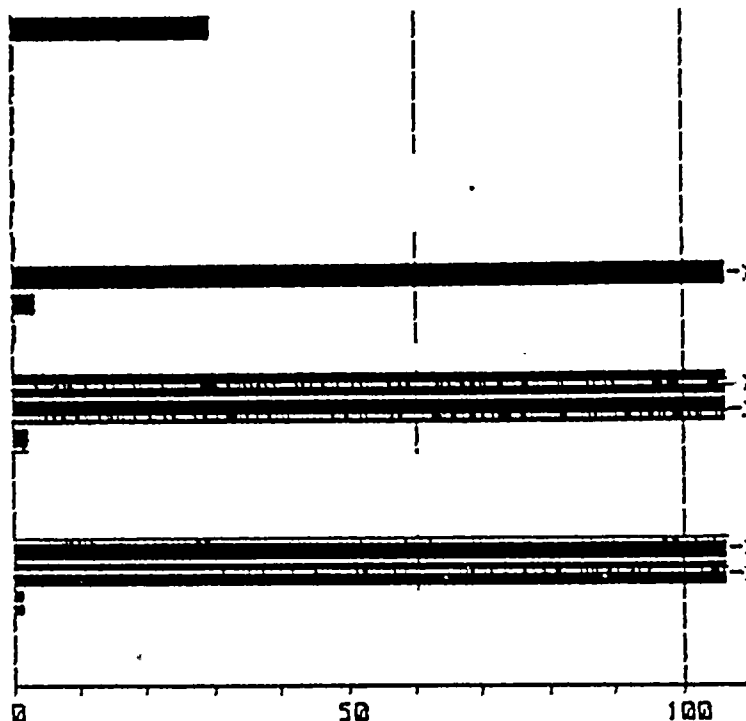


STATUS : 025-00

PMP 2081 Unit 2 Effluents

0500

CHAN.	DATA
025-01	8.70E-002 uCi
025-03	2.30E-007 uCi
025-05	2.30E-007 uCi/cc
025-07	2.30E-007 uCi/cc
025-09	2.30E-007 uCi/cc
025-10	1.77E+002 CFM
026-01	1.37E-002 uCi/cc
026-02	3.50E+003 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	1.64E-002 uCi/cc
028-01	1.61E+001 uCi/cc
028-02	1.01E+001 uCi/cc
028-03	1.21E+001 uCi/cc
028-10	0.00E+000 CFM
029-01	1.06E+001 uCi/cc
029-02	1.06E+001 uCi/cc
029-03	1.06E+001 uCi/cc
029-10	0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02 Status: High Alarm Location: SG Loop 4 PORV

Type: gamma gas Alert Alarm: 6.00E+001 High Alarm: 1.00E+002

Exit



STATUS : 025-AA

PMP 2081 Unit 2 Effluents

0515

CHAR. DATA
 025-01 R 70F-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-12 1.77E+002 CFM

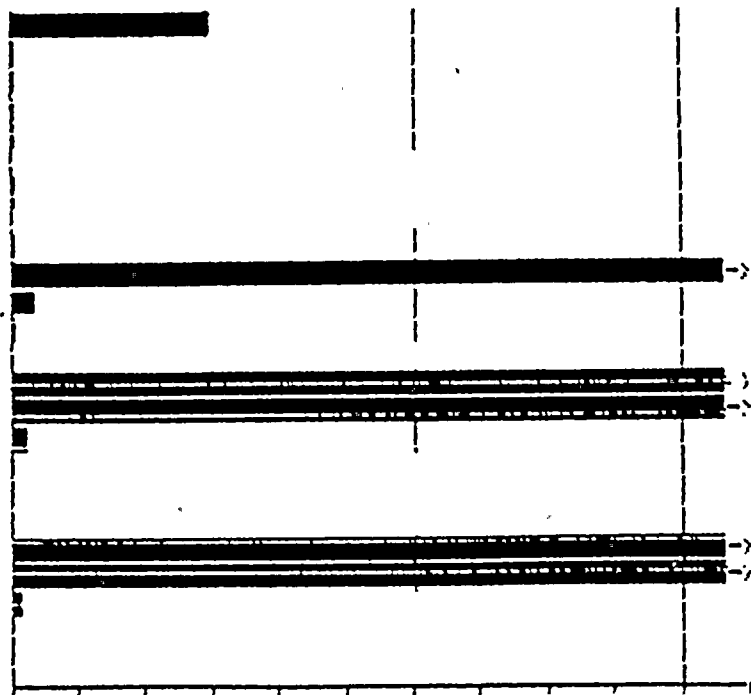
026-01 1.34F-002 uCi/cc
 026-02 2.10E+003 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 1.86E-002 uCi/cc

028-03 1.72E+001 uCi/cc
 028-07 1.72E+001 uCi/cc
 028-09 1.72E+001 uCi/cc

028-10 0.00E+000 CFM

029-05 1.00E+001 uCi/cc
 029-07 1.00E+001 uCi/cc
 029-09 1.00E+001 uCi/cc

029-10 0.00E+000



Percent of high alarm > 0

50

100

Unit 026-02 Status: High Alarm

Location: SG loop 4 PORV

Type: gamma gas

Alert Alarm: 6.00E+001

High Alarm: 1.00E+002

Exit



STATUS : 025-00

PMP 2081 Unit 2 Effluents

0530

CHAN.	DATA
025-01	8.70E-002 uCi
025-03	2.30E-007 uCi
025-05	2.30E-007 uCi/cc
025-07	2.30E-007 uCi/cc
025-09	2.30E-007 uCi/cc

025-10 3.10E+003 CFM

026-01	1.50E-002 uCi/cc
026-02	1.30E+003 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	2.08E-002 uCi/cc

028-03	1.55E-003 uCi/cc
028-07	1.55E-003 uCi/cc
028-09	1.55E-003 uCi/cc

028-10 0.00E+000 CFM

029-05	8.63E-004 uCi/cc
029-07	8.63E-004 uCi/cc
029-09	8.63E-004 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 026-02

Status: High Alarm

Location: SG Loop 4 PDRV

Type: gamma gas

Alert Alarm: 5.00E+001

High Alarm: 1.00E+002

Edit

Edit

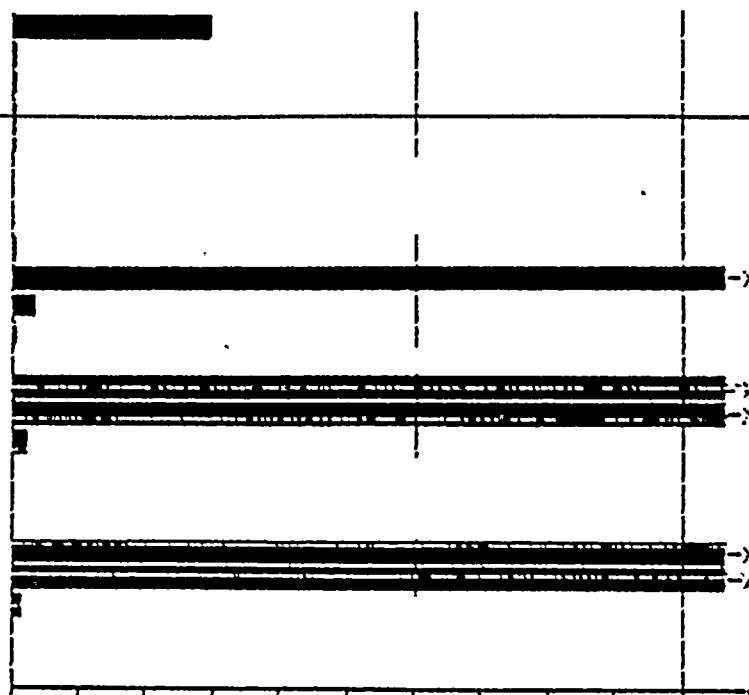


STATUS : 025-00

PMP 208J Unit 2 Effluents

0545

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc
 025-12 0.00E+000 CFM
 026-01 7.00E-002 uCi/cc
 026-02 8.00E+002 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 1.82E-002 uCi/cc
 028-05 1.90E+001 uCi/cc
 028-07 1.00E+001 uCi/cc
 028-09 1.90E+001 uCi/cc
 028-10 0.00E+000 CFM
 029-05 1.11E+001 uCi/cc
 029-07 1.11E+001 uCi/cc
 029-09 1.11E+001 uCi/cc
 029-12 0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02 Status: High Alarm

Location: SG Loop 4 PORV

Type: gamma gas

Alert Alarm: 6.00E+001

High Alarm: 1.00E+002

Exit

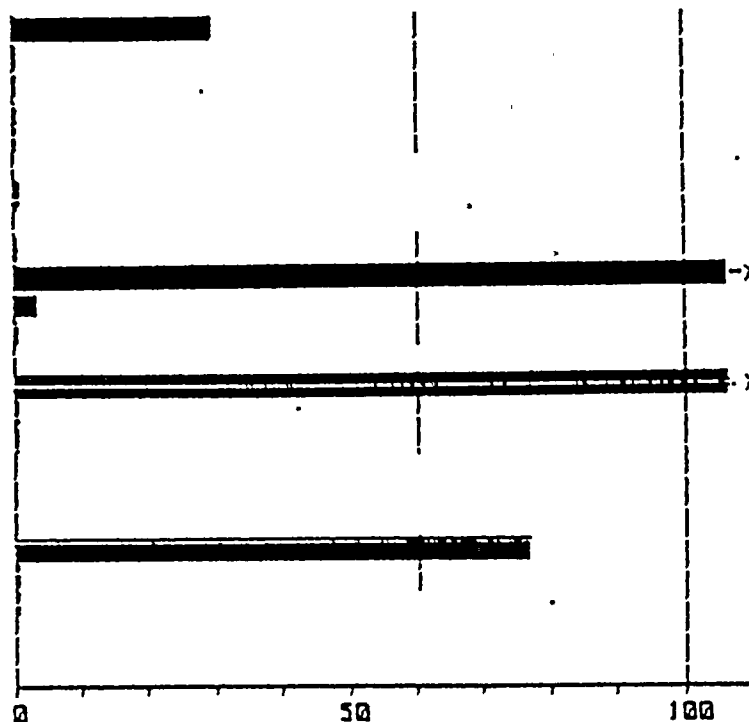


STATUS : 025-00

PMP 2081 Unit 2 Effluents

0600

CHAN.	DATA
025-01	8.70E-002 uCi
025-03	2.30E-007 uCi
025-05	2.30E-007 uCi/cc
025-07	2.30E-007 uCi/cc
025-09	2.30E-007 uCi/cc
025-10	5.20E+002 CFM
026-01	1.46E-002 uCi/cc
026-02	5.00E+002 uCi/cc
027-01	3.00E+000 uCi/cc
027-02	1.93E-002 uCi/cc
028-03	6.13E-004 uCi/cc
028-07	6.13E-004 uCi/cc
028-09	6.13E-004 uCi/cc
028-10	0.00E+000 CFM
029-05	3.35E-004 uCi/cc
029-07	3.35E-004 uCi/cc
029-09	3.35E-004 uCi/cc
029-10	0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02 Status: High Alarm

Location: SG Loop 4 PDRV

Type: gamma gas

Alert Alarm: 6.00E+001

High Alarm: 1.00E+002

Exit

Exit



STATUS : 025-00

PMP 2081 Unit 2 Effluents

0615

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 0.00E+000 CFM

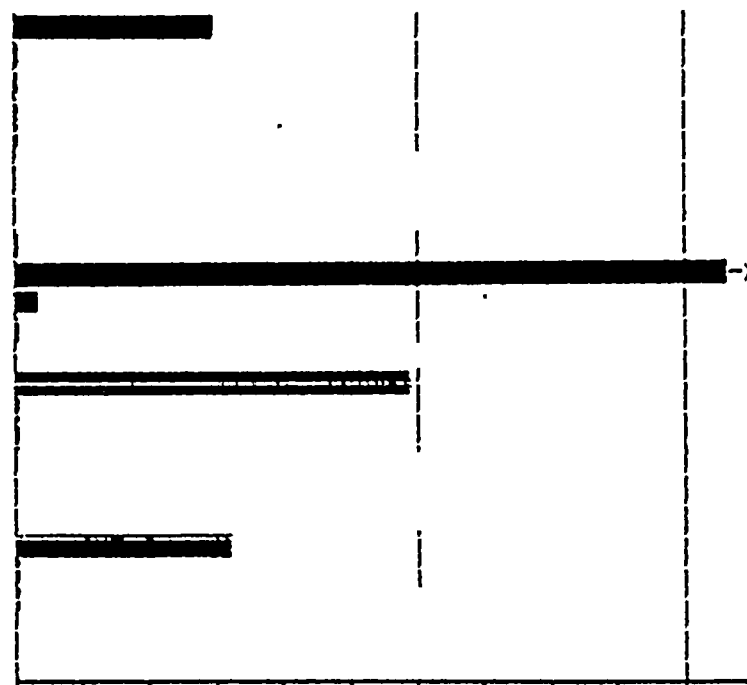
026-01 1.37E-002 uCi/cc
 026-02 3.10E+002 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 1.76E-002 uCi/cc

028-03 2.56E-004 uCi/cc
 028-07 2.50E-004 uCi/cc
 028-09 2.50E-004 uCi/cc

028-10 0.00E+000 CFM

029-05 1.40E-004 uCi/cc
 029-07 1.40E-004 uCi/cc
 029-09 1.39E-004 uCi/cc

029-10 0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02	Status: High Alarm	Location: SG loop 4 PORV
Type: gamma gas	Alert Alarm: 6.00E+001	High Alarm: 1.00E+002

3311 3312 3313 3314 3315 3316 3317 3318

STATUS : 025-AA

PMP 2001 Unit 2 Effluents

0630

CHAR. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 0.00E+000 CFM

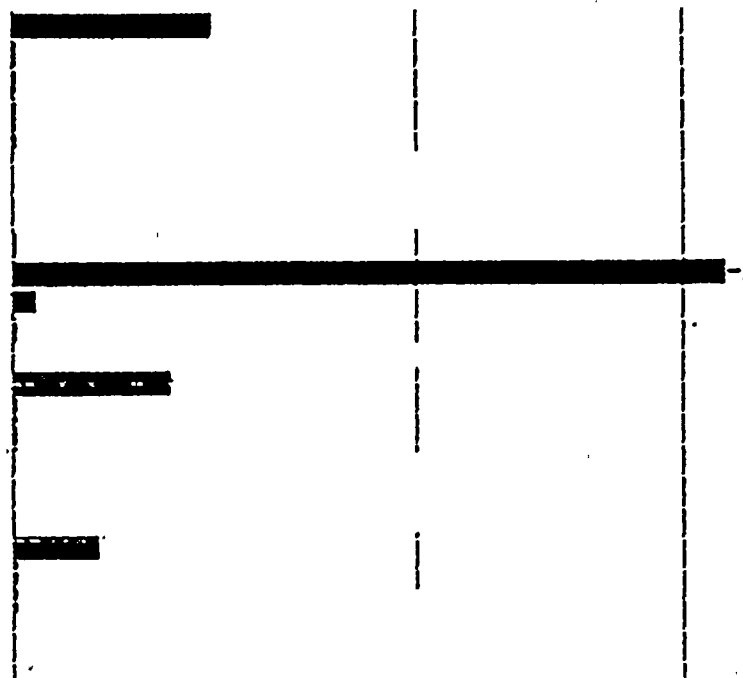
026-01 1.32E-002 uCi/cc
 026-02 1.90E+002 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 1.52E-002 uCi/cc

028-03 1.02E-004 uCi/cc
 028-07 1.02E-004 uCi/cc
 028-09 1.02E-004 uCi/cc

028-10 0.00E+000 CFM

029-05 5.49E-005 uCi/cc
 029-07 5.49E-005 uCi/cc
 029-09 5.49E-005 uCi/cc

029-10 0.00E+000 CFM



Percent of high alarm > 0

50

100

Unit 026-02	Status: High Alarm	Location: SG Loop 4 PORV
Type: gamma gas	Alert Alarm: 5.00E+001	High Alarm: 1.00E+002

025-01 025-03 025-05 025-07 025-09 025-10 026-01 026-02 027-01 027-02 028-03 028-07 028-09 028-10 029-05 029-07 029-09 029-10



STATUS : 025-00

PMP 2001 Unit 2 Effluents

0645

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 0.00E+000 CFM

026-01 1.20E-002 uCi/cc
 026-02 1.20E+002 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 1.45E-002 uCi/cc

028-01 4.83E-005 uCi/cc
 028-02 4.83E-005 uCi/cc
 028-03 4.83E-005 uCi/cc

028-10 0.00E+000 CFM

029-01 2.60E-005 uCi/cc
 029-02 2.60E-005 uCi/cc
 029-03 2.60E-005 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 025-01 Status: Normal

Location: Unit Vent

Type: beta part.

Alert Alarm: 1.75E-001

High Alarm: 2.95E-001

Unit. Exit.

STATUS : 025-00

PMP 208J Unit 2 Effluents

0700

CHAN. DATA
 025-01 R 70F-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 0.00E+000 CFM

026-01 R 66F-003 uCi/cc
 026-02 7.50E+001 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 9.59E-003 uCi/cc

028-05 2.20E-005 uCi/cc
 028-07 2.20E-005 uCi/cc
 028-09 2.20E-005 uCi/cc

028-10 0.00E+000 CFM

029-05 1.21E-005 uCi/cc
 029-07 1.21E-005 uCi/cc
 029-09 1.21E-005 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0

50

100

Unit 026-01 Status: Normal

Location: SG Loop 1 PORV

Type: gamma gas

Alert Alarm: 6.00E+001

High Alarm: 1.00E+002

Exit Exit Exit Exit Exit Exit Exit Exit

STATUS : 025-00

PMP 2081 Unit 2 Effluents

0715

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 2.30E-007 uCi/cc
 025-07 2.30E-007 uCi/cc
 025-09

025-10 4.20E+002 CFM

026-01 4.70E-003 uCi/cc
 026-02 4.50E+001 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 5.25E-003 uCi/cc

028-03 6.10E-006 uCi/cc
 028-07 0.10E-000 uCi/cc
 028-09 8.10E-006 uCi/cc

028-10 -3.5E-017 CFM

029-05 4.32E-006 uCi/cc
 029-07 4.32E-006 uCi/cc
 029-09 4.32E-006 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0 50 100

Unit 025-07	Status: Normal	Location: Unit Vent
Type: gamma gas	Alert Alarm: 6.00E-001	High Alarm: 1.00E+000

Exit



100-100000

100-100000

100-100000

STATUS : 025-AA

PMP 2001 Unit 2 Effluents

0730

CHAN. DATA
 025-01 8.70E-002 uCi
 025-03 2.30E-007 uCi
 025-05 NOT AVAILABLE
 025-07 2.30E-007 uCi/cc
 025-09 2.30E-007 uCi/cc

025-10 5.20E+003 CFM

026-01 4.00E-003 uCi/cc
 026-02 1.51E-004 uCi/cc
 027-01 3.00E+000 uCi/cc
 027-02 4.38E-003 uCi/cc

028-01 6.17E-006 uCi/cc
 028-02 6.17E-006 uCi/cc
 028-03 6.17E-006 uCi/cc

028-10 -3.5E-017 CFM

029-01 3.23E-006 uCi/cc
 029-02 3.23E-006 uCi/cc
 029-03 3.23E-006 uCi/cc

029-10 0.00E+000 CFM

Percent of high alarm > 0 50 100

Unit 025-07	Status: Normal	Location: Unit Vent
Type: gamma gas	Alert Alarm: 6.00E-001	High Alarm: 1.00E+000

Unit 025-07 Status: Normal Location: Unit Vent Type: gamma gas Alert Alarm: 6.00E-001 High Alarm: 1.00E+000

DONALD C. COOK NUCLEAR PLANT
EMERGENCY RESPONSE EXERCISE

VIII. F. PLUME EXPOSURE DATA

Table provides data for the Offsite Radiation Monitoring Teams. The data set presents data for the time between 0430 to 0901. A given data set is applicable for the fifteen minutes following the time listed.

A listing and explanation of less than obvious terms used in the table are as follows:

1. ROUTE; refers to the predesignated, color coded, survey routes.
2. R1, B1, Y1, R2, B2, Y2; refers to the specific color coded survey route where:

R1=Red, closest to plant
B1=Blue, closest to plant
Y1=Yellow, closest to plant
R2=Red, farthest from plant
B2=Blue, farthest from plant
Y2=Yellow, Farthest from plant
3. Sample Point - refers to the predesignated lettered points. Readings which follow indicate the distance traveled from the lettered point of origination, at which the listed dose rate was encountered.
4. AIR SAMPLE, IOD; the iodine activity results of are in units of $\mu\text{Ci/cc}$ and were developed based on scenario postulated thyroid dose projections.
5. NET CPM; the iodine activity in counts per minute.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VIII. F. PLUME EXPOSURE DATA, cont.

Dose rate data for a given time period should be provided as appropriate for the route, both color and traverse points, being taken and the time. Air sample data should be provided only if a centerline sample is obtained and following sample analysis at the counting vehicle. The player shall analyze the actual sample obtained and determine the activity of the actual sample. At that time the Controller shall interject and provide the concentration postulated by the scenario. The activities are based on a 10 cubic foot air sample and a 4% efficiency for the scintillation detector. An asterisk indicates the dose rates are less than 1 mR/hr. Because release rates were elevated to meet drill objectives, the resultant iodine sample count rates would have been beyond the capabilities of the counting equipment. Therefore, the iodine sample count rates have been reduced by a factor of 1000 to verify players capability of calculating sample activities.

LEGEND

* = <1 mR/hr
Particulate MDA = 2.50×10^{-9} $\mu\text{Ci/cc}$
Iodine MDA = 2.86×10^{-10} $\mu\text{Di/cc}$
Dose Rate = mR/hr
Open Window Readings = $1.5 \times \text{Dose Rate}$
Distance = Miles



PLUME EXPOSURE DATA

TIME: 0446 - 0500

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	4					1.31E-	3.28E+5
		.3	423						
		.4	4						
Blue 1	A East	.7	*	1.2	16			2.51E-6	6.31E+4
		.8	16	1.3	*				
		.9	83						
		1.0	144						
		1.1	83						
Yellow 1	The plume has not arrived								
Red 2	The plume has not arrived								
Blue 2	The plume has not arrived								
Yellow 2	The plume has not arrived								

PLUME EXPOSURE DATA

TIME: 0430- 0445

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1 .3 .4	4 423 4					1.31E-5	3.28E+5
Blue 1	The plume has not arrived								
Yellow 1	The plume has not arrived								
Red 2	The plume has not arrived								
Blue 2	The plume has not arrived								
Yellow 2	The plume has not arrived								



PLUME EXPOSURE DATA

TIME: 0501 - 0515

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						$\mu\text{Ci/cc}$	cpm	$\mu\text{Ci/cc}$	cpm
Red 1	A	.2	2					8.90E-6	2.24E+5
		.3	289						
		.4	2						
		East .1	*						
Blue 1	A	0.7	1	1.3	1			2.65E-6	6.67E+4
		0.8	17						
		0.9	88						
		1.0	152						
		1.1	88						
		East 1.2	17						
Yellow 1	The plume has not arrived								
Red 2	The plume has not arrived								
Blue 2	The plume has not arrived								
Yellow 2	The plume has not arrived								



PLUME EXPOSURE DATA

TIME: 0516 - 0530

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	1					5.39E-6	1.35E+5
		.2	174						
		.3	1						
Blue 1	A East	0.7	*	1.3	*			1.72E-6	4.31E+4
		0.8	11						
		0.9	57						
		1.0	98						
		1.1	57						
		1.2	11						
Yellow 1	C West	1.0	2	1.5	58			9.99E-8	2.51E-3
		1.1	2	1.6	55				
		1.2	4	1.7	5				
		1.3	5	1.8	4				
		1.4	55	2.0	2				
Red 2	B East	1.1	4	1.7	51			7.64E-7	1.92E-4
		1.2	11	1.8	37				
		1.3	22	1.9	22				
		1.4	37	2.0	11				
		1.5	51	2.1	4				
		1.6	57						
Blue 2	The plume has not arrived								
Yellow 2	The plume has not arrived								



PLUME EXPOSURE DATA

TIME: 0531 - 0545

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						$\mu\text{Ci/cc}$	cpm	$\mu\text{Ci/cc}$	cpm
Red 1	A East	.1	1					3.37E-6	8.48E+5
		.2	109						
		.3	1						
Blue 1	A East	0.7	*					1.06E-6	2.666E+4
		0.8	7	1.2	7				
		0.9	35	1.3	*				
		1.0	61						
		1.1	35						
Yellow 1	C West	1.0	14	1.5	59			1.02E-7	2.57E+3
		1.1	31	1.6	57				
		1.2	41	1.7	50				
		1.3	50	1.8	41				
		1.4	57	1.9	31				
				2.0	14				
Red 2	B East	1.1	4	1.7	53			7.80E-7	1.96E+4
		1.2	11	1.8	39				
		1.3	23	1.9	23				
		1.4	39	2.0	11				
		1.5	53	2.1	4				
		1.6	59						
Blue 2	The plume has not arrived								
Yellow 2	The plume has not arrived								



PLUME EXPOSURE DATA

TIME: 0546 - 0600

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*					7.00E-6	1.76E+5
		.2	60						
		.3	*						
Blue 1	A East	0.7	*	1.2	4			2.65E-6	6.67E-4
		0.8	4	1.3	*				
		0.9	19						
		1.0	33						
		1.1	19						
Yellow 1	C	1.0	*	1.6	29			4.77E-7	1.20E+4
		1.1	3	1.7	18				
		1.2	8	1.8	8				
		1.3	18	1.9	3				
		1.4	29	2.0	*				
		1.5	34						
Red 2	B East	1.1	2	1.7	30			4.43E-7	1.11E+4
		1.2	6	1.8	22				
		1.3	13	1.9	13				
		1.4	22	2.0	6				
		1.5	30	2.1	2				
		1.6	33						
Blue 2	C West	0.2	6	1.0	25			3.88E-7	9.74E+3
		0.4	15	1.2	15				
		0.6	25	1.4	6				
		0.8	30						
Yellow 2	The plume has not arrived								

PLUME EXPOSURE DATA

TIME: 0601 - 0615

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*					1.18E-6	2.96E+4
		.2	38						
		.3	*						
Blue 1	A East	0.7	*	1.2	2			3.79E-7	9.53E+3
		0.8	2	1.3	*				
		0.9	13						
		1.0	21						
		1.1	13						
Yellow 1	C West	1.0	3	1.6	12			2.28E-7	5.73E+3
		1.1	5	1.7	11				
		1.2	7	1.8	7				
		1.3	11	1.9	5				
		1.4	12	2.0	3				
		1.5	13						
Red 2	B East	1.3	1	1.9	19			2.81E-7	7.07E+3
		1.4	4	2.0	14				
		1.5	8	2.1	8				
		1.6	14	2.2	4				
		1.7	19	2.3	1				
		1.8	25						
Blue 2	C West	0.0	6	0.8	27			3.88E-	9.74E+3
		0.4	27	1.0	15				
		0.6	32	1.2	6				
Yellow 2	The plume has not arrived.								



PLUME EXPOSURE DATA

TIME: 0616 - 0630

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*					7.73E-7	1.94E+4
		.2	25						
		.3	*						
Blue	A East	1.0	1	1.4	1			2.23E-7	5.63E+3
		1.1	7						
		1.2	13						
		1.3	7						
Yellow 1	C West	0.7	3	1.3	8			1.40E-7	3.52E+3
		0.8	4	1.4	7				
		0.9	6	1.5	6				
		1.0	7	1.6	4				
		1.1	8	1.7	3				
		1.2	8						
Red 2	B East	1.7	*	2.3	11			1.71E-7	4.30E+3
		1.8	2	2.4	8				
		1.9	5	2.5	5				
		2.0	8	2.6	2				
		2.1	11	2.7	*				
		2.2	13						
Blue 2	B East	2.2	*	3.2	16			2.47E-7	6.20+3
		2.3	3	3.4	9				
		2.6	9	3.7	3				
		2.8	16	3.8	*				
		3.0	20						
Yellow 2	B East	3.5	8	4.5	21			2.84E-7	7.14E+3
		3.7	11	4.7	19				
		3.9	19	4.9	11				
		4.1	21	5.1	8				
		4.3	24						



1000

1000

1000

1000

1000

1000



PLUME EXPOSURE DATA

TIME: 0631 - 0645

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*					4.36E-7	1.09E+4
		.2	14						
		.3	*						
Blue 1	A East	1.0	*	1.3	4			1.34E-7	3.37E+4
		1.1	4	1.4	*				
		1.2	8						
Yellow 1	C West	0.7	1	1.2	4			7.59E-8	1.91E+3
		0.8	2	1.3	4				
		0.9	3	1.4	3				
		1.0	3	1.5	3				
		1.1	4	1.6	2				
				1.7	1				
Red 2	B East	1.7	*	2.3	7			1.07E-7	2.69E+3
		1.8	1	2.4	5				
		1.9	3	2.5	3				
		2.0	5	2.6	1				
		2.1	7	2.7	*				
		2.2	8						
Blue 2	B East	2.3	1	3.5	4			1.33E-7	3.34E+3
		2.4	2	3.6	2				
		2.5	4	3.7	1				
		3.0	11						
Yellow 2	B East	3.5	2	4.5	19			2.57E-7	6.46E+3
		3.7	7	4.7	13				
		3.9	13	4.9	7				
		4.1	19	5.1	2				
		4.3	22						



PLUME EXPOSURE DATA

TIME: 0646 - 0700

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*					2.62E-7	6.57E+3
		.2	9						
		.3	*						
Blue 1	A East	1.0	*	1.4	*			8.39E-8	2.11E-3
		1.1	3						
		1.2	5						
		1.3	3						
Yellow 1	C West	1.1	1	1.7	3			5.04E-8	1.27E+3
		1.2	1	1.8	2				
		1.3	2	1.9	2				
		1.4	2	2.0	1				
		1.5	3	2.1	1				
		1.6	3						
Red 2	B East	1.8	*	2.3	4			5.9E-8	1.45E+3
		1.9	2	2.4	3				
		2.0	3	2.5	2				
		2.1	4	2.6	*				
		2.2	4						
Blue 2	B East	2.3	*	3.2	6			8.28E-8	2.08E+3
		2.4	1	3.4	3				
		2.6	3	3.6	1				
		2.8	6	3.7	*				
		3.0	7						
Yellow 2	B East	3.5	1	4.5	7			1.00E-7	2.52E+3
		3.7	3	4.7	5				
		3.9	5	4.9	3				
		4.1	7	5.1	1				
		4.3	9						



PLUME EXPOSURE DATA

TIME: 0701 - 0715

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*					1.80E-4	4.53E+3
		.2	6						
		.3	*						
Blue 1	A East	1.0	*	1.3	2			5.18E-8	1.30E+3
		1.1	2	1.4	*				
		1.2	3						
Yellow 1	C West	1.1	*	1.6	2			3.27E-8	8.23E+2
		1.2	1	1.7	2				
		1.3	1	1.8	2				
		1.4	2	1.9	1				
		1.5	2	2.0	1				
				2.1	*				
Red 2	B East	1.8	*	2.3	2			3.98E-8	1.00E+3
		1.9	1	2.4	2				
		2.0	2	2.5	1				
		2.1	2	2.6	*				
		2.2	2						
Blue 2	B East	2.3	*	3.2	4			5.33E-8	1.34E+3
		2.4	*	3.4	2				
		2.6	2	3.6	*				
		2.8	4	3.7	*				
		3.0	4						
Yellow 2	B East	3.5	*	4.5	5			6.37E-8	1.60E+3
		3.7	2	4.7	3				
		3.9	3	4.9	2				
		4.1	5	5.1	*				
		4.3	5						



PLUME EXPOSURE DATA

TIME: 0716 - 0730

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	A East	.1	*						
		.2	3					9.00E-8	2.26E+3
		.3	*						
Blue 1	A East	.8	*	1.1	1				
		.9	1	1.2	*			3.45E-8	8.67E-2
		1.0	2						
Yellow 1	C West	1.5	*	2.1	1				
		1.6	*	2.2	*				
		1.7	*	2.3	*				
		1.8	*	2.4	*			1.96E-8	4.94E+2
		1.9	1	2.5	*				
		2.0	1						
Red 2	B East	1.4		2.1	2				
		1.5		2.2	1				
		1.6		2.3	*				
		1.7	*					2.50E-8	6.28E+2
		1.9	1						
		2.0	2						
Blue 2	B East	1.5	*	2.5	1				
		1.7	*	2.7	1				
		1.9	1	2.9	*			3.21E-8	8.07E+2
		2.1	1	3.1	*				
		2.3	3						
Yellow 2	B East	2.5	*	3.5	3				
		2.7	1	3.7	2				
		2.9	2	3.9	1			3.98E-8	1.00E+3
		3.1	3	4.1	*				
		3.3	3						



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PLUME EXPOSURE DATA

TIME: 0731 - 0745

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	The plume has ended								
Blue 1	A East	1.0	*	1.3	1			3.45E-8	8.67E+2
		1.1	1	1.4	*				
		1.2	2						
Yellow 1	C West	1.2	*	1.7	1			1.96E-8	4.94E-2
		1.3	*	1.8	*				
		1.4	*	1.9	*				
		1.5	1	2.0	*				
		1.6	1	2.1	*				
Red 2	B East	1.9	*	2.3	2			2.50E-8	6.28E+2
		2.0	1	2.4	1				
		2.1	2	2.5	*				
		2.2	2						
Blue 2	B East	2.4	*	3.2	1			3.21E-8	8.07E+2
		2.6	*	3.4	*				
		2.8	1	3.6	*				
		3.0	2						
Yellow 2	B East	3.5	*	4.4	3			3.98E-8	1.00E+3
		3.7	1	4.6	2				
		3.9	2	4.8	1				
		4.0	3	5.0	*				
		4.2	3						



PLUME EXPOSURE DATA

TIME: 0746 - 0800

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate	Iodine	
						$\mu\text{Ci/cc}$ cpm	$\mu\text{Ci/cc}$	cpm
Red 1	The plume has ended							
Blue 1	A	1.0 1.1 1.2	4 22 36	1.3 1.4	2.2 4		6.49E-7	1.63E+4
Yellow 1	C West	1.3 1.4 1.5 1.6	* * * **	1.7 1.8 1.9	* * *		1.33E-8	3.34E+2
Red 2	B East	1.8 1.9 2.0 2.1 2.2	* * * 1 1	2.3 2.4 2.5 2.6	1 * * *		1.52E-8	3.82E+2
Blue 2	B East	2.7 2.8 2.9 3.0	* 1 2 2	3.1 3.2 3.3	2 1 *		2.17E-8	5.46E+2
Yellow 2	B East	3.4 3.6 3.8 4.0 4.2	* * 1 2 2	4.4 4.6 4.8 5.0	2 1 * *		2.43E-8	6.10E+2



PLUME EXPOSURE DATA

TIME: 0801 - 0815

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	The plume has ended								
Blue 1	The plume has ended								
Yellow 1	B	0.8	*	1.3	*			<MDA	
		0.9	*	1.4	*				
		1.0	*	1.5	*				
		1.1	*	1.6	*				
		1.2	*						
Red 2	C East	0.8		1.4	*			1.01E-8	2.55E+2
		0.9		1.5	*				
		1.0	*	1.6	*				
		1.1	*						
		1.2	*						
		1.3	*						
Blue 2	C East	1.0	*	1.3	1			1.36E-9	3.42E+2
		1.1	1	1.4	*				
		1.2	1						
Yellow 2	C East	2.2	*	2.7	1			1.62E-8	4.08E+2
		2.3	*	2.8	1				
		2.4	1	2.9	*				
		2.5	1	3.0					
		2.6	2						



PLUME EXPOSURE DATA

TIME: 0816 - 0830

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						µCi/cc	cpm	µCi/cc	cpm
Red 1	The plume has ended								
Blue 1	The plume has ended								
Yellow 1	The plume has ended								
Red 2	The plume has ended								
Blue 2	C East	0.2	*	1.0	*			8.15E-9	2.05E+2
		0.4	*	1.2	2				
		0.6	*	1.4	*				
		0.8	1						
Yellow 2	C East	0.7	*	1.5	*			1.01E-8	2.54E+2
		0.8	*	1.7	*				
		0.9	*	1.8	*				
		1.1	*	1.9	*				
		1.3	1						

PLUME EXPOSURE DATA

TIME: 0831 - 0845

Air Sample Data

Air Sample Data									
Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						$\mu\text{Ci/cc}$	cpm	$\mu\text{Ci/cc}$	cpm
Red 1	A East	The plume has ended							
Blue 1	B East	The plume has ended							
Yellow 1	B East	The plume has ended							
Red 2	C East	The plume has ended							
Blue 2	C East	0.1	*	1.0	*			<MDA	
		0.2	*	1.2	*				
		0.4	*	1.4	*				
		0.6	*	1.5	*				
		0.8	*						
Yellow 2	C East	0.7	*	1.5	*			5.49E-9	1.38E+2
		0.8	*	1.7	*				
		0.9	*	1.8	*				
		1.1	*	1.9	*				
		1.3	1						

PLUME EXPOSURE DATA

TIME: 0846 - 0901

Air Sample Data

Route	From Sample Point	Distance From	Dose Rate	Distance From	Dose Rate	Particulate		Iodine	
						$\mu\text{Ci/cc}$	cpm	$\mu\text{Ci/cc}$	cpm
Red 1	The plume has ended								
Blue 1	The plume has ended								
Yellow 1	The plume has ended								
Red 2	The plume has ended								
Blue 2	The plume has ended								
Yellow 2	The plume has ended								



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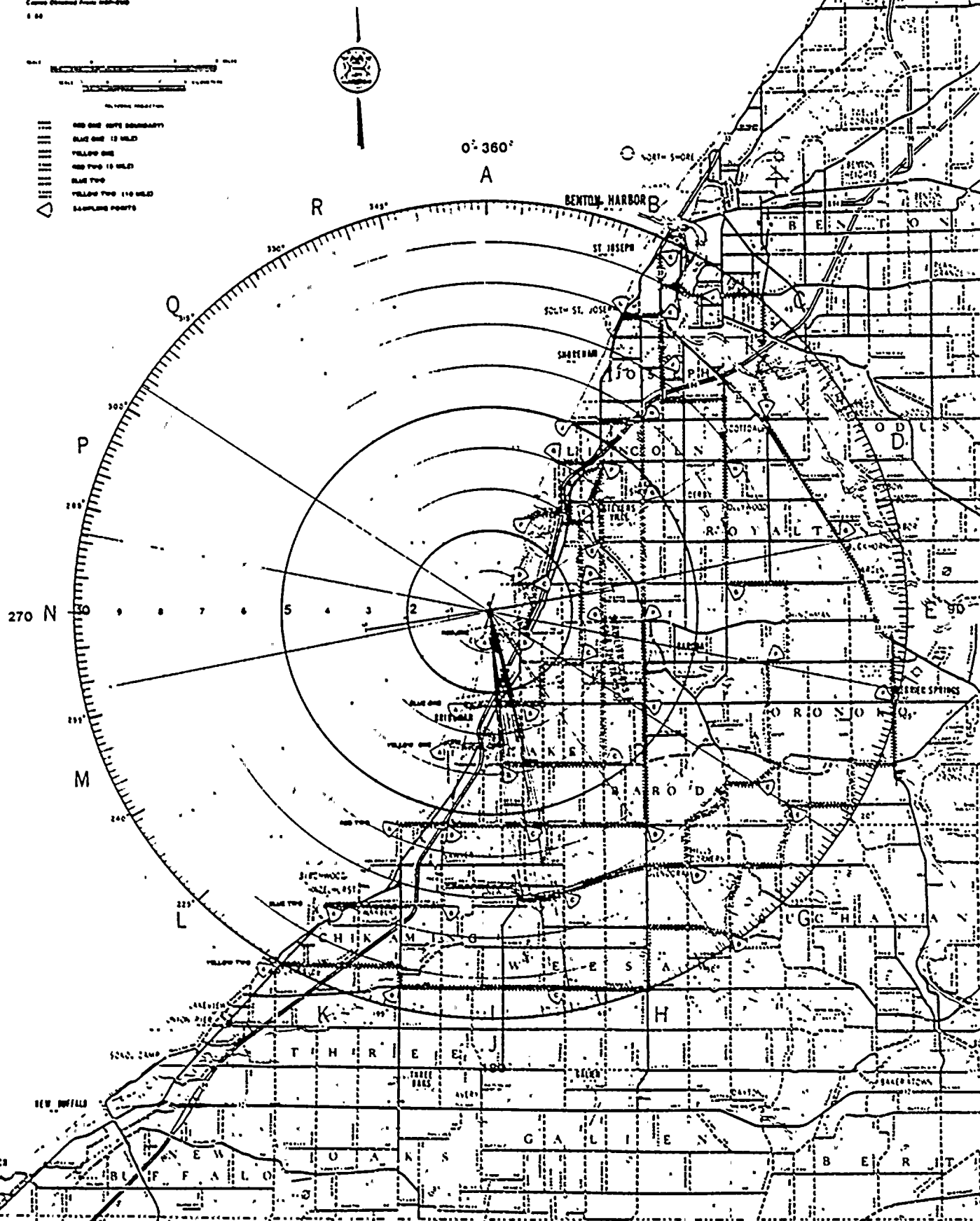
10

DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

0431-0445

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by D. C. COOK NUCLEAR POWER PLANT
Colors Obtained From Map-View
1:50

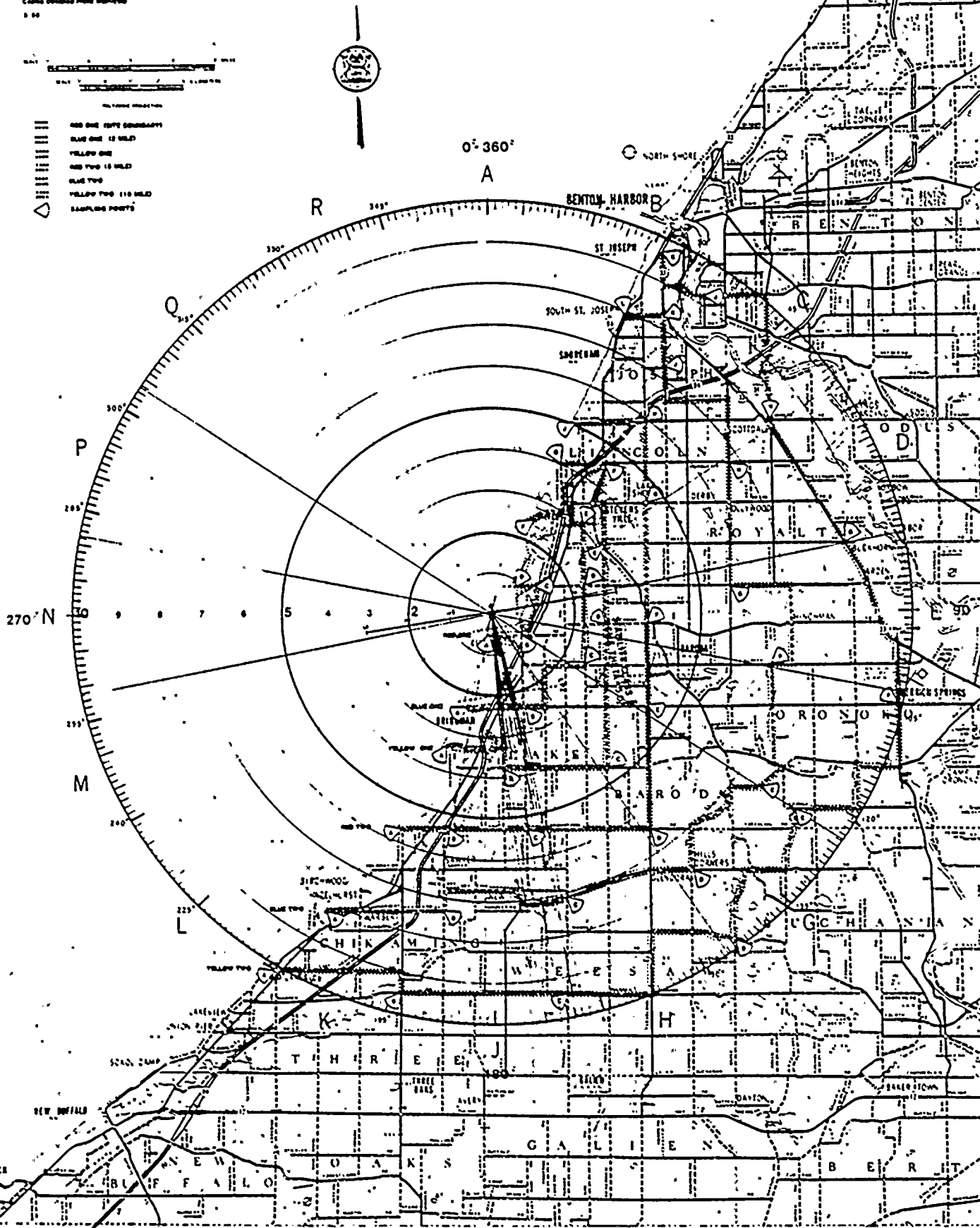


DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

0446-0500

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by D. C. COOK NUCLEAR POWER PLANT
Colors Derived From Highway
S. 50

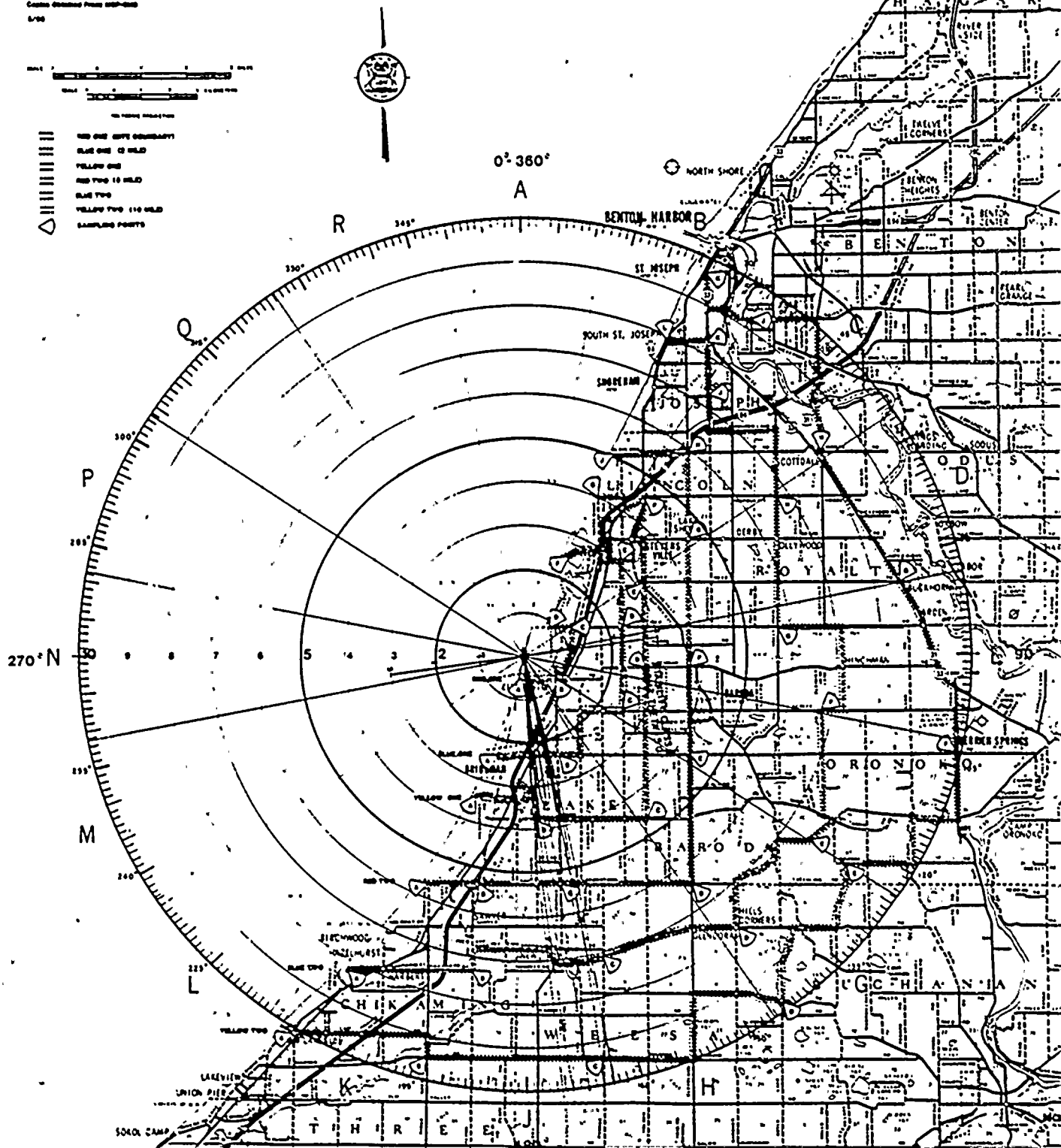




DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by D. C. COOK NUCLEAR POWER PLANT
Control Building Phone 282-2828
5/66



0516-0530

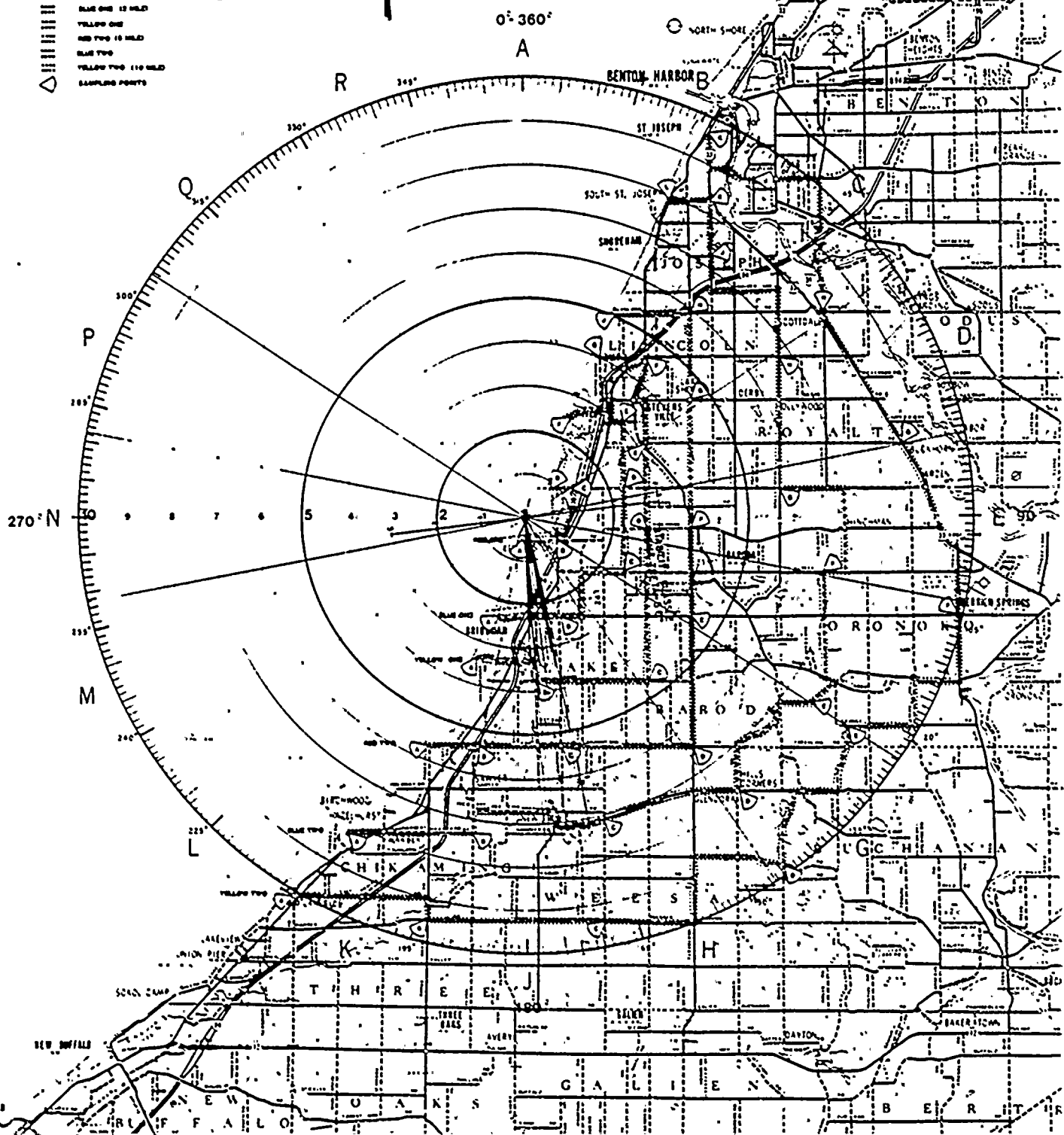
POWERED BY A C. COOK NUCLEAR POWER PLANT

Courtesy: National Science Foundation



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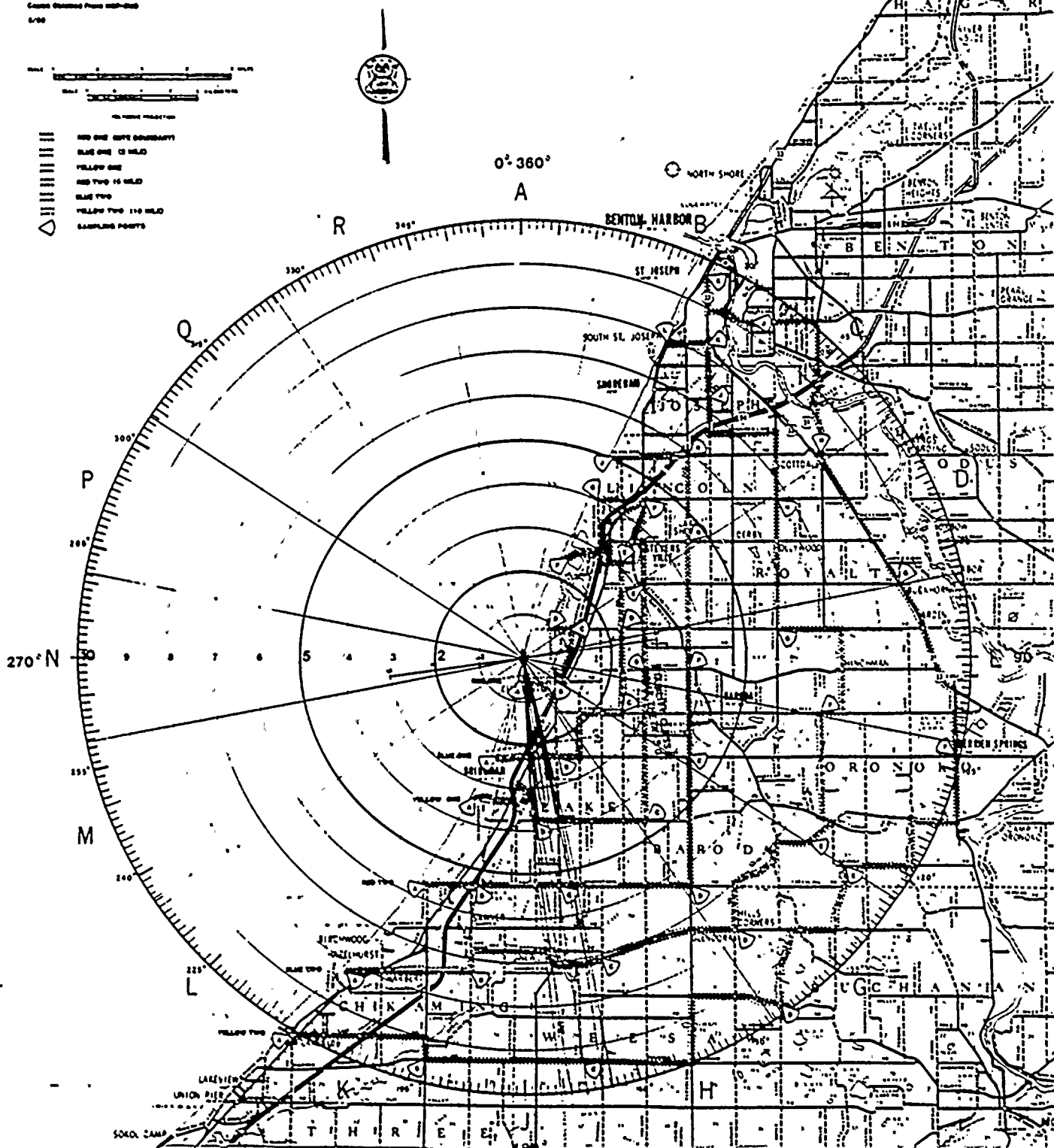
RED ONE FIVE SEVEN
BLUE ONE IS NINE
YELLOW ONE
RED TWO IS NINE
BLUE TWO
YELLOW TWO IS NINE
SAMPLING POINTS





0531-0545

Provided by B. C. COCK NUCLEAR POWER PLANT
 Cause Obtained From MSP-2225
 6/78





DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

0546-0600

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

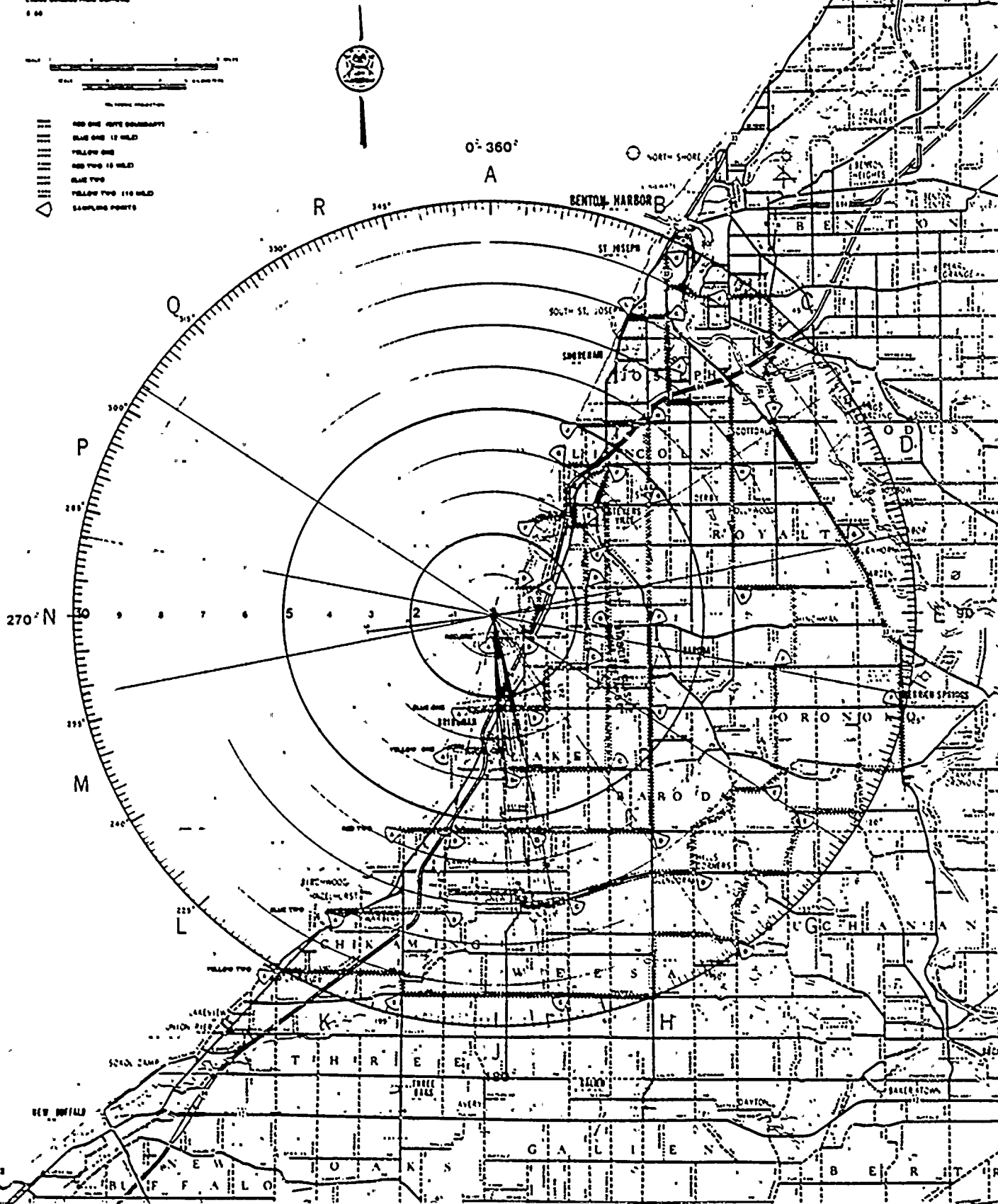
Prepared by D. C. COOK NUCLEAR POWER PLANT

Course Obtained From USNR-200

5-60



- RED ONE FIVE BOUNDARY
- BLUE ONE 10 MILE
- YELLOW ONE
- RED TWO 10 MILE
- BLUE TWO
- YELLOW TWO 10 MILE
- SAMPLING POINTS

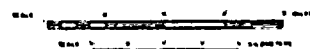


DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

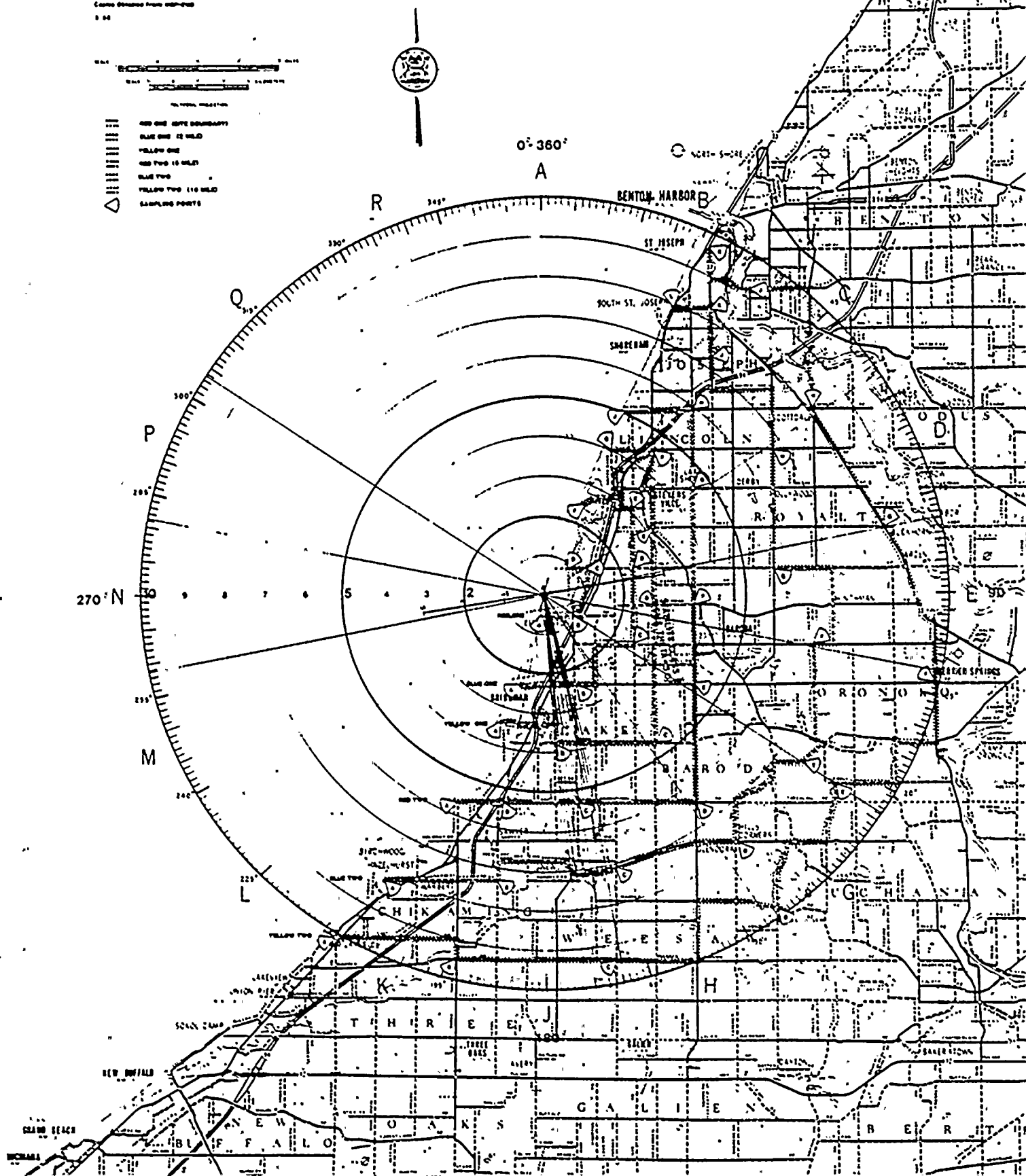
0601-0615

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by D. C. COOK NUCLEAR POWER PLANT
Contours Obtained from USGS-DEM
3-64



- RED ONE MILE BOUNDARY
- BLUE ONE 12 MILE
- YELLOW ONE
- RED TWO 15 MILE
- BLUE TWO
- YELLOW TWO 110 MILE
- SAMPLING POINTS





DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

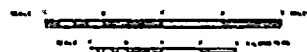
0616-0630

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by D. C. COOK NUCLEAR POWER PLANT

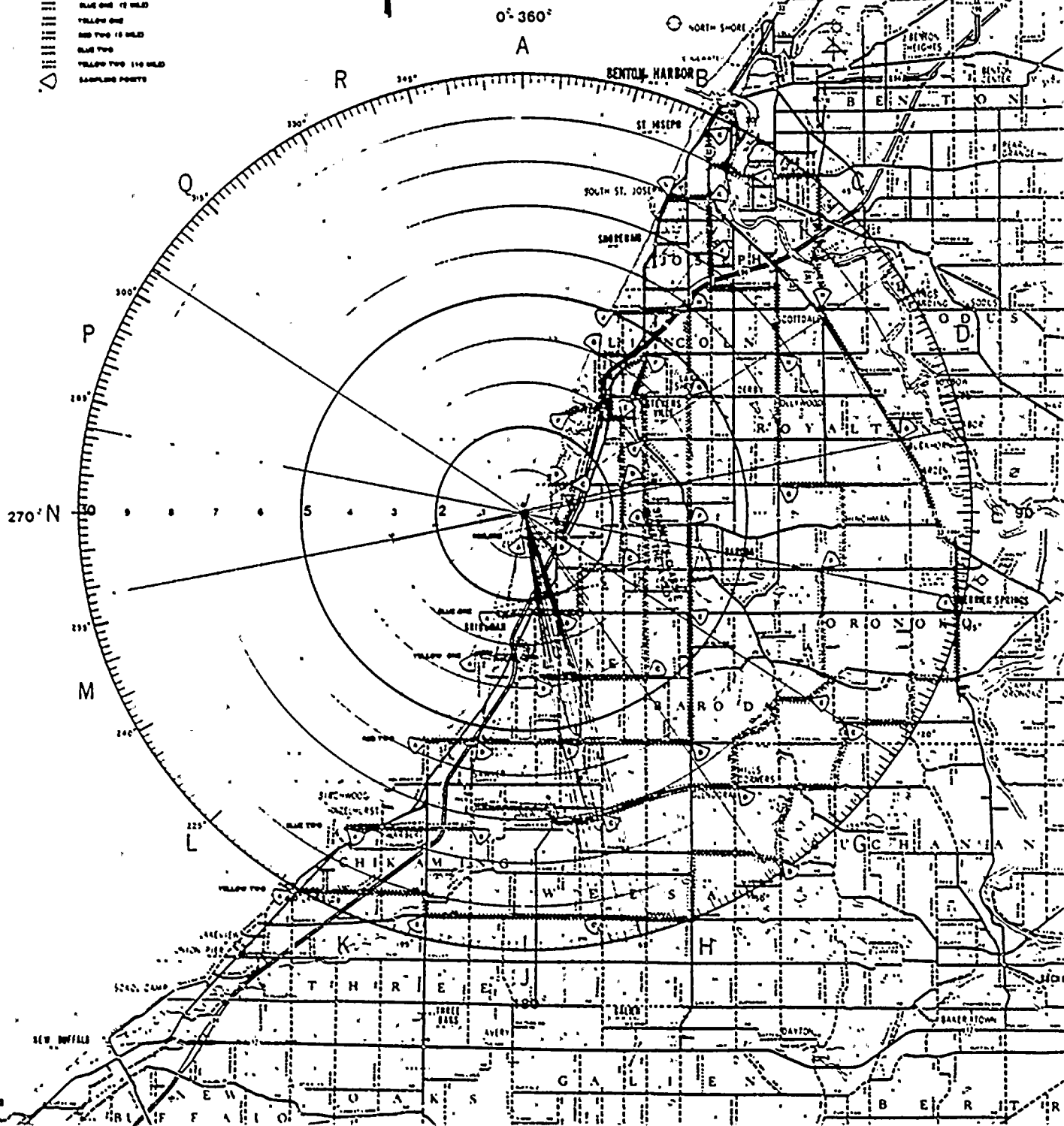
Source Obtained From: 100-1000

1:50



THE FOLLOWING INFORMATION

- RED ONE 100% CONTAMINATED
- BLUE ONE 1% WILD
- YELLOW ONE
- RED TWO 1% WILD
- BLUE TWO
- YELLOW TWO 1% WILD
- SAMPLING POINTS





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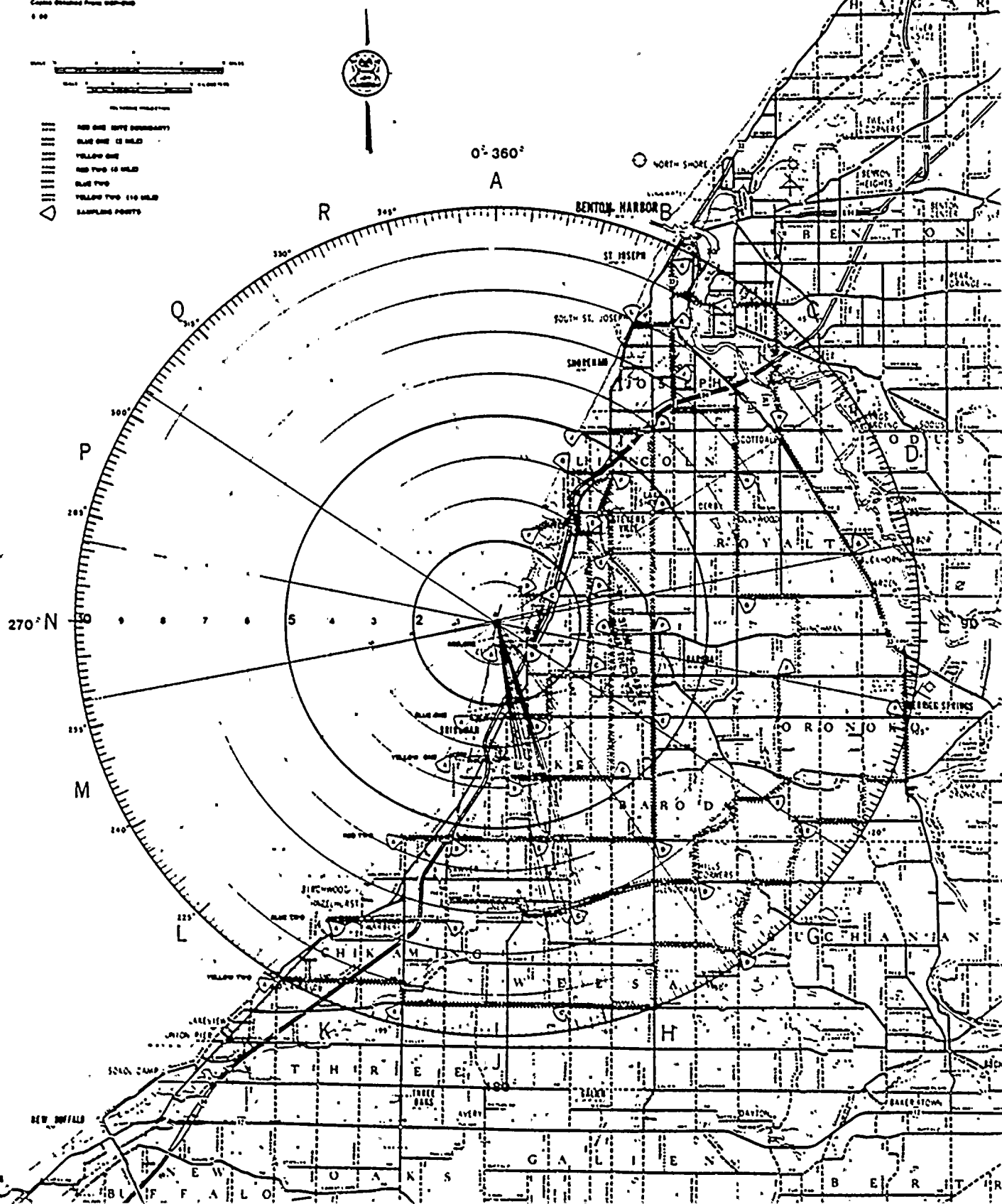
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0631-0645

PRODUCED BY B. C. COKE NUCLEAR POWER PLANT

Cases Selected From 1989-2001

422



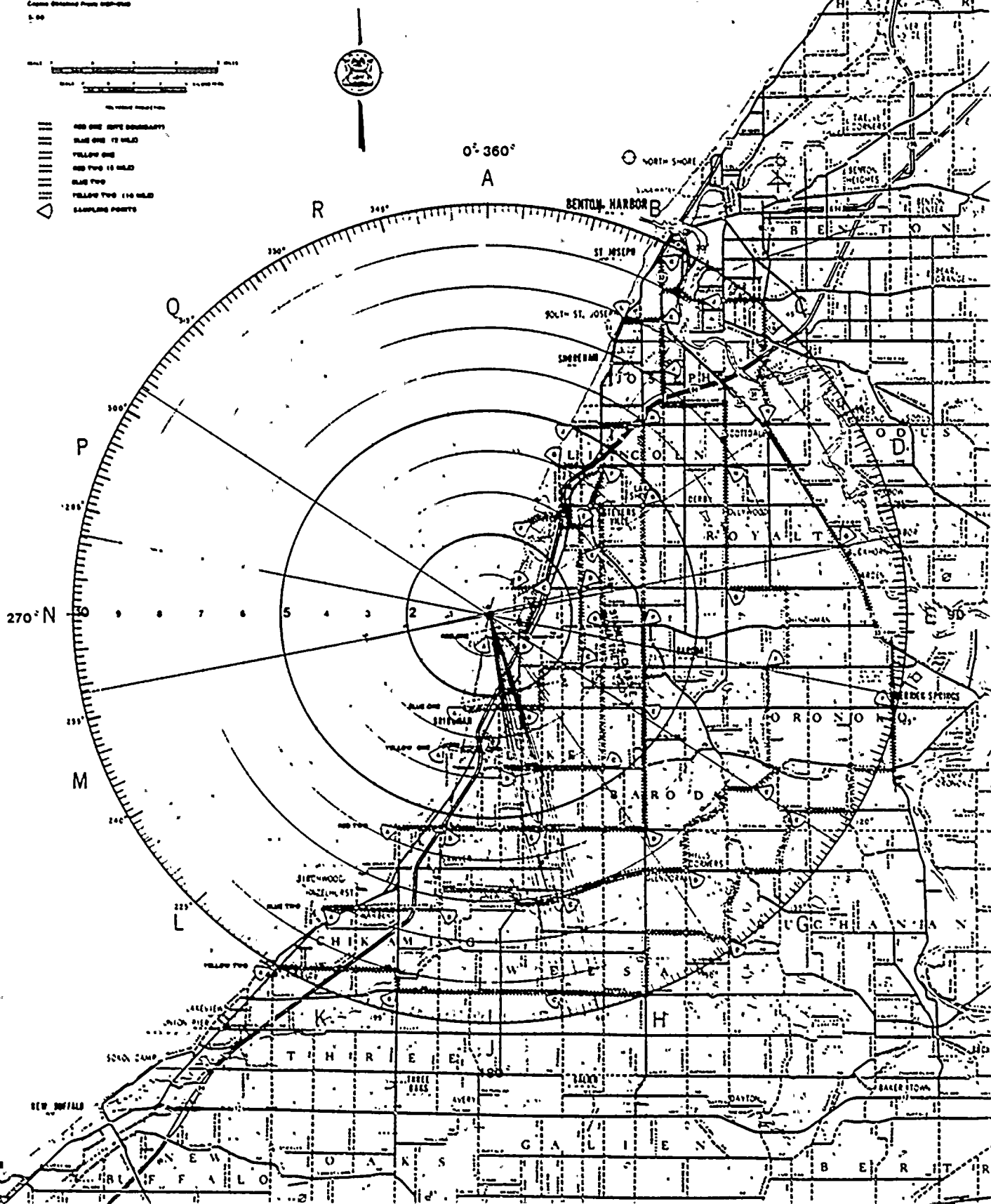
0646-0700

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

POWERED BY D. C. COOL NUCLEAR POWER PLANT

Capone (Continued) Pages 672-673

1.00

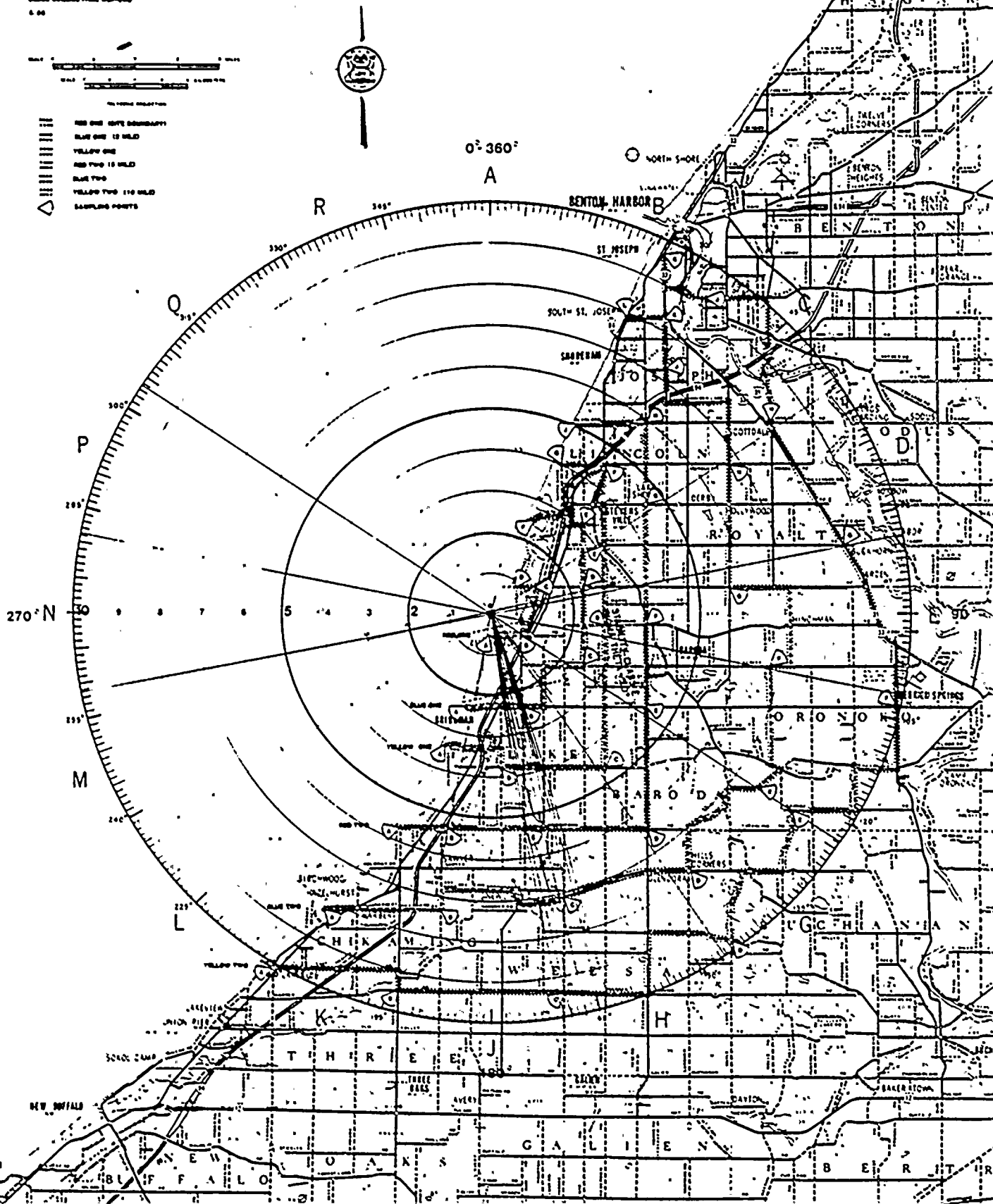




0701-0715

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by E. E. CODE NUCLEAR POWER PLANT
 Carbon Dioxide From High-Grade
 6.00

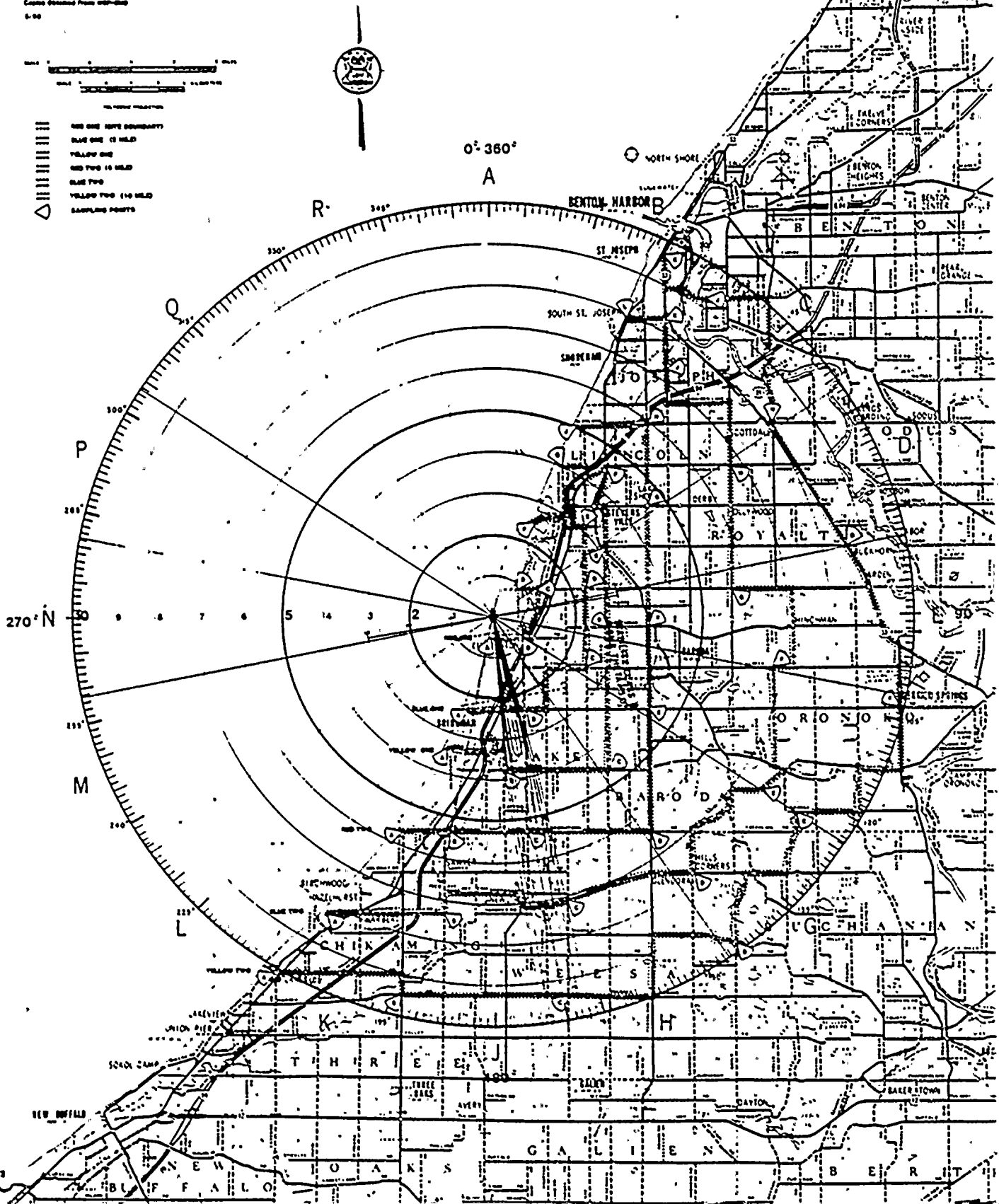


0716-0730

POWERED BY B. C. COKE NUCLEAR POWER PLANT

COPIES DESTROYED FROM 100-4249

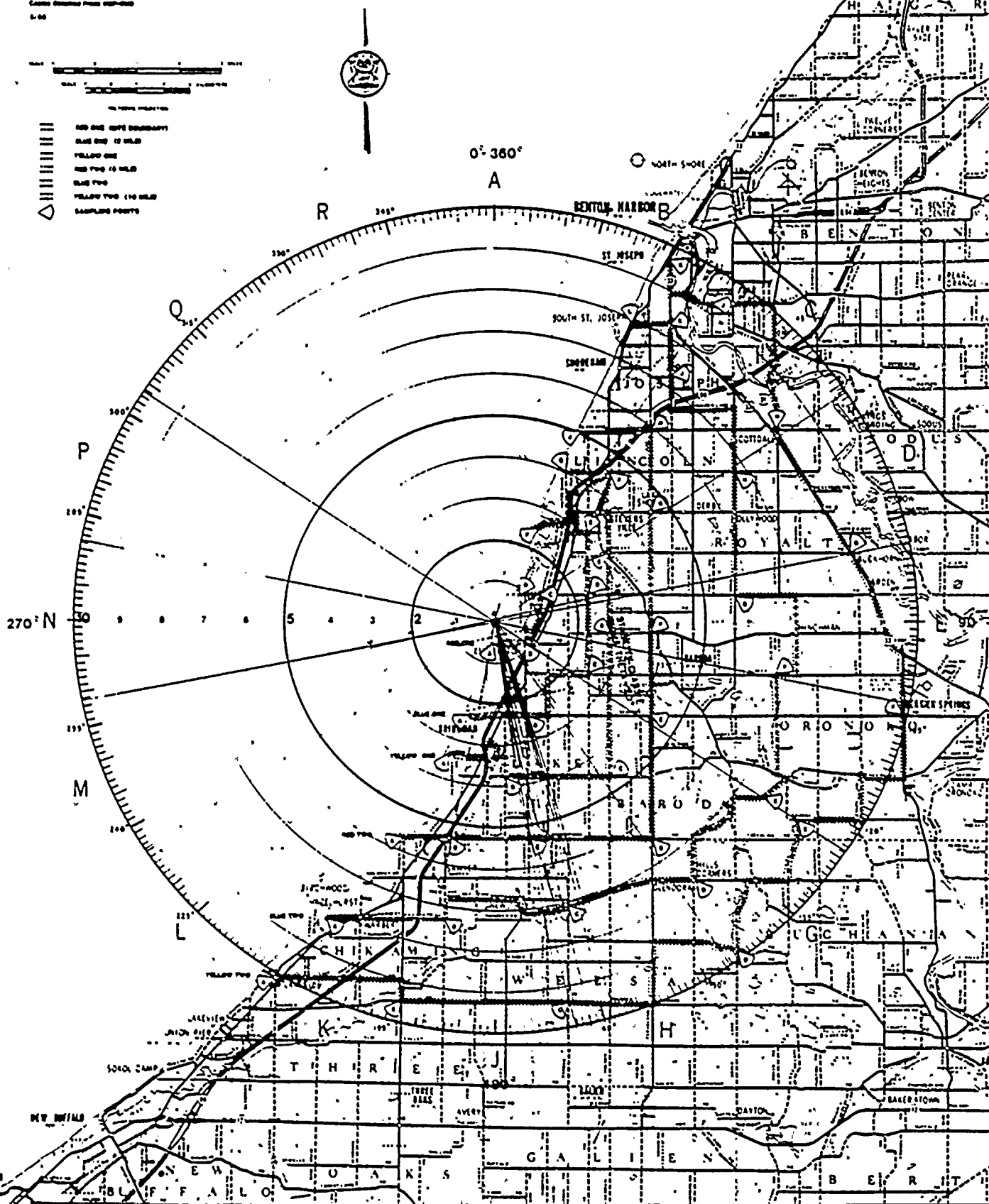
4. 30





0731-0745

Prepared for: D. C. COKE STEEL & POWER PLANT
Coke Division From: 447-4242
S. 26



DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

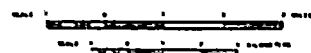
0746-0800

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

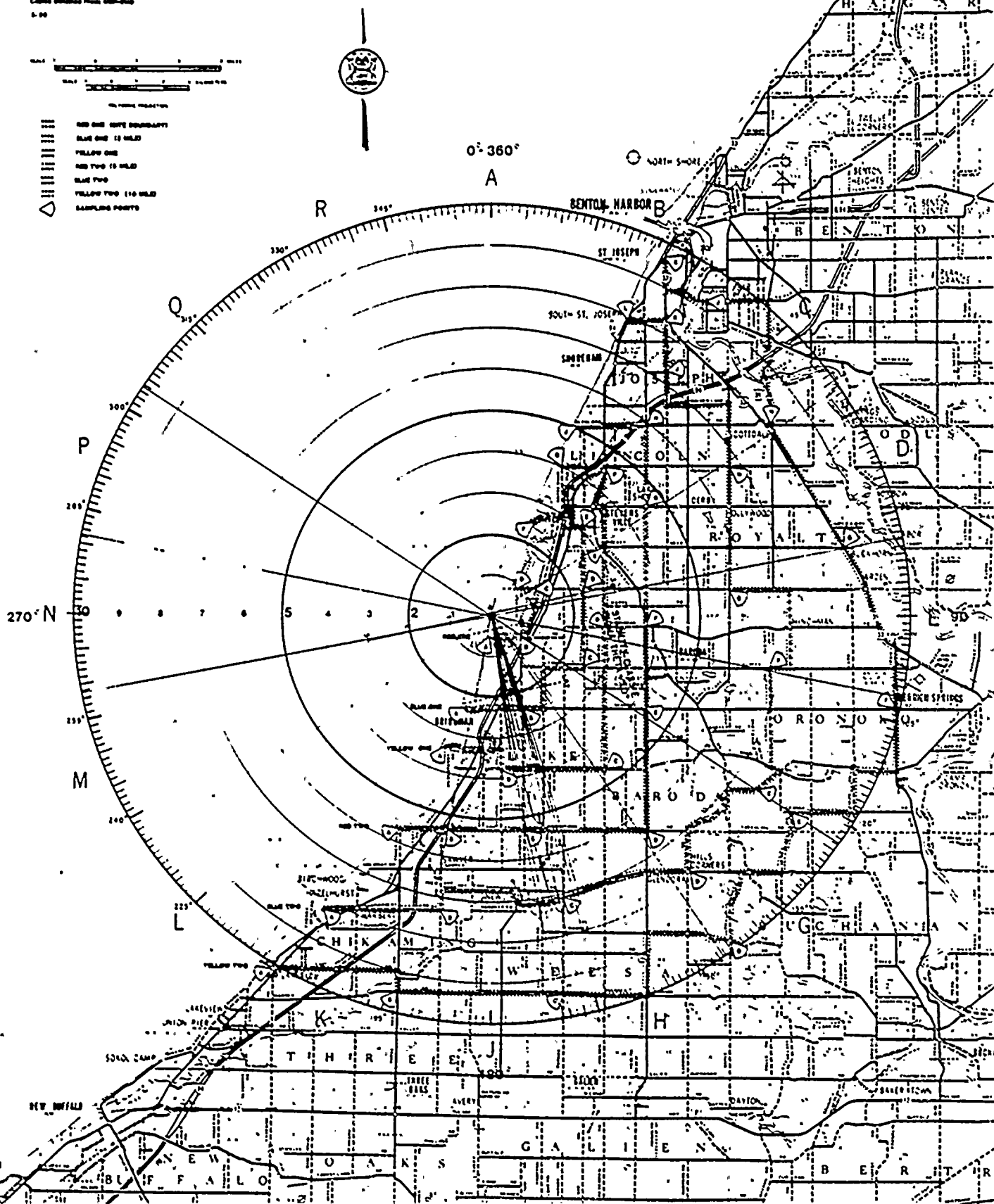
Prepared by D. C. COOK NUCLEAR POWER PLANT

Current Obtained From: 08/01/80

5-80



- RED ONE MILE BOUNDARY
- BLUE ONE 10 MILE
- YELLOW ONE
- RED TWO 10 MILE
- BLUE TWO
- YELLOW TWO 10 MILE
- TRIANGLE
- SAMPLING POINTS





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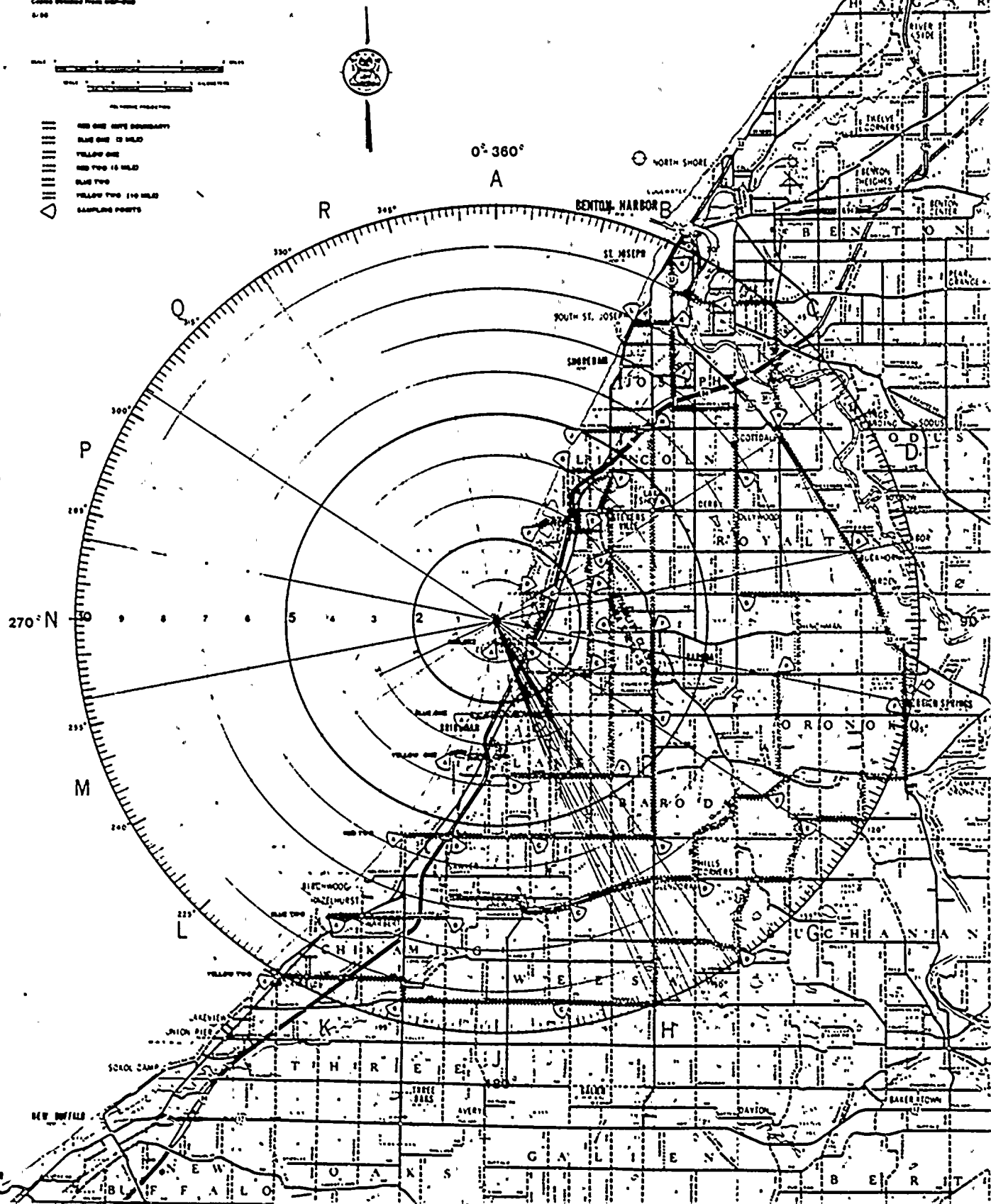
1.

DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

0801-0815

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Prepared by D. C. COOK NUCLEAR POWER PLANT
Copies Printed From 0801-0815
5-68



DONALD C. COOK NUCLEAR POWER PLANT 10 MILE EPZ BERRIEN COUNTY

0816-0830

COOK NUCLEAR PLANT ROUTES & SAMPLING POINTS

Issued by: D. C. COOK NUCLEAR POWER PLANT

Scale: (Distance from map)

1:10

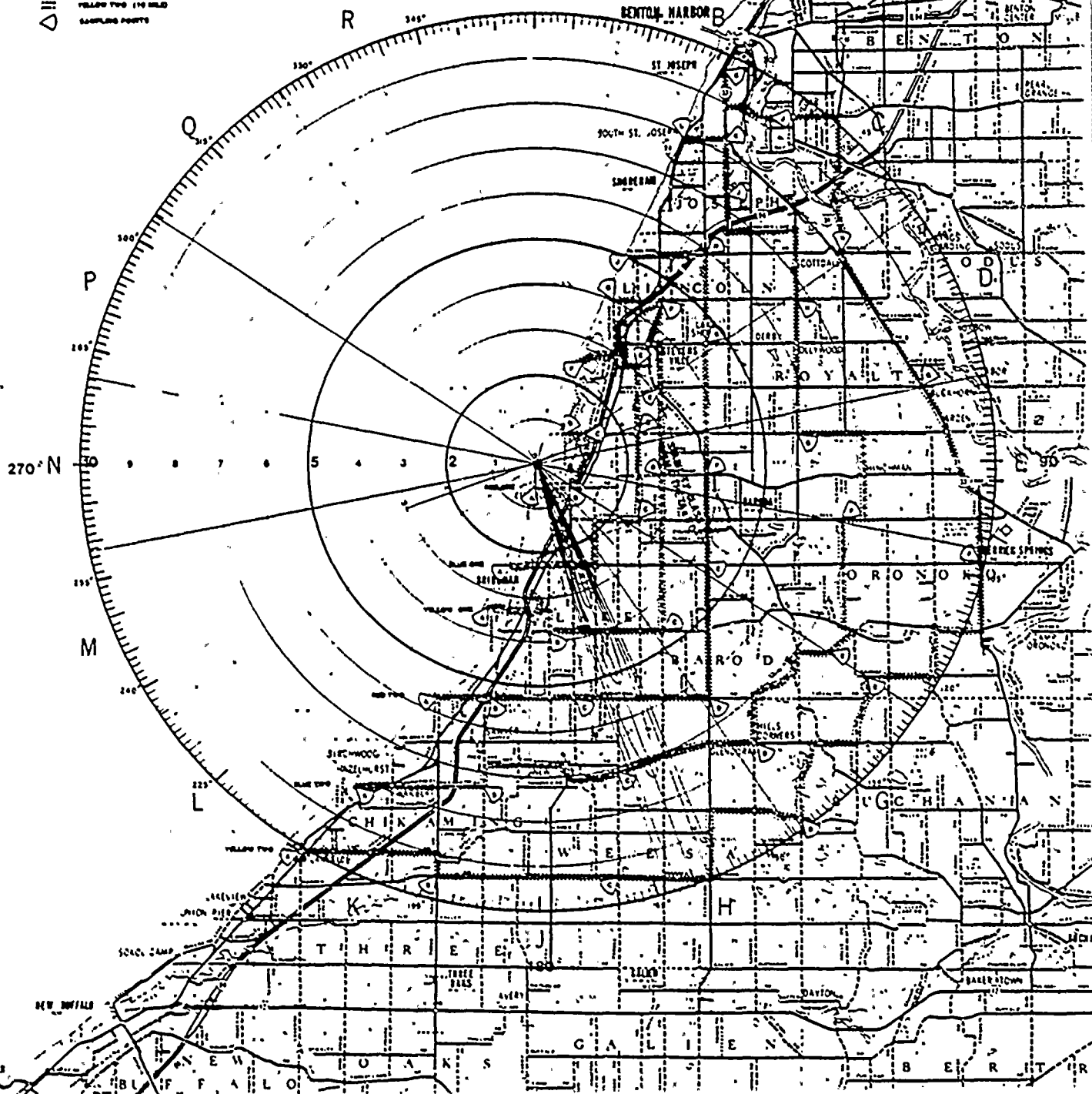


- RED ONE: STATE BOUNDARY
- BLUE ONE: 10 MILE
- YELLOW ONE
- RED TWO: 10 MILE
- BLUE TWO
- YELLOW TWO: 10 MILE
- TRIANGLE: SAMPLING POINTS



0°-360°

A

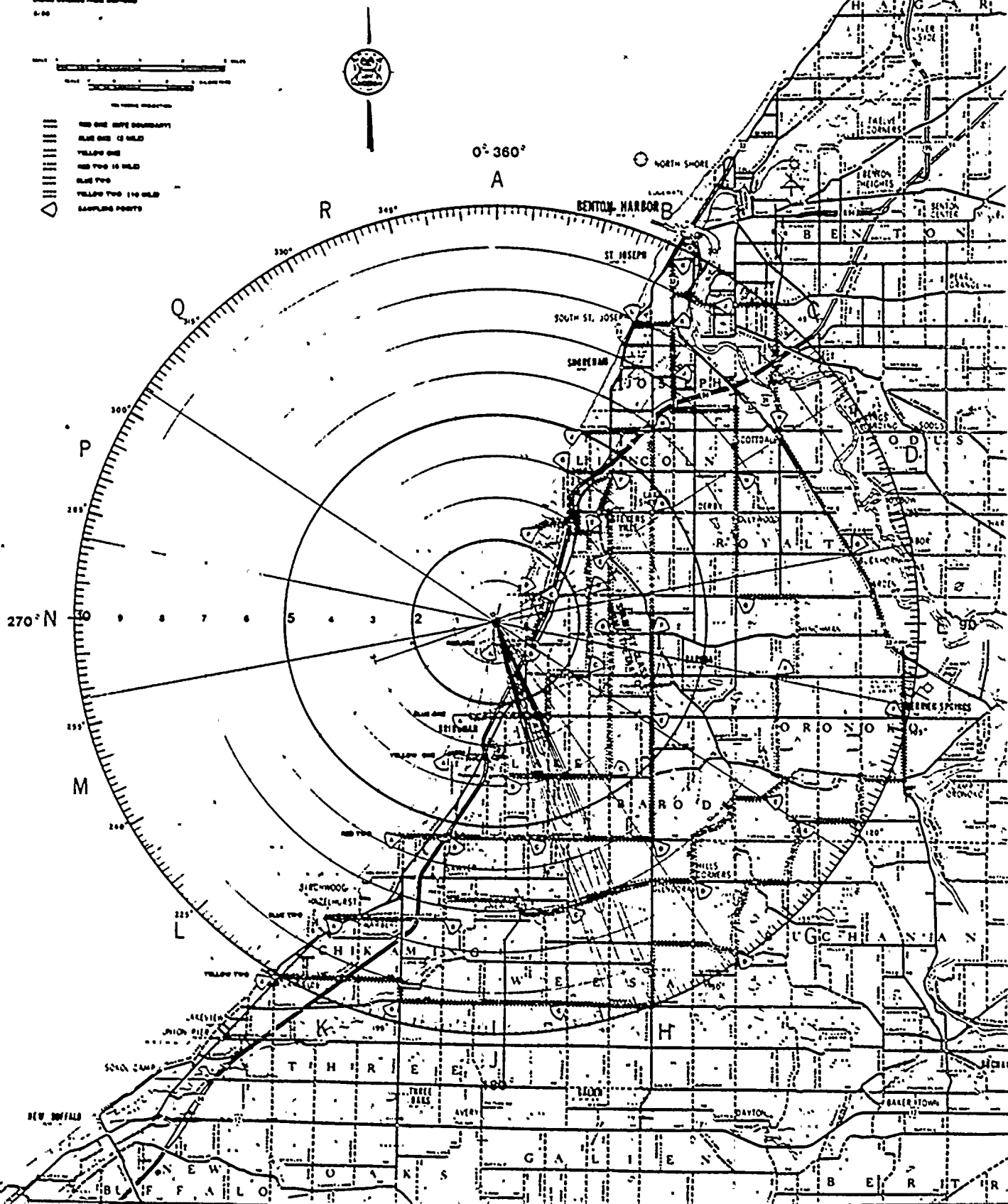


0831-0845

PRODUCED BY D. C. COOK NUCLEAR POWER PLANT

Course Grading from 1982-2000

● ●

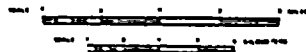


0846-0900

POWERED BY D. C. COOL NUCLEAR POWER PLANT

Course Number: 1000-0000

44



THE UNIVERSITY OF CHICAGO

- | | |
|-----------------|-----------------------|
| GREEN
START | RED ONE LEFT CORNER |
| YELLOW
START | BLUE ONE (1) HOLE |
| GREEN
START | YELLOW ONE |
| YELLOW
START | RED TWO (2) HOLE |
| GREEN
START | BLUE TWO |
| YELLOW
START | YELLOW TWO (1+2) HOLE |
| GREEN
START | SAMPLING POINTS |

