50-352/353

EXERCISE MANUAL

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE

LIMERICK GENERATING STATION

July 25, 1984

Sections II and III are

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TO EMERGENCY RESPONSE
EXERCISE PARTICIPANTS

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LIMERICK GENERATING STATION
PRACTICE EMERGENCY RESPONSE EXERCISE

July, 1984

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EXERCISE SCHEDULE
1984 NRC/FEMA OBSERVED EMERGENCY RESPONSE
LIMERICK GENERATING STATION

On-Site Controller/Evaluator Briefing

Date:	Tuesday, July 24, 1984
Time:	10:00 am
Location:	Limerick Energy Information Center
Purpose:	Pre-Exercise Scenario Briefing
Attendees:	PECo Controller/Evaluators
	NRC Evaluators
Coordinator:	M. Gallagher

Exercise

Date:	Wednesday, July 25, 1984
Location:	Limerick Generating Station
Purpose:	Radiological Emergency Response
Attendeed:	Site Personnel
Coordinator:	R. Kankus, M. Gallagher

Exercise Debriefing

Date:	Thursday, July 26, 1984
Time:	1:30 pm
Location:	Limerick Energy Information Center
Purpose:	Players and Controller/Evaluator Debriefing
Attendees:	PECo Players
	NRC and PECo Controller/Evaluators
Coordinator:	M. Gallagher

Exercise Critique

Date:	Friday, July 27, 1984
Time:	10:00 am
Location:	Pottsgrove Junior High School, Pottstown, PA
Purpose:	FEMA/NRC Public Comment
Attendees:	PECo
	FEMA
	NRC
Coordinator:	R. Kankus, M. Gallagher

CONTROLLER AND EVALUATOR ASSIGNMENTS
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
JULY 25, 1984

CONTROL ROOM	NAME
Head Controller	M. Gallagher
Controller - Hand Outs	R. Vanasse (SWEC)
Controller -	C. Madsen
Controller -	R. Gambone (PBAPS)
*Controller - Accident Assessment	W. Mattiford
*Controller - Accident Assessment	H. Carlberg (SWEC)

TECHNICAL SUPPORT CENTER	NAME
Lead Controller	D. Graves (SWEC)
Controller - Dose Assessment	C. Mazzola (SWEC)
Evaluator - Dose Assessment	D. Burwell (SWEC)
Evaluator - Personnel Safety Team Leader	H. Lipschitz (SWEC)
Evaluator - Chemistry Team Leader	E. Michael (SWEC)
Evaluator - Security Team Leader	J. Basilio
Evaluator - Tech Support Team Leader	F. Cross (PBAPS)
Controller - Field Monitoring Team Red	J. Dietrich (HP-NSS)
Controller - Field Monitoring Team Blue	A. Bergey (HP-NSS)
Controller - Field Monitoring Team Green	M. Horvatinovic (HP-NSS)
Controller - Field Monitoring Team Yellow	R. Bernhardt (HP-NSS)
Controller - Chemistry	C. Doherty (SWEC)
Evaluator - Chemistry Lab	W. Leinheiser (Chemistry-GP)
Evaluator - Chemistry Team	S. Blacklock (Chemistry-GP)
Evaluator - PASS	M. Clifton (Chemistry-GP)
Evaluator - Fire & Damage Team Leader	M. Restaino (PBAPS)
Controller - Assembly/Accountability/Evacuation	D. Taylor
Controller - ERFDS Handouts	K. Serotkin (SWEC)
Controller - Evacuation Offsite	S. Gallagher (NSS-HP)

OPERATIONS SUPPORT CENTER	NAME
Lead Controller -	D. McDavitt (SWEC)
Evaluator - Maintenance Supervisor	R. Hennessey
Controller - Damage/Repairs	W. Stull
Controller - Damage/Repairs	C. Wyler
Controller - Fire Team	S. MacAinsh
Controller - First Aid Event	V. Affatato
Evaluator - OSC Coordinator	(later)
Evaluator - ARMS Handouts	R. Bettison (SWEC)
Evaluator - In Plant Rad. Monitoring Teams	J. Richardo (NSS-HP)
Controller - Damage/Repairs	J. McElwain

EMERGENCY OPERATIONS FACILITY	NAME
Head Controller (Offsite Activities)	R. Kankus
Controller - Command & Control	E. Firth
Controller - Dose Assessment	E. Salomon (SWEC)
Evaluator - Communications/Status Boards	R. Smith (SWEC)
Evaluator - Dose Assessment	D. Leonard (SWEC)
Controller - ERFDS Handouts/Engineering Support	V. Warren

HEADQUARTERS EMERGENCY SUPPORT CENTER	NAME
Lead Controller Evaluator - Command & Controller	K. Schlecker
Evaluator - Public Relations/C mmunications	E. Doncarellis (SWEC)
(Offsite Medical Facilities	
Controller	K. Mandl

OBJECTIVES FOR THE 1984
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

In order to demonstrate the radiological emergency response preparedness of the Limerick Generating Station, the Philadelphia Electric Company (PECO), the Pennsylvania Emergency Management Agency (PEMA), and the surrounding risk counties, an integrated radiological emergency response exercise will be conducted.

The PECO objectives of the exercise are as follow:

A. Accident Assessment

1. Demonstrate the ability of site personnel to recognize an emergency initiating event and properly characterize and classify the emergency according to the pre-established Emergency Action Levels.

2. Demonstrate that PECO personnel can perform offsite dose projections and accident assessment, for both radioactive noble gases and radioiodine, quickly and accurately.

3. Demonstrate that onsite and offsite field monitoring teams can be dispatched and deployed in a timely manner; that field communications are adequate; that radiological monitoring equipment is functional; that simulated data are accurately obtained and transmitted to the appropriate location and individuals; that results for area radiation levels and air sampling and analysis for radioiodine and particulates can be effectively used in determining protective action recommendations.

B. Activation of Emergency Facilities

1. Demonstrate the ability of station and corporate personnel to activate and staff the emergency response facilities as appropriate for the existing emergency class and to transfer functional responsibilities to the appropriate operations center when escalating or de-escalating to a different emergency class.

2. Demonstrate that adequate security of facilities can be maintained.

3. Demonstrate functional capabilities of equipment in both EOF and TSC. (Functional capabilities may be simulated on real-time computer equipment.)

C. Notification and Communication

1. Demonstrate that station and offsite notification of PECO staff and officials can be accomplished in a timely manner and that all initial notification and updating is verified and logged.

2. Demonstrate the ability to communicate with in-plant monitoring teams, rescue parties, and other station personnel as needed.

3. Demonstrate that the decision to notify the public officials can be accomplished in an effective and timely manner.

4. Demonstrate that messages are transmitted in an accurate and timely manner; that messages are properly logged; that status boards are accurately maintained and updated; that appropriate briefings are held and incoming EOF personnel are briefed and updated.

5. Demonstrate that public information is coordinated between PECO and offsite officials; that there are accurate and timely press releases and briefings; that designated public information personnel are inplementing their procedures.

D. Station Health Physics and Security

1. Demonstrate the ability to account for all personnel within the protected area onsite.

2. Demonstrate the ability to provide adequate radiation protection services such as dosimetry and personnel monitoring (frisking).

3. Demonstrate the ability to perform area surveys under emergency conditions.

4. Demonstrate the ability to enter a highly contaminated area for the purpose of rescuing casualties.

5. Demonstrate the ability to provide first aid and transportation to a suitably prepared medical facility for an injured individual who has been contaminated or has received a high radiation dose.

6. Demonstrate the ability to maintain plant security under emergency conditions.

7. Demonstrate the ability to perform post-accident sampling and analysis of in-plant airborne radioactivity and surface contamination levels.

8. Demonstrate the ability to perform personnel and equipment decontamination.

9. Demonstrate the use of post-accident sampling equipment to obtain transport, and analyze samples of reactor coolant and/or containment air samples under conditions involving fuel damage.

E. Direction and Control

1. Demonstrate that local offsite support agencies such as life squads and fire companies will provide timely support.

2. Demonstrate the ability of the directors to direct the emergency organizations in the implementation of the Emergency Plan and the Emergency Plant Implementation Procedures (EPIPs)

3. Demonstrate the capability to technically evaluate the incident conditions and implement appropriate corrective actions.

4. Demonstrate that PECO has 24 hr capability. Demonstrate that all agency representatives who are assigned emergency reponsibilities can effectively operate from their planned location inside or outside the EOF. (May be done on a limited scale by designating two shifts.)

F. Protective Actions

1. Demonstrate protective actions (including mock evacuation and sheltering) by preparing an exercise scenario which provides for a hypothetical total integrated whole body or thyroid dose exceeding the evacuation PAGs for at least the nearest residents.

2. Demonstrate the ability of the site and the EOF to make recommendations on both the taking and relaxing of protective actions.

G. Parallel and Other Actions

1. Demonstrate the ability to call on a designated hospital to treat a hypothetically contaminated injured patient and that the ambulance service can effectively transport hypothetically contaminated injured personnel to the hospital. Demonstrate that the ambulance and associated equipment can be decontaminated and that contaminated clothing and disposable materials are properly discarded.

2. Demonstrate the licensee's capability for self-critique and ability to identify areas needing improvement in order to make future appropriate procedural changes.

The PEMA objectives of the exercise are to test and evaluate the capabilities of state, counties and municipalities to interface and coordinate with each other in the following areas:

a. Notification of Officials and Staff

The adequacy of the nuclear incident notification and alert procedures from the fixed nuclear facility to PEMA, BRP, risk counties and municipalities, and support counties.

b. Public Alert/Notification and Information

The ability of state, county and municipal authorities to alert, notify and update the public of incidents within the plume exposure pathway emergency planning zone, to include actual use of sirens, EBS announcements, route alerting and other communications means available.

c. Communications

The adequacy of and/or the need for all planned internal and external communications systems among and between the participants to include backup communications system, EBS and RACES.

d. Emergency Operations Center

The adequacy of state, county and municipality emergency operation centers with respect to security, space, comfort, staffing and function for managing responses to nuclear facility incidents.

e. Direction and Control

The ability of key state, county and municipal emergency response personnel and elected officials' support for the initiation and coordination of timely and effective decisions and their ability to provide resource requirements for incidents.

f. Emergency Plans

The adequacy and capability of implementation of state, risk and support counties, and municipal emergency response plans.

g. Public Information

The adequacy of the interface of state, county and nuclear facility public information systems with the news media, to include news media briefing rooms, rumor control measures, etc.

h. Accident Assessment (Bureau of Radiation Protection)

The effectiveness of state BRP nuclear facility accident assessment system, to include adequacy of equipment, personnel staffing and competency skills with respect to reporting dose projection, field measurement, coordination and communications.

i. Protective Measures

The capability of the state, county and municipal emergency response systems to implement sheltering of evacuation and to take actions to activate such support functions as reception centers, mass care/decontamination centers, decontamination stations, risk school district procedures, ambulance services, bus operations, and pickup points.

j. Radiological Exposure Control

The capability of state, county and municipal emergency response personnel to implement access control points and traffic control points, the issuance of dosimetry and KI and the record keeping and decontamination procedures.

REFERENCE DOCUMENTS
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

1. Limerick Generating Station, Emergency Plan
2. Limerick Generating Station, Emergency Procedures
3. Limerick Generating Station, Final Safety Analysis Report
4. Title 10, Code of Federal Regulations, Part 50, Appendix E
5. NUREG-0654/FEMA-REP-1, Revision 1

PARTICIPATING EMERGENCY CENTERS
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

Pennsylvania

Bureau of Radiation Protection Headquarters Assessment Center, Fulton Building, Harrisburg, PA

State of Pennsylvania Emergency Operations Center, Transportation Building, Commonwealth & Forrester Streets, Harrisburg, PA

Montgomery County Emergency Operations Center, 100 Wilson Blvd., Eagleville, PA 19408

Chester County Emergency Operations Center, 14 East Biddle St., West Chester, PA 19380

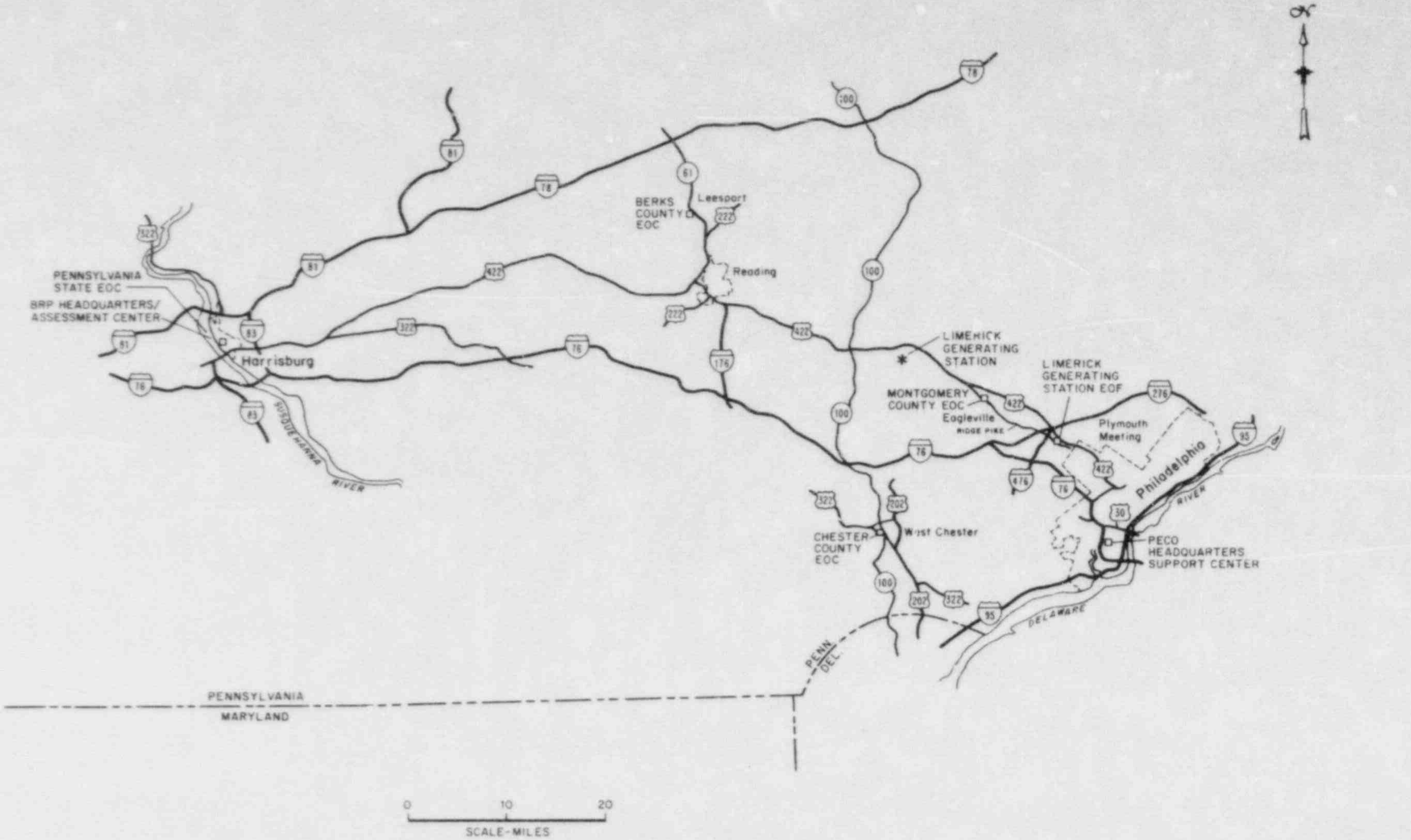
Berks County Emergency Operations Center, Leesport, PA 19533

Philadelphia Electric Company

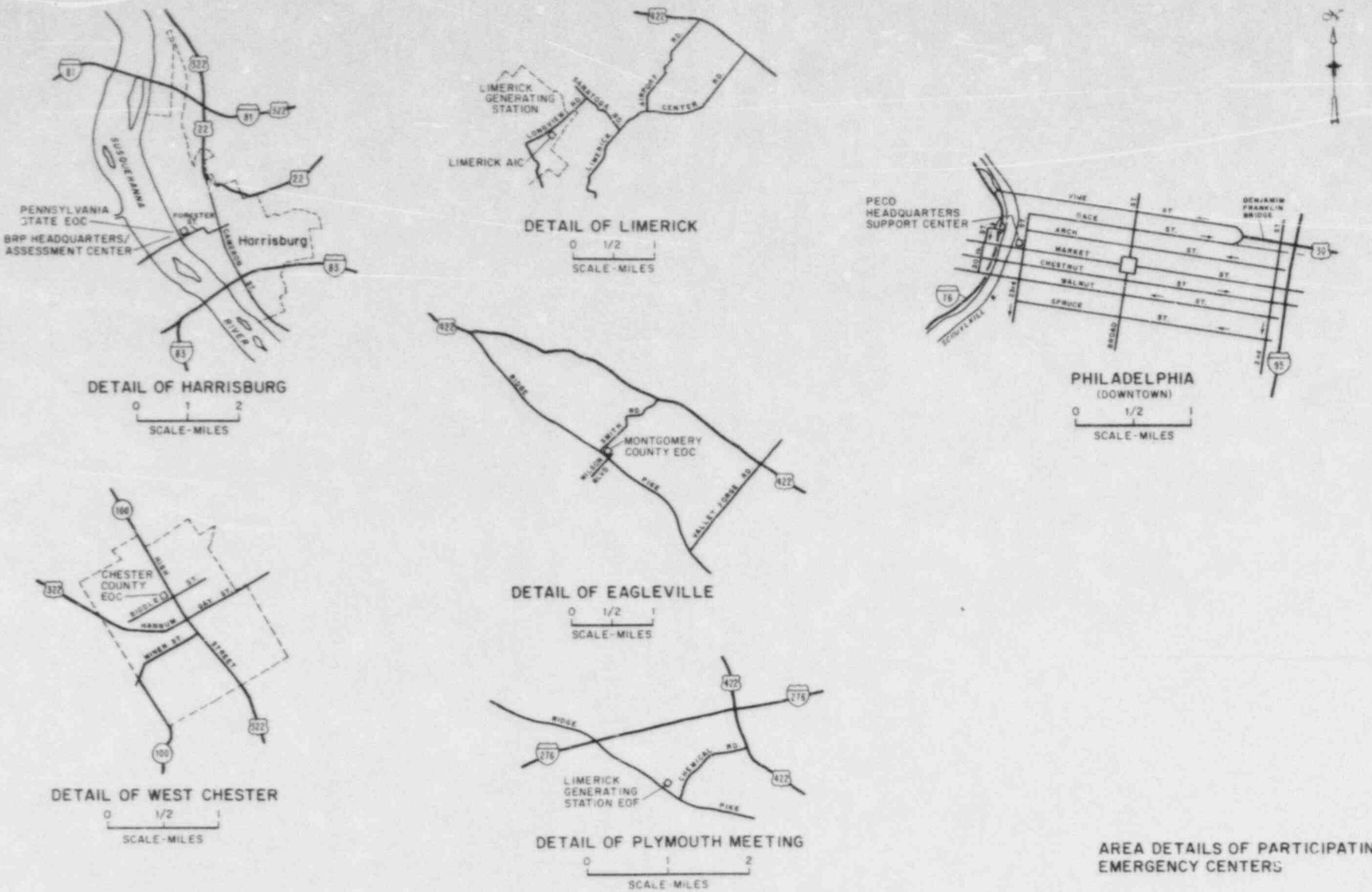
Headquarters Emergency Support Center, 2301 Market St., Philadelphia, PA 19101

Limerick Generating Station Technical Support Center, Limerick, PA

Limerick Generating Station Emergency Operations Facility, Plymouth Service Building, Ridge Pike & Chemical Rd., Plymouth Meeting, PA 19462



LOCATIONS OF PARTICIPATING EMERGENCY CENTERS



AREA DETAILS OF PARTICIPATING EMERGENCY CENTERS

PARTICIPATING AGENCIES
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

PENNSYLVANIA

State Agencies

Pennsylvania Emergency Management Agency (PEMA)

Bureau of Radiation Protection (BRP)

State Staff Sections

Department of Aging
Department of Agriculture
Banking
Department of Commerce
Department of Community Affairs
Department of Education
Governor's Energy Council
Department of Environmental Resources
Bureau of Radiation Protection
Department of General Services
Department of Health
Insurance
Labor and Industry
Department of Military Affairs
Public Utility Commission
Department of Public Welfare
Red Cross
Pennsylvania State Police
Department of Transportation
Turnpike Commission
Pennsylvania Game Commission

Risk Counties

Berks County
Chester County
Montgomery County

Support Counties

Philadelphia County
Lehigh County

Federal Agencies

Nuclear Regulatory Commission (NRC)

GUIDELINES FOR CONDUCT OF THE JULY 1984
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

I. PURPOSE AND SCOPE

This document provides guidance for conducting the July 1984 LGS emergency preparedness exercise. It provides methods for demonstrating emergency response capability, conducting the exercise, and evaluating results. Table 1.G-1 summarizes the degree of simulation to be employed by PECo in demonstrating emergency response capabilities.

II. CONCEPT OF OPERATIONS AND CONTROL OF THE EXERCISES

Philadelphia Electric Company (PECo) and Stone & Webster Engineering Corporation (SWEC) will supply official controllers and/or evaluators for each location where an emergency response is being demonstrated. Prior to the exercise, the controllers and evaluators will be provided with the appropriate locations, maps, time periods, guidelines, and an evaluator evaluation checklist corresponding to their assignments.

Controllers will hand out messages and cue cards and will make judgment decisions. If crisis situations arise, they will contact the Lead Controller in their assigned Emergency Response Facility (ERF) for advice or resolution of the problem. Lead Controllers are designated for the TSC, OSC, and EOF to keep these ERFs on track. If required, they will contact the Head Controller to force play of some events. The Head Controller, stationed in the Control Room, will be in overall charge of conducting the exercise. All requests for modifications or holding periods must be cleared through the Head Controller.

The exercise initiating events will be controlled by lead controllers. Hypothesized initiating events will consist of three types of information: (1) plant information and data provided to Control Room and Technical Support Center personnel; (2) release rates; (3) hypothesized environmental radiation levels. The Head Controller in conjunction with the Lead State Controller has the authority to determine the time sequence of these initiating events to ensure an orderly flow of exercise events. All other actions during the exercise will occur through a free-play response as the plant and corporate participants respond to the initiating events.

As the initiating events are provided to the plant staff, they will determine the nature of the emergency and the implementation of the appropriate emergency response procedures. These procedures are expected to include a determination of the emergency classification in accordance with NUREG-0654. FEMA-REP-1, Revision 1. Notifications will be made to the appropriate federal, state, and county authorities.

The hypothesized emergency will continue to develop based on data and information provided to the Control Room and TSC personnel. As the situation develops, information will be forwarded to appropriate plant and corporate personnel for the determination of actions to be taken in response to the hypothesized emergency. Where information would normally be confirmed via an independent source (such as National Weather Service for weather data), the confirmation data will be simulated. If a conflict exists between the hypothesized data and the actual data, the hypothesized data will be utilized.

Certain inconsistencies (such as plume width, release duration, technical reason for the simulated release, etc.) may be intentional and required to provide an exercise basis which tests the plant and corporate capabilities to the maximum extent feasible in a limited time frame. If an inconsistency is known or determined to be intentional, then the emergency response personnel will note the inconsistency and ignore it. The lead controllers will have the authority to resolve or explain any inconsistencies or problems that may occur during the exercise.

With the exception of the already cited and potential inconsistencies, the internal operations of the emergency response facilities will be identical with their intended operation in a real emergency.

III. GENERAL GUIDANCE FOR THE CONDUCT OF THE EXERCISE

1. Simulating Emergency Actions

Since exercises are intended to demonstrate actual capabilities as realistically as possible, participants should act as they would during a real emergency. Wherever possible, actions should be carried out. The actions that PECo will actually perform and those that will be realistically simulated are identified in Table 1.G-1. Only when it is not feasible to perform an action should it be simulated. Any orders given that for any reason cannot or should not actually be performed should begin with the word "Simulate." For example, the order to put out a fire that is being hypothesized would state: "Simulate discharging the fire extinguisher." Where such actions are being taken, it is suggested that participants inform any observers in the area of what action really would be taken had the emergency been real.

2. Avoiding Violation of Laws

Intentional violation of laws is not justifiable during any exercise. To implement this guideline, the following actions must be taken:

a. All evaluators and potential exercise participants must be specifically informed of the need to avoid intentional violation of all federal, state, and local laws, regulations, ordinances, statutes, and other legal restrictions. The orders of all police, sheriffs, or other authorities should be followed as would normally be the case.

b. Exercise participants will not direct illegal actions being taken by other exercise participants or members of the general public.

c. Exercise participants will not intentionally take illegal actions when being called out to participate in an exercise. Specifically, local traffic laws such as speed laws will be observed.

3. Avoiding Personnel and Property Endangerment

Participants and evaluators will be instructed to avoid endangering property (public or private), other personnel responding to the exercise, members of the general public, animals, and the environment.

4. Actions to Minimize Public Inconvenience

It is not the intent, nor is it desirable or feasible, to effectively train or test the public response during the conduct of radiological emergency exercises. Public inconvenience is to be minimized.

The actions of federal, state, and county agencies and nuclear power plant operators receive continuous public notice and scrutiny; therefore, the conduct of an exercise could arouse public concern that an actual emergency is occurring.

5. Maintaining Emergency Readiness

During the performance of an exercise the ability to recognize a real emergency, terminate the exercise, and respond to the new situation must be maintained. Therefore, the exercise scenario and actions of participants will not include any actions which seriously degrade the condition of systems, equipment or supplies, or affect the detection, assessment, or response capability to radiological or other emergencies.

Actions taken by the participants will also avoid actually reducing plant or public safety. The potential for creating real radiological or other emergencies will be specifically avoided.

If a real emergency occurs during the exercise, requiring the actions of plant and corporate personnel, then the exercise will be terminated. All messages about real events will be clearly identified as such. For example, precede a real message with: "This is NOT, repeat, NOT an exercise message."

IV. EMERGENCY RESPONSE IMPLEMENTATION AND OPERATIONS

1. Initial Notification

Initial notification will be made in accordance with the appropriate Emergency Plan Implementing Procedures (EPIPs).

2. Plant Operations

It should be emphasized that the exercise will in no way interrupt normal plant operations, production, and safety. The responses of Control Room personnel and plant operators will be simulated when taking action to combat the emergency. Instead, a controller will narrate the initiating events and the postulated plant response directly to the Shift Supervisor and other Control Room personnel who will then employ the appropriate emergency procedures.

3. Environmental Monitoring Teams

LGS will dispatch field environmental monitoring teams. The controllers will provide hypothesized field data which will be used to determine radiation readings at preselected locations. However, these teams will be equipped with the necessary equipment to enable them to determine actual area gamma dose rates and airborne radioiodine concentrations. The monitoring teams will not be suited up in anticontamination clothing, but will have such equipment at their disposal.

4. Public Notification

Actual emergency message transmissions via the Emergency Broadcast System will not occur.

5. Public Information

Press releases to the general public and news media will be simulated. The simulated press releases will contain all necessary information on the current status of the exercise but will not be transmitted.

6. Communications

Communications between the exercise participants will occur in accordance with the appropriate Emergency Plan Implementing Procedures. Should any primary communication path become inoperative or prove inadequate, backup means of communication will be utilized as appropriate.

V. CLOSEOUT OF THE EXERCISE

The exercise will be terminated by PECo and SWEC lead controllers, at their discretion, when the scenario is completed. This will occur after the plant has entered the recovery phase.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

TABLE 1G-1 SCOPE

IDENTIFICATION OF ACTUAL AND SIMULATED EVENTS

	ACTUAL	SIMULATION
1. EMERGENCY CLASSIFICATION AND DETECTION		
o Demonstrate the ability of site personnel to recognize an emergency initiating event and condition.	X	
o Demonstrate the ability of site personnel to properly classify events into an emergency class according to the pre-established Emergency Action Levels (EALs) which includes escalation and de-escalation of the classification.	X	
2. EMERGENCY RESPONSE ORGANIZATION		
o Demonstrate the response of the on-shift emergency organization.	X	
o Demonstrate the timely augmentation of the on-shift emergency organization.	X	
o Demonstrate that there are sufficient qualified personnel to respond to the postulated events.	X	
o Demonstrate the timely augmentation of the plant staff emergency organization by corporate support personnel.	X	
o Demonstrate that emergency personnel understand and can implement their responsibilities	X	
3. EMERGENCY RESPONSE SUPPORT RESOURCES		
o Demonstrate the ability of PECo corporate personnel to provide support.	X	
o Demonstrate the ability to procure assistance from outside contractors and private organizations.		X
o Demonstrate the ability to request assistance from Federal resources.		X

	ACTUAL	SIMULATION
3. EMERGENCY RESPONSE SUPPORT RESOURCES		
o Demonstrate the ability to obtain assistance from nuclear and other facilities, organizations or individuals identified in the LGS Emergency Plan.		X
4. EMERGENCY FACILITIES ACTIVATION		
o Demonstrate the ability of station and corporate personnel to activate and staff the following emergency facilities: Operations Support Center (OSC); Technical Support Center (TSC); Emergency Operations Facility (EOF); Headquarters Emergency Support Center (HESC) and Emergency News Center (ENC).	X	
o Demonstrate the ability to provide adequate supplies and equipment for use by emergency response personnel.	X	
o Demonstrate functional capabilities of equipment in both EOF and TSC. (Functional capabilities may be simulated on real-time computer equipment.)	X	
5. NOTIFICATION AND COMMUNICATION		
o Demonstrate the notification of state and local response organizations based on the emergency classification.	X	
o Demonstrate the effectiveness of notification messages and verification of these messages.	X	
o Demonstrate the ability to alert, notify, and mobilize emergency response personnel.	X	
o Demonstrate the operation of the public alerting system.	X	
o Demonstrate the adequacy of communications with state/local governments during the exercise.	X	
o Demonstrate the adequacy of communications with federal emergency response organizations including the NRC Regional Office Emergency Operations Centers.		X

	ACTUAL	SIMULATION
5. NOTIFICATION AND COMMUNICATION		
o Demonstrate the adequacy of communications between the PECo emergency facilities and field survey groups.	X	
o Demonstrate the adequacy of communications with offsite fire fighting company.	X	
6. ACCIDENT ASSESSMENT		
o Demonstrate proficiency in the assessment of plant conditions and radiological consequences in determining appropriate actions to response and recovery from an emergency.	X	
o Demonstrate that personnel can perform radiological accident assessment and offsite dose projection techniques by using plant monitor readings, environmental data, and meteorological parameters.	X	
o Demonstrate the ability to effectively use the Post Accident Sampling Station.		X
o Demonstrate the ability to perform field monitoring within the plume exposure Emergency Planning Zone.		X
o Demonstrate the ability to estimate integrated dose from projected and field monitored dose rates and compare these estimates with protective action guides.	X	
7. RADIATION PROTECTION CONTROL		
o Demonstrate the ability to provide adequate radiation protection services, such as personnel dosimetry, respiratory protection, protective clothing, and personnel monitoring (frisking) to emergency response personnel during the exercise when required (donning of protective clothing, dosimetry, and respiratory protection equipment may be simulated in certain situations).	X	
7. RADIATION PROTECTION CONTROL		
o Demonstrate the ability to provide and monitor dosimeters for emergency workers.		X

		ACTUAL	SIMULATION
	o Demonstrate the ability to evaluate the need for and provide the means for personnel decontamination.		X
	o Demonstrate the ability to provide contamination control measures such as areas access control.	X	
	o Demonstrate the application of onsite exposure quidelines consistent with Emergency Exposure Guidelines.	X	
	o Demonstrate the ability for radiological monitoring of people evacuated from the site		X
8.	CORRECTIVE ACTIONS		
	o Demonstrate the ability to determine the cause of the emergency condition, terminate the condition with consideration of appropriate engineering safeguards, and place the plant in a safe condition.	X	
	o Demonstrate the ability of PECo personnel to respond to and terminate a fire.		X
9.	PROTECTIVE ACTIONS		
	o Demonstrate the ability to warn or advise personnel onsite of emergency conditions.	X	
	o Demonstrate the ability to evacuate nonessential personnel from the site. (A preselected group of onsite personnel will participate in this activity.)	X	
	o Demonstrate the ability to provide timely and accurate protective action recommendations to the state and local authorities.	X	
10.	MEDICAL ASSISTANCE		
	o Demonstrate the ability to provide first aid and transportation for an injured individual who has been contaminated.		X
11.	PUBLIC INFORMATION		
	o Demonstrate the adequacy of facilities used for dissemination of information to the news media.	X	

	ACTUAL	SIMULATION
o Demonstrate the ability of the PECo spokesperson to receive and disseminate necessary information.	X	
o Demonstrate the ability for timely exchange of information among designated spokespersons.		X
o Demonstrate the ability to deal with rumors		X
12. PARALLEL AND OTHER ACTIONS		
o Demonstrate proper procedures for emergency security measures, including control of access/egress and personnel accountability at the plant site.	X	
o Demonstrate the establishment of a recovery organization		X
o Demonstrate the capability for self-critique and the ability to identify areas needing improvement in order to make future appropriate plan and procedural changes.	X	

INSTRUCTIONS FOR CONTROLLERS AND EVALUATORS
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

1. Personnel are assigned as controllers or evaluators at all key function areas to monitor and control the exercise. In addition, they will accompany radiological monitoring teams, plant health physics personnel, and maintenance repair/rescue teams.

2. The inplant controllers will be coordinated by the Head Controller located at the Control Room (ext. 2498). If unable to reach the Control Room, contact the Lead Controller in the TSC (ext. 2630). He will be responsible for the overall conduct of the exercise scenario. Field controllers should contact the Lead Controller in the EOF (ext. 2604) regarding coordination problems or questions. The Lead Controller at the EOF will be responsible for contacting the Lead State Controller to maintain schedules.

3. Message forms and simulated Control Room data will be used to initiate, modify, and complete the events comprising the overall scenario. Selected controllers will use the message forms to place the scenario events in effect and to trigger responses from the involved emergency response organizations. Each controller will have copies of the messages controlling the portion of the exercise scenario he/she is responsible for.

   Two kinds of messages will be used:

   Controlling

   Messages used as a primary means of implementing scenario events by announcing or placing an event in effect by hypothesizing conditions resulting from previous actions.

   Contingency

   Messages used at the discretion of the controllers with the approval of the Head Controller in the Control Room in order to maintain the scenario plan continuity or schedule.

   Controlling messages will be presented to the designated exercise participant at the time specified in the event schedule. The controller should follow up with an explanation of the message and answer questions to ensure that the participant understands the message.

   Controllers will not initially provide information to the participants regarding scenario development or resolution of problem areas encountered. The participants are expected to obtain information through their own organization and exercise their own judgment in determining response actions and resolving problems. In the event of incorrect or incomplete responses, or if the participant indicates lack of knowledge of how to proceed, the controller will prompt the participant with necessary instructions or contingency cards and will note the deficiency on his/her critique sheets.

4. Note that the scenario events are hypothetical. Any portions of the scenario depicting plant system operational transients are simulated events. <u>No</u> Control Room actions, or reactions involving operation of plant systems or affecting generation capability, will be initiated. All exercise scenario messages will be prefixed and suffixed with the words "THIS IS A DRILL." Controllers stationed at areas vital to maintaining generating capability should be especially aware and take extra precautions in issuing messages or giving instructions regarding the scenario events.

5. Required controllers will have the time-related plant and radiological parameters of the exercise scenario. This information should be issued upon request to the appropriate exercise participants by either the Control Room controller or controllers accompanying the radiological monitoring field teams.

6. Some exercise participants may insist that certain parts of the scenario are unrealistic. The controllers and evaluators have the authority, with the approval from the Lead controllers, to clarify any questions regarding scenario content. In some cases, it may be necessary to exercise "controller's prerogative" or "this is due to exercise requirements" to preserve the continuity and objectives of the exercise.

7. Prior to commencement, all telecommunications should be tested to ensure satisfactory communications between the lead controllers and all other controllers.

8. All controllers and evaluators will synchronize their watches to ensure that messages are delivered at the proper time. Times on messages are set relative to the beginning of the exercise, with delivery of the first message of "T + 0:00".

9. Controllers will commence their assignments at assembly locations for players that they are to observe or as directed by the Lead Controllers. (See Controller Assignment, Part B.)

10. Scenario equipment problems not covered in the Exercise Events section of this manual will be handled by the controllers in the Control Room.

11. Players are not allowed to introduce items project free play into the exercise or its scenario.

12. Be sure to return all exercise books to the Lead Controller.

13. Lunches will be provided by PECO; however, there are no such lunch breaks in the exercise. Players and controllers shall be relieved for lunch as situation permits. Emergency team leaders should decide when team members may take a lunch break.

14. Be sure to have a hard hat with you when entering the plant.

CONTROLLER'S AND EVALUATOR'S RULES

DOs

1. Know the overall Controller's Organization (Part B).
2. Remember that there are two clocks: a scenario time and a clock time.
3. Identify the players by name and function.
4. Identify yourself at all times to all players. Wear T-shirts or tags as provided by PECO.
5. Identify the phone (or radio for field teams) you will use to maintain communications with lead controllers.
6. Position yourself in order to maximize your effectiveness in issuing messages and observing the players.
7. Be sure you understand the player's scenario script and the master scenario.
8. Keep the play on schedule by checking your script.
9. Issue the message on time. Make sure the players understand it.
10. Remember to call the Lead Controller or Head Controller to report on status of players actions if off schedule or if in doubt about what to do. Call for advice if players depart signicantly from the scenario script which will create a major delay. If necessary, intervene with player action and put players back on scenario track.
11. Allow the players reasonable flexibility to do their functions and demonstrate their skill, knowledge, and initiative.
12. Identify the federal evaluators(s). Make sure they are reasonably aware of all your actions and those of the players.
13. Make notes on good and bad points of players' actions, the strengths and weaknesses, and areas for improvements. Use the Evaluators's Critique Sheets.
14. Attend the post-exercise critique session to provide your comments and recommendations to the Chief Controller on what happened.
15. Identify the players' leaders. Work with them as appropriate.
16. If a real emergency occurs and this affects the players, call off your portion of the exercise, and notify (later) immediately.
17. Be at your post at least 20 minutes prior to any player action commencement. Set yourself up.

18. The federal evaluators will not issue "surprise" messages or direct "surprise" actions at the players. They must work through the controller. This is essential for the success of the exercise.

19. Controllers and federal evaluators do not have to follow the radiation exposure control practices for the simulated radiation levels from the emergency exercise scenario. However, the players must follow the radiation protection rules Controllers and evaluators will be exempt from accountability and have access to all areas.

DON'Ts

1. Don't leave your post at key times.

2. Don't prompt the players to take action.

3. Don't coach the players.

4. Don't criticize the players' actions during the play.

5. Don't forget to call the lead controllers to seek advice or help as necessary.

6. Don't allow the media/other external influences to distract the players. No interviews with players are allowed.

7. Don't allow free play to be interjected into the exercise scenario.

8. Don't allow simulation when equipment and facilities are available except for causing flow discharge of fire extinguishers, etc.

SUMMARY OF EXERCISE SCENARIO
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

Unit 1 is operating at full power and has accumulated eight full power months of operation since the previous refueling. At that time, 15 fuel assemblies of a new design were installed so that they could be qualified under commercial operating conditions. The 15 fuel assemblies represent about 2 percent of the fuel in the core. All power generation equipment is operating, and all safety system equipment is operable.

At 1105, fire is reported at the instrument air compressor 1AK101. Offsite assistance is required since the fire is spreading and threatens the nearby lube oil storage tanks. The fire is reported extinguished at 1145.

*** UNUSUAL EVENT should be declared ***
Fire

A spurious "High Steam Flow" alarm causes isolation valves in two main steam lines to trip shut. The resulting transient causes isolation of the other main steam lines, due to high steam flow, and reactor scram. The spurious alarm occurs at 1315.

*** UNUSUAL EVENT should be declared ***
Unplanned reactor scram

The thermal/mechanical transient resulting from the unbalanced isolation of the main steam lines and reactor scram caused damage to the 15 new design fuel assemblies. Pins holding fuel rods in the upper and lower tie plates shattered, and fuel rod spacers became dislodged. The mechanical damage to the fuel is not an immediate cause of increased primary system activity, but it has resulted in significant loss of cooling flow paths at both lower and upper ends of the assemblies and the fuel begins heating up. The transient, with peak pressure of 1170 psig, also causes reactor vessel head seal leakage and cracks in the piping of several safety/relief valves (SRV) discharge lines at the point that they enter the drywell floor. The reactor vessel head seal leakage will cause pressurization of the drywell if reactor pressure is maintained, while the cracks in the SRV discharge piping will cause pressurization of the drywell if reactor pressure is reduced. At approximately 1345, reactor depressurization is begun.

By 1400, drywell pressure has reached 2.4 psig and radiation levels are 2.0 R/hr. Reactor coolant and drywell atmosphere samples indicate that nearly all the radioactivity is Xenon and Krypton. RHR A and B pumps are lined up for suppression pool cooling mode.

At 1430, the control room is notified that an assistant plant operator has been found unconscious and bleeding from a head laceration. He was on routine inspection of the radwaste enclosure and was found lying in a puddle that appears to be leakage from the fuel pool holding pump (00P340). Drywell radiation level has increased to 14 R/hr at 1500 and reaches 100 R/hr at 1600. Sample analysis continues to indicate primarily noble gases in the drywell atmosphere.

*** ALERT should be declared ***
Containment radiation monitor reading exceeds 100 R/hr

At 1615, it is noted that the discharge flow of RHR pump B has started decreasing. Personnel are sent to investigate the cause. At 1630, airborne radiation levels in the secondary containment rise significantly due to leakage from the primary containment. Evacuation of the Unit 1 reactor building is ordered. Contact is lost with the personnel investigating the RHR pump problem, and a search is begun.

By 1700, reactor coolant activity indicates more than 300 μCi/gm of I-131 equivalent and drywell radiation level is 400 R/hr. Drywell pressure is leveling off at 4.5 psig. HPCI and RCIC have been secured, and the vessel is being filled with available LPCI and core spray pumps.

At 1715, the CO_2 portion of the fire protection system is declared inoperable due to decreasing tank pressure. A fire watch should be implemented until the system is restored. Alarms sound at 1730 indicating a fire in the East RHR heat exchanger room on el 177 ft-0 in. Reports are received that the fire has disabled both RHR B&D pump motors. Cause of the fire is unknown, but it is fueled by scaffolding material brought there in preparation for an inspection of the RHR heat exchangers. Station fire fighters are able to extinguish the fire.

At 1730, drywell radiation level has reached 1,000 R/hr.

*** SITE EMERGENCY should be declared ***
(Containment radiation monitor reading exceeds 1,000 R/hr.)

At 1800, the Standby Gas Treatment System (SGTS) effluent monitors detect radioactive releases. Subsequent analyses of SGTS exhaust samples indicate releases are approximately 0.1 Ci/second of noble gases. Meteorological conditions are not expected to change significantly for 12 to 24 hours. Wind is from the South Southeast (158°) at 3 mph.

Reactor pressure is near 30 psig at 1830. Containment radiation level is now 2,000 R/hr, and drywell pressure is approximately 4 psig. The control room is notified that the result of the 1830 sample of the cooling tower blowdown is 7N6 μCi/cc. Samples taken at 1815 and 1845 were both negative. At 1845, status lights on the control board indicate the containment purge isolation valve (HV-57-114) has backed off the fully-closed position. The valve does not respond to controls. At 1900, radioactive releases have increased to levels corresponding to site boundary-whole body dose rate of 2 mrem/hr and thyroid dose rate of 4 mrem/hr. Although there is as yet no confirming indication in the control room, the release is coming from leakage pass the closed isolation valve (HV-57-115) on the containment purge line. Drywell radiation level has increased to 4000 R/hr.

At 1915, status lights indicate that the containment purge line isolation valve (HV-57-115) is unseated and it also fails to respond to controls. Effluent releases increase rapidly, and ventilation exhaust monitors exceed the General Emergency Action Level by 1930 hours. Drywell radiation level reaches 10,000 R/hr.

*** GENERAL EMERGENCY should be declared ***
Potential or actual effluent releases correspond to 5 rem/hr thyroid <u>or</u> containment monitor reading exceeds 10,000 R/hr

Personnel in the reactor building report that it will require 10 hours to terminate the release from the containment purge line. At 1945, radioactive releases level off at values corresponding to offsite whole body and thyroid dose rates of 800 mrem/hr and 11,000 mrem/hr, respectively. Wind speed has increased to 4 mph but continues from the South Southeast.

At 2040, CS pump A trips. CS pumps B and D are manually initiated. CS pump C is tripped. Personnel are dispatched to diagnose the problem.

At 2145, the release is terminated by repair of the containment purge line valves. De-escalation of the emergency to SITE EMERGENCY and later to ALERT status is now feasible.

At 2145, the exercise will be terminated after the plant has demonstrated recovery.

DETAILED SCENARIO FOR UNIT 1
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
July 25, 1984

Initial Conditions

Unit 1 is operating at full power and has accumulated 8 full power months of operation since the previous refueling. At that time, 15 fuel assemblies of a new design were installed so that they could be qualified under commercial operating conditions. The 15 fuel assemblies represent about 2 percent of the fuel in the core. On two occasions in the past three months, Unit 1 has experienced reactor trips caused by spurious main steam isolation valve (MSIV) closure signals. All power generation equipment is operating, and all safety system equipment is operable.

The initial plant and reactor system values are shown in Table 1.

The Meteorological conditions at 1100 are characterized by the influence of an almost stationary high pressure area centered over Greenwich, Connecticut. The clockwise flow around its center is evident by the following ground level Limerick Generating Station Met tower data:

Wind direction	Southeast (137 degrees)
Wind speed	5.2 mph
Temperature	71°F
Delta Temperature	-1.3°F
Sigma Theta	6.7 degrees azimuth

The National Weather Service indicates that the high is expected to slowly drift to the south during the next 12 to 24 hours. Skies will remain sunny with light winds gradually backing to the South Southeast.

1100 Reactor power is 100 percent, reactor pressure and water level are 1020 psig and +35 in., respectively. Drywell pressure and temperature are 0.6 psig and 130°F, respectively.

1105 Control room is notified of a fire in the turbine enclosure at el 217 ft-0 in. Instrument air compressor 1AK101 is on fire. Offsite assistance is required since the fire is spreading and threatens the nearby lube oil storage tank.

UNUSUAL EVENT should be declared

EP-101-5 Fire: Fire in protected area lasting 10 minutes or more after initial attempts to extinguish it as indicated by observation or fire alarm on OA(B)C850.

1145 The control room is notified that the fire in the turbine enclosure is extinguished.

1200 Reactor continues to operate at full power.

1315 A spurious high steam flow signal causes main steam isolation valves (MSIV) HV-41-1F028A and C to shut.

The remaining MSIVs close due to high steam flow.

The reactor scrams.

The reactor pressure increases to 1,170 psig.

Three groups of safety relief valves (SRVs) open.

The reactor water level decreases.

UNUSUAL EVENT should be declared

EP-101-12 Unusual Shutdown: Shutdown other than normal controlled shutdown and for the purpose of placing the plant in a safer condition.

1316 The reactor pressure and water level decreased to 1,050 psig and -38 in., respectively. The SRVs have closed except for two SRVs which the operator has kept open in order to control pressure.

HPCI and RCIC systems are initiated on low-low water level.
Standby gas treatment system (SGTS) is initiated.

1317 The reactor pressure has decreased to 1,040 psig.

Reactor water level has decreased to -40 in.

Drywell pressure and temperature begin to increase due to reactor vessel head seal leakage and cracks in SRV discharge lines. The reactor water level begins to increase due to HPCI and RCIC injection.

1325 Reactor pressure and water level are 1,025 psig and +50 in., respectively. Drywell pressure has increased to 1.5 psig which results in a high drywell pressure alarm in the control room.

HPCI pump is manually operated for pressure level control.

1330 Drywell pressure has increased to 1.68 psig.

Containment group isolations occur.

HPCI is initiated in injection mode and trips at +54 in. Once the high level signal clears, HPCI is initiated and operated for pressure/level control.

1345 Reactor pressure and water level are 1,000 psig and +50 in., respectively.

Containment radiation level is 1 R/hr.

Depressurization of the reactor using SRVs is begun.

1400 Reactor pressure and water level are 860 psig and +50 in., respectively.

Drywell pressure is 2.4 psig.

Containment radiation level is 2 R/hr.

Reactor coolant and drywell samples indicate that nearly all the radioactivity is Xenon and Krypton.

RHR A and B pumps are lined up for suppression pool cooling mode.

The wind speed has decreased to 4.8 mph. the wind direction is from the Southeast (145 degrees).

1430 Reactor pressure is 670 psig.

Reactor water level is being maintained at +50 in.

1430 The control room is notified of a contaminated injury in the radwaste enclosure.

1500 Cooldown and depressurization of the reactor continues.

Reactor pressure is 560 psig.

Drywell pressure is 4.0 psig.

Drywell radiation level has increased to 14 R/hr.

1545 Reactor pressure is 440 psig. Core spray (CS) and RHR in the LPCI mode are initiated.

1548 RHR A and B pumps are returned to suppression pool cooling mode.

1600 Drywell radiation level has increased to 100 R/hr. Sample analysis reveal primarily noble gases in the drywell atmosphere.

ALERT should be declared

EP-101-8 Damage of Fuel: Containment post-LOCA radiation monitor greater than 100 R/hr.

1615 RHR pump B flow decreased to 500 gpm. Personnel are sent to investigate the cause. Reactor pressure and water level are 380 psig and +50 in., respectively.

1630 The control room is notified that the airborne radiation levels in the reactor enclosure have risen significantly and exceed 10 MPC. The high airborne radiation levels are due to small leakage from the primary containment.

Evacuation of the Unit 1 reactor enclosure is ordered.

The wind speed has decreased to 4.1 mph. The wind direction is from the South Southeast (151 degrees)

1650 The control room is notified that the person investigating RHR pump B is unaccounted for. A search is begun.

1700 Reactor pressure is 300 psig.

Drywell pressure is leveling off at 4.5 psig.

Drywell radiation level is 400 R/hr.

Reactor coolant activity sample results indicate more than 300 uCi/gm of I-131.

RCIC and HPCI pumps are manually tripped.

Reactor vessel is flooded with CS and LPCI.

1715 A low pressure alarm from the CO_2 storage unit 00S133 is received.

1730 The control room is notified that the CO_2 portion of the fire protection system is inoperable due to low tank pressure. A continuous fire watch is established for those areas in which redundant systems or components could be damaged.

1730 Annunciator alarm on the fire protection panel in the control room is received. The alarm indicates that the fire is located in the RHR heat exchanger and pump room at el 177 ft. RHR pump B trips.

Control room is notified that the fire has disabled the motors for both RHR pumps B and D. Cause of the fire is unknown, but it is fueled by scaffolding material brought there in preparation for an inspection of the RHR heat exchangers. Offsite assistance is not required to extinguish the fire.

Drywell radiation level reaches 1,000 R/hr.

SITE EMERGENCY should be declared

EP-101-8 Damage of Fuel: Containment post-LOCA radiation monitors greater than 1,000 R/hr.

1745 LPCI is tripped once the reactor vessel is flooded.

Cooldown is continued by circulating reactor vessel inventory through the SRVs to the suppression pool using available CS pumps.

1800 SGTS effluent monitor detects radioactive release concentration of 0.01 μCi/cc. Subsequent analyses of SGTS exhaust samples indicate releases are approximately 0.1 Ci/second of Noble gases. The wind is from the South Southeast (158 degrees) at 3 mph. Meteorological conditions are not expected to change significantly for 12 to 24 hours.

1830 Reactor pressure is 30 psig.

Containment drywell radiation level is 2,000 R/hr.

Drywell pressure is 4 psig.

1845 Status lights on the control board indicate the containment isolation valve HV-57-114 in the containment purge system has backed off the fully closed position. Repeated attempts to close the valve are unsuccessful.

1900 Drywell pressure is 3.8 psig. Reactor enclosure local radiation levels in the area of the containment purge system line are increasing.

The control room is notified that the result of the 1830 sample of the cooling tower blowdown is 7N6 μCi/cc. Samples taken at 1815 and 1845 were both negative.

Analysis of 1830 sample indicates that at least 60 percent of the activity is Technetium-99M.

Radioactive releases have increased to levels corresponding to site boundary-whole body dose rate of 2 mrem/hr and thyroid dose rate of 4 mrem/hr. The releases are due to leakage pass the closed isolation valve HV-57-115 in the containment purge line although there is no indication in the control room.

1915 Status lights on the control board indicate that the outboard containment purge line isolation valve HV-57-115 is unseated.

Repeated attempts to close the valve are unsuccessful. Effluent releases increase rapidly.

Personnel investigating the purge valves report that it will require 10 hours to terminate the release.

1930 North stack effluent radiation monitor indicates 10 uCi/cc. Radiation releases correspond to offsite whole body and thyroid dose rates of 800 mrem/hr and 11,000 mrem/hr, respectively.

Drywell radiation level reaches 10,000 R/hr.

GENERAL EMERGENCY should be declared

EP-101-6 Radioactive Release: Projected thyroid dose greater than 5 rem at the site boundary <u>or</u>

EP-101-8 Damaged Fuel: Containment post-LOCA radiation monitor greater than 10,000 R/hr.

1945 The wind speed increased to 4.0 mph. The wind direction remains from the South Southeast.

2000 North stack effluent radiation monitor indicates 10 uCi/cc. Drywell pressure is 3.2 psig.

2040 CS pump A trips. CS pumps B and D are manually initiated. CS pump C is tripped.

Drywell radiation levels off at 1.8 x 10^4 R/hr.

2115 Drywell pressure is 2.5 psig. Drywell radiation level is 18,000 R/hr. Personnel investigating the seizure of CS pump A report that they have encountered high radiation fields and it will be some time before they can enter the area.

2130 Drywell pressure is 2.3 psig. Drywell radiation level is 17,000 R/hr. North stack effluent radiation monitor indicates 10 uCi/cc.

2145 The containment purge line valve HV-57-115 is repaired. Releases to the atmosphere are terminated.

Deescalation of emergency to SITE EMERGENCY and later to ALERT status is now feasible.

2230 Exercise is terminated after the plant has demonstrated recovery.

TABLE 1

Limerick Generating Station Initial Plant and Reactor System Values

Reactor Level	+35 inches	Drywell Press	0.6 psig
Reactor Pressure	1020 psig	Drywell Atmos Temp	130 °F
Reactor Power	100 % Full Power	Supp Pool Press	0.6 psig
Core Plate DP	100 % Full Power	Supp Pool Temp	90 °F
Core Flow	100 lb/hr x 10^6	Supp Pool Level	22.1 feet
Total Steam Flow	14 lb/hr x 10^6	Main Stm Line Rad Mon	1100 mR/hr
Total Feedwater Flow	14 lb/hr x 10^6	Containment Rad Level	2 R/hr
Condenser Vacuum	29 inches Hg	Cond Stor Tank Level	38 feet
Hotwell Level	40 inches	RCIC Flow	0 gpm
CRD Charging Pressure	1300 psig	HPCI Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	RHR A Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR B Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR C Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	RHR D Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray A Flow	0 gpm
H_2 Concentration	0 %	Core Spray B Flow	0 gpm
O_2 Concentration	2.8 %	RHR Hx Outlet Temp	80 °F
SGTS Flow	0 cfm	RHR SW Inlet Temp	80 °F
North Vent Stack Concentration	5N6 µCi/cc	North Vent Stack Release Rate	7P2 µCi/sec

2B-7

SIGNIFICANT EVENTS TIME LINE
NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION

Emergency Classification	Time	Scenario Event	Expected Actions

None	1100	Initial Conditions
		• Unit I at Full Power
		• All power generation equipment operating
		• All safety systems operable
		• Meteorological conditions
		  • Stable
		  • Wind velocity 5.2 mph from 137° (Southeast)	

None	1100	Exercise Starts	

UNUSUAL EVENT	1105	Fire is discovered at instrument air compressor 1AK101 which threatens Lube Oil Storage Tank	• Fire Fighting Group responds to fire
			• Offsite fire assistance is required
			  • Local fire company responds
			• Unusual Event should be declared
			  • Internal Notification
			  • Offsite Agencies Notified

UNUSUAL EVENT	1145	Fire is reported extinguished	

Emergency Classification	Time	Scenario Event	Expected Actions

UNUSUAL EVENT	1315	Reactor scrams on spurious Main Steam Isolation Valve (MSIV) closure signal
		• Safety Relief Valves (SRVs) open
		• Reactor level decreases
		  • Standby Gas Treatment System (SGTS) initated
			• Reactor operators follow standard operating procedures and emergency procedures
			• Unusual Event Declared
			  • Internal notification
			  • Offsite agencies notified

UNUSUAL EVENT	1330	Drywell "Hi-Pressure" setpoint of 1.68 psig is exceeded • Containment group isolation occur	• Isolation valves on instrument nitrogen lines opened to reestablish manual control of SRVs. • HPCI placed on manual control • Operators attempt to stop leakage by backseating of valves
UNUSUAL EVENT	1345	Drywell pressure increase continues	• Depressurization of reactor using SRVs is begun
UNUSUAL EVENT	1400	Reactor coolant and drywell samples indicate that nearly all radioactivity is Xenon and Krypton	
UNUSUAL EVENT	1430	Worker is injured and radioactively contaminated in the Radwaste Enclosure	• Search and Rescue/First Aid Group dispatched • Emergency medical First Aid administered • Personnel contamination survey performed • Personnel decontamination performed • Offsite medical assistance requested from hospital

Emergency Classification	Time	Scenario Event	Expected Actions
ALERT	1600	Drywell Radiation Level has increased to 100 R/hr	• Alert should be declared • Offsite notification • Internal notification • Technical Support Center activated • Operations Support Center activated • Offsite emergency teams placed on standby • State and County EOCs partially activated
ALERT	1615	RHR pump B flow decreases to 500 gpm	• Personnel dispatched to investigate cause of reduced flow
ALERT	1630	Control room is notified that significant airborne activity levels are detected in the reactor enclosure	• Local evacuation of reactor enclosure ordered
ALERT	1650	Contact is lost with personnel investigating RHR pump B	• Search and Rescue/First Aid Group dispatched to find missing person.
ALERT	1700	Reactor coolant sample indicates activity of more than 300μCi/gm of I-131 equivalent	• The Search and Rescue/First Aid Group finds the person and escorts the individual out of the affected area. • The individual is not injured or contaminated.
ALERT	1715	Low pressure alarm from CO_2 storage tank of the Fire Protection System	• Personnel are sent to investigate CO_2 portion of fire protection system

Emergency Classification	Time	Scenario Event	Expected Actions
ALERT	1730	Alarm indicates that there is a fire in the RHR heat exchanger and pump room	• Fire Fighting Group responds to fire and extinguishes it
SITE EMERGENCY	1730	Drywell radiation level has increased to 1000 R/hr	• Site Emergency should be declared • Notification of offsite agencies • Emergency Operations Facility activated • Headquarters Emergency Support Center activated • News Media Center activated • Field survey groups deployed • State and Local EOCs fully activated
SITE EMERGENCY	1800	North Stack effluent monitors detect radioactive concentrations of 0.01 μCi/cc	• Dose assessment team should conclude that no protective action required
SITE EMERGENCY	1845	Status lights on control board indicate 1 of 2 isolation valves on containment purge line has backed off fully-closed position	• Plant personnel will attempt to get the valve closed
SITE EMERGENCY	1900	Local radiation levels near the containment purge line are increasing	

Emergency Classification	Time	Scenario Event	Expected Actions
SITE EMERGENCY	1900	High radioactivity in cooling tower blowdown reported	• Dose assessment per EP-318 and EP-319 • Continue sampling of blowdown • Perform notification in accordance with EP-312
SITE EMERGENCY	1915	Status lights indicate that 2nd isolation valve on containment purge line is unseated	• Personnel checking isolation valves estimate 10 hours to repair

GENERAL EMERGENCY	1930	Drywell radiation level reaches 10,000 R/hr
		
		North stack effluent radiation monitor indicates 10 μCi/cc
			• General Emergency should be declared
			  • Offsite notification of agencies
			  • Dose projections should continue
			  • Field surveys continue and confirm that site boundary doses are 200 mrem/hr whole body and 4,000 mrem/hr thyroid

GENERAL EMERGENCY	1945	Radioactive releases continue	• PECo recommends evacuation of nearby residents
GENERAL EMERGENCY	2000	Radioactive releases continue	• State recommends protective action of evacuation
GENERAL EMERGENCY	2015	Radioactive releases continue	• Public alert sirens are sounded
GENERAL EMERGENCY	2040	Core Spray pump A trips	• Personnel are sent to investigate • Core Spray pump manually tripped • Core Spray pumps B and D started

SIGNIFICANT EVENTS TIME LINE (Cont)

Emergency Classification	Time	Scenario Event	Expected Actions
GENERAL EMERGENCY	2145	Containment purge line isolation valves are repaired Radioactive releases ended	• Field survey groups to confirm that releases have stopped • Deescalation to Site Emergency and later to Alert is considered
	2230	Exercise Terminated	

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Coolant Activity Concentrations (μCi/gm)

	Kr-85	Kr-85M	Kr-87	Kr-88	Xe-133	Xe-135	Total Noble Gas	I-131	I-133	Total Iodine	Gross Beta
1100-1330	*4.N2	8.N1	6.N4	2.	4.	4.	**1.P2	5.N3	1.N1	8.N1	1.6P2
1330-1400	1.5	3.P1	2.P1	6.P1	2.P2	1.2P2	8.P2	2.N2	3.N1	1.5	1.P3
1400-1430	3.	6.P1	3.P1	1.2P2	2.5P2	2.P2	2.P3	6.N2	5.N1	2.	2.P3
1430-1500	1.P1	2.P2	1.2P2	5.P2	1.P3	1.P3	6.P3	2.N1	1.0	4.	6.P3
1500-1530	2.P1	4.P2	2.P2	9.P2	2.P3	2.P3	1.P4	8.N1	3.5	10.	8.P3
1530-1600	2.8P1	6.P2	3.P2	1.4P3	3.P3	3.P3	1.4P4	2.2	9.	3.P1	1.P4
1600-1630	4.P1	8.P2	4.P2	1.8P3	4.P3	4.P3	1.8P4	2.5P1	1.P2	2.5P2	1.P4
1630-1700	4.P1	8.P2	4.P2	1.9P3	4.P3	4.P3	1.8P4	9.P1	3.5P2	8.P2	1.P4
1700-1715	4.P1	8.P2	4.P2	2.P3	4.P3	4.P3	1.8P4	2.5P2	1.P3	2.P3	9.P3
1715-1730	4.P1	9.P2	3.7P2	2.P3	4.P3	4.P3	1.6P4	6.P2	2.5P3	5.P3	8.P3
1730-1745	4.P1	9.P2	3.P2	2.P3	4.P3	4.P3	1.6P4	8.P2	3.P3	6.P3	8.P3
1745-1800	4.2P1	9.P2	2.7P2	2.P3	4.2P3	4.P3	1.5P4	9.P2	3.5P3	7.P3	7.P3
1800-1830	4.5P1	9.P2	2.5P2	2.P3	4.2P3	4.P3	1.5P4	9.P2	3.5P3	7.P3	7.P3
1830-1900	4.8P1	1.P3	2.P2	2.P3	4.5P3	4.P3	1.5P4	9.P2	3.6P3	7.P3	6.P3
1900-1915	5.P1	1.P3	2.P2	1.8P3	4.5P3	4.P3	1.4P4	9.P2	3.6P3	6.P3	6.P3
1915-1930	5.P1	1.P3	2.P2	1.8P3	4.5P3	4.2P3	1.4P4	9.P2	3.5P3	6.P3	5.P3
1930-2000	5.P1	1.P3	1.8P2	1.7P3	4.5P3	4.2P3	1.4P4	8.P2	3.P3	5.P3	5.P3
2000-2030	5.P1	1.P3	1.7P2	1.5P3	5.P3	4.2P3	1.2P4	8.P2	3.P3	5.P3	5.P3
2030-2045	5.P1	9.P2	1.6P2	1.5P3	5.P3	4.2P3	1.2P4	8.P2	3.P3	5.P3	5.P3
2045-2100	5.P1	9.P2	1.5P2	1.3P3	5.P3	4.5P3	1.2P4	8.P2	3.P3	5.P3	5.P3
2100-2145	5.P1	8.P2	1.3P2	1.2P3	5.P3	4.5P3	1.2P4	7.P2	3.P3	5.P3	4.P3

*4.N2 = 4×10^{-2}

**1.P2 = 1×10^{2}

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Drywell and Suppression Chambers Air Concentrations (μCi/gm)

	Kr-85	Kr-85M	Kr-87	Kr-88	Xe-133	Xe-135	Total Noble Gas	I-131	I-133	Total Iodine	Gross Beta
1100-1330	*1.N6	2.N5	2.N5	5.N5	1.N4	1.N4	2.N3	2.N8	3.N9	2.N7	4.N3
1330-1400	2.N4	4.N3	3.N6	1.N2	2.N2	2.N2	5.N1	6.N8	1.5N7	8.N7	8.N1
1400-1430	8.N4	1.5N2	1.N2	3.N2	1.N1	6.N2	4.N1	1.5N7	6.N7	3.N6	5.N1
1430-1500	1.5N3	3.N2	1.5N2	6.N2	1.5N1	1.2N1	1.	5.N7	2.N6	7.N6	1.
1500-1530	5.N3	1.N1	6.N2	2.5N1	5.N1	5.N1	3.	5.N7	2.N6	6.N6	3.
1530-1600	1.N2	2.N1	1.N1	4.5N1	1.	1.	5.	3.N6	1.N5	3.N5	4.
1600-1630	1.4N2	3.N1	1.5N1	7.N1	3.	1.5	7.	7.N6	3.N5	8.N5	5.
1630-1700	4.N2	8.N1	4.N1	2.	8.	4.	2.P1	1.N4	4.N4	8.N4	**1.P1
1700-1715	1.N1	2.	1.	5.	2.P1	6.	3.P1	3.N4	1.2N3	2.N3	2.P1
1715-1730	1.N1	2.	1.	5.	2.P1	1.P1	5.P1	7.N3	3.N2	6.N2	2.P1
1730-1745	2.N1	4.	1.6	1.P1	3.P1	2.P1	8.P1	1.5N2	6.N2	1.2N1	4.P1
1745-1800	2.N1	4.	1.5	1.P1	2.P1	2.P1	7.P1	2.5N2	1.N1	2.N1	3.P1
1800-1830	2.1N1	4.2	4.	1.P1	2.P1	2.P1	2.P2	6.N2	2.5N1	5.N1	1.5P2
1830-1900	5.N1	4.5	4.	2.P1	4.P1	4.P1	2.P2	8.N2	3.N1	6.N1	2.P2
1900-1915	5.N1	1.P1	6.	2.5P1	5.P1	5.P1	3.P2	4.N1	1.6	2.5	3.P2
1915-1930	1.	2.P1	1.P1	4.5P1	1.P2	1.P2	5.P2	1.	4.	7.	4.P2
1930-2000	2.5.	5.P1	1.P1	9.P1	1.8P2	1.8P2	5.P2	4.	1.6P1	3.P1	2.P2
2000-2030	2.5	5.P1	1.P1	8.P1	2.P2	2.P2	6.P2	1.P1	4.P1	7.P1	2.P2
2030-2045	2.5	5.P1	1.P1	8.P1	2.5P2	2.2P2	6.P2	9.	3.5P1	6.P1	2.P2
2045-2100	2.5	4.5P1	8.	7.P1	2.5P2	2.2P2	6.P2	9.	3.5P1	6.P1	2.P2
2100-2145	2.5	4.5P1	6.	6.P1	2.5P2	2.2P2	6.P2	9.	3.5P1	6.P1	2.P2

*1.N6 = 1×10^{-6}

**1.P1 = 1×10^{1}

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENRATING STATION
Suppression Pool Activity Concentrations (μCi/gm)

	I-131	I-133	Total Noble Gas	Gross Beta
1100-1330	*5.N7	3.N8	7.N7	2.N5
1330-1400	2.N6	4.N6	2.N5	3.N5
1400-1430	1.5N5	5.N5	7.N5	7.N5
1430-1500	8.N5	3.N4	6.N4	6.N4
1500-1530	4.N4	1.6N3	3.N3	2.5N3
1530-1600	2.N3	8.N3	1.4N2	1.N2
1600-1630	6.N3	2.5N2	4.N2	3.N2
1630-1700	1.N1	4.N1	6.N1	3.N1
1700-1715	5.N1	2.	3.	2.
1715-1730	1.5	6.	1.P1	8.
1730-1745	5.	1.8P1	3.P1	2.P1
1745-1800	**1.3P1	5.P1	8.P1	6.P1
1800-1830	1.7P1	7.P1	1.P2	7.P1
1830-1900	2.0P1	8.P1	1.2P2	9.P1
1900-1915	2.3P1	1.P2	1.4P2	1.P2
1915-1930	2.5P1	1.P2	1.5P2	1.P2
1930-2000	2.7P1	1.1P2	1.6P2	1.1P2
2000-2030	2.9P1	1.1P2	1.6P2	1.2P2
2030-2045	3.1P1	1.2P2	1.7P2	1.2P2
2045-2100	3.3P1	1.3P2	1.8P2	1.3P2
2100-2145	3.5P1	1.4P2	1.9P2	1.3P2

*5.N7 = 5×10^{-7}

**1.3P1 = 1.3×10^{1}

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure Atmosphere PASS Sample Concentrations (μCi/cc)

	Kr-85	Kr-85R	Kr-87	Kr-88	Xe-133	Xe-135	Total Noble Gas	I-131	I-133	Total Iodine	Gross Beta
1100-1315	*2.0N8	1.3N7	2.4N7	3.6N7	9.2BN7	1.8N7	2.0N6	**	**	**	4.0N6
1315-1800	1.7N8	3.6N7	1.0N7	7.9N7	1.5N6	1.5N6	4.3N6	1.8N10	7.2N10	9.0N10	6.N6
1800-1900	1.2N8	2.4N7	6.8N8	4.3N7	8.5N7	8.5N7	2.4N6	1.8N9	7.2N9	9.0N9	3.N6
1900-1915	5.0N9	9.8N8	2.8N8	1.8N7	3.5N7	3.5N7	1.0N6	2.0N9	8.0N9	1.0N8	1.0N6
1915-1945	7.0N10	1.4N8	3.9N9	2.5N8	4.9N8	4.9N8	1.4N7	2.0N9	8.0N9	1.0N8	1.047
1945-2145	4.0N10	8.4N9	2.4N9	1.5N8	3.0N8	3.0N8	8.5N8	2.0N9	8.0N9	6.0N8	7.N8

*2.0N8 = 2×10^{-8}

**less than detectable

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Post Accident Sampling System Readings (mR/hr)

System	Sample Size	Distance	Shield	From / To	1100 / 1330	1330 / 1400	1400 / 1430	1430 / 1500	1500 / 1530	1530 / 1600	1600 / 1630	1630 / 1700	1700 / 1715	1715 / 1730	1730 / 1745
Drywell Atmosphere	15.ml	1 inch	none		-	0.3.	1.5	3.	13.	23.	50.	90.	150.	250.	400.
		1 ft	none		-	-	0.02	0.03	0.15	0.25	0.5	0.9	1.5	2.5	4.
		1 inch	2" lead		-	-	0.01	0.02	0.1	0.2	0.4	0.7	1.2	2.	3.
		1 ft	2" lead		-	-	-	-	-	0.01	0.01	0.02	0.03	0.06	0.1
Reactor Coolant	10.ml	1 inch	none		2.P3	1.6P4	4.P4	1.2P5	2.P5	3.P5	3.6P5	3.7P5	4.P5	4.2P5	4.4P5
		1 ft	none		20.	160.	400.	1.2P3	2.P3	3.P3	3.6P3	3.7P3	4.P3	4.2P3	4.4P3
		1 ft	2" lead		0.4	3.	8.	25.	40.	60.	70.	75.	80.	85.	90.
		1 ft	4" lead		0.01	0.06	0.16	0.5	0.8	1.2	1.4	1.5	1.6	1.7	1.8
Gas Stripped From Reactor Coolant	15 ml	1 inch	none		1.5P3	1.2P4	3.P4	9.P4	1.5P5	2.2P5	2.7P5	3.P5	3.P5	3.P5	3.P5
		1 ft	none		15.	120.	300.	900.	1.5P3	2.2P3	2.7P3	3.P3	3.P3	3.P3	3.P3
		1 ft	2" lead		0.3	2.5	6.0	18.	30.	44.	55.	60.	60.	60.	60.
		1 ft	4" lead		-	0.05	0.1	0.4	0.6	1.	1.1	1.2	1.2	1.2	1.2
Suppression Pool Liquid	10 ml	1 inch	none		-	-	-	-	0.15	0.7	2.0	30.	90.	500.	1.5P3
		1 ft	none		-	-	-	-	-	0.01	0.02	0.3	0.9	5.	15.
		1 inch	2" lead		-	-	-	-	-	-	0.01	0.2	0.7	4.	12.
Ambient Radiation Level					0.2	0.2	0.7	2.	3.	3.	5.	5.	8.	10.	15.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Post Accident Sampling System Readings (mR/hr)

System	Sample Size	Distance	Shield	From 1745 To 1800	From 1800 To 1830	From 1830 To 1900	From 1900 To 1915	From 1915 To 1930	From 1930 To 2000	From 2000 To 2030	From 2030 To 2045	From 2045 To 2100	From 2100 To 2145
Drywell Atmosphere	15.ml	1 inch	none	600.	800.	1.5P3	1.P3	2.5P3	4.5P3	4.P3	4.P3	3.5P3	3.P3
		1 ft	none	6.	8.	10.	15.	25.	45.	40.	40.	35.	30.
		1 inch	2" lead	4.	6.	4.	13.	20.	35.	35.	35.	30.	25.
		1 ft	2" lead	0.15	0.2	0.3	0.4	0.7	1.2	1.1	1.1	1.0	0.8
Reactor Coolant	10.ml	1 inch	none	4.4P5	4.4P5	4.4P5	4.P5	4.P5	3.8P5	3.4P5	3.4P5	3.4P5	3.4P5
		1 ft	none	4.4P3	4.4P3	4.4P3	4.P3	4.P3	3.8P3	3.4P3	3.4P3	3.4P3	3.4P3
		1 ft	2" lead	90.	90.	90.	80.	80.	80.	70.	70.	70.	70.
		1 ft	4" lead	1.8	1.8	1.8	1.6	1.6	1.6	1.4	1.4	1.4	1.4
Gas Stripped From Reactor Coolant	15 ml	1 inch	none	3.P5	3.P5	3.P5	2.7P5	2.7P5	2.5P5	2.3P5	2.3P5	2.0P5	1.8P5
		1 ft	none	3.P3	3.P3	3.P3	2.7P3	2.7P3	2.5P3	2.3P3	2.3P3	2.0P3	1.8P3
		1 ft	2" lead	60.	60.	60.	55.	55.	50.	45.	45.	40.	40.
		1 ft	4" lead	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.8	0.8
Suppression Pool Liquid	10 ml	1 inch	none	4.P3	5.P3	6.P3	7.P3	7.5P3	8.P3	8.P3	8.5P3	8.5P3	8.5P3
		1 ft	none	40.	50.	60.	70.	75.	80.	80.	85.	85.	85.
		1 inch	2" lead	30.	40.	50.	55.	60.	65.	65.	70.	70.	70.
Ambient Radiation Level				15.	20.	20.	20.	20.	25.	25.	25.	25.	25.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
North Vent Release Data (Source Term)

Time Interval	1315-1800	1800-1900	1900-1915	1915-1945	1945-2145
North Vent Stack Flow(cfm)	3000.	3000.	3000.	3000.	3000.
Stack Concentrations (μCi/CC) of release					
Kr-85	2.0N8	*3.N5	1.N4	2.N2	6.N2
-85M	4.2N7	7.N4	2.N3	4.N1	1.2N1
-87	1.2N7	2.N4	6.N4	9.N2	2.N1
-88	9.0N7	1.5N3	4.N3	7.N1	2.
Xe-133	1.8N6	3.N3	1.N2	2.	6.
-135	1.8N6	3.N3	9.N3	1.8	5.5
I-131	2.0N11	5.N7	5.N5	7.N3	3.26N2
-133	8.0N11	2.N6	2.N4	3.N2	1.3N1
North Vent Stack Release Rate (μCi/sec)					
Kr-85	2.8N2	43.	**1.4P2	3.P4	9.P4
-85M	6.N1	1.P3	3.P3	6.P5	1.8P6
-87	1.7N1	3.P2	8.P2	1.3P5	3.P5
-88	1.3	2.P3	6.P3	1.P6	2.8P6
Xe-133	2.5	4.3P3	1.4P4	3.P6	8.5P6
-135	2.5	4.3P3	1.3P4	2.6P6	7.P6
I-131	2.8N5	0.7	70.	1.P4	4.7P4
-133	1.N4	3.	3.0P2	4.3P4	2.0P5
Exposure Rate from 100 ml 3 Sample at 1." (mR/hr)	-	3.	10.	1.9P3	4.P3

$*3.N5 = 3 \times 10^{-5}$
$**1.4P2 = 1.4 \times 10^{2}$

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
North Vent Stack Effluent and Sample Data

		1315-1800	1800-1900	1900-1915	1915-1945	1945-2145
Gaseous Effluent Monitor Readings (μCi/CC)						
Low Range	2LE-076	5.0N6	*8.5N3	2.6N2	Off-Scale	Off-Scale
Mid Range	1ME-076	-	9.N3	3.N2	5.	15.
High Range	3HE-076	-	-	-	5.	15.
Composite Channel (μCi/sec) 4TE-076		7.0	1.2P4	**4.P4	7.P6	2.P7
Increase in Readings from Iodine Collection Cartridge						
Normal Range Detector 2/5 IE-075 (μCi/cc)		1.0N10	2.5N6	Off-Scale	Off-Scale	Off-Scale
Dose Rate from Unshielded Cartridge (mR/hr/minute)		-	-	1.	120.	240.
Dose Rate from 2" Lead Shielded Cartridge (mR/hr/minute)		-	-	-	2.4	5.
Dose Rate from Unshielded Stack Sample (mR/hr)						
15 ml sample		-	0.4	1.6	300.	600.
100 ml sample		-	3.	10.	1.9P3	4.P3
750 ml sample		-	22.	80.	1.5P4	3.P4
Dose Rate from 2" Lead Shielded Stack Sample (mR/hr)						
15 ml sample		-	-	.03	6.	10.
100 ml sample		-	0.05	0.2	40.	80.
750 ml sample		-	0.4	1.6	300.	600.

*8.5N3 = 8.5×10^{-3}
**4.P4 = 4×10^{4}

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Meteorological Parameters

	1100-1400	1400-1600	1630-1800	1800-1945	1945-2400
Wind Speed - mph					
Ground	5.2	4.8	4.1	3.0	4.0
Elevated	7.1	6.3	5.1	3.1	4.3
Wind Direction - deg azm					
Ground					
Elevated					
Sigma Theta - deg azm	137	145	151	158	158
	144	152	157	158	158
Ground	6.7	5.9	11.0	10.6	10.2
Elevated	8.0	6.9	13.6	12.9	12.4
Delta T - deg F					
Ground	-1.3	-1.7	-2.3	-2.1	-2.1
Elevated	-1.1	-1.3	-2.3	-2.1	-2.1
Temperature - deg F					
Elevated	71	75	82	79	16

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
Whole Body Dose Rate Along Centerline of Plume (mR/hr)

Distance (Miles)	0.5	1	2	3	4	5	6	7	8	9	10
Release 1											
Arrival Time	1810	1820	1840	1900	1920	1940	1956	2011	2026	2041	2056
Reading	0.14	0.05	0.02	0.01	----	----	----	----	----	----	----
Release 2											
Arrival Time	1910	1920	1940	1956	2011	2026	2041	2056	2111	2126	2141
Reading	0.38	0.13	0.05	0.02	0.01	----	----	----	----	----	----
Release 3											
Arrival Time	1925	1935	1952	2007	2022	2037	2052	2107	2122	2137	2152
Reading	68.	24.	6.	3.6	2.2	1.5	1.0	0.8	0.6	0.5	0.4
Release 4											
Arrival Time	1952	2000	2015	2030	2045	2100	2115	2130	2145	2200	2215
Reading	150.	55.	19.	8.	5.0	3.5	2.6	2.0	1.6	1.2	1.0
End of Releases	2152	2200	2215	2230	2245	2300	2315	2330	2345	2400	2415

Note: Use these values for areas shaded red;
0.5 of these values for areas shadded blue;
0.3 of these values for areas shaded orange;
0.1 of these values for areas shaded yellow;
0.01 of these values for areas shaded green

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
SAM-II Readings Along Centerline of Plume (cpm above background)

Distance (Miles)	0.5	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Release 1											
Arrival Time	1810	1820	1840	1900	1920	1940	1956	2011	2026	2041	2056
Reading	----	----	----	----	----	----	----	----	----	----	----
Release 2											
Arrival Time	1910	1920	1940	1956	2011	2026	2041	2056	2111	2126	2141
Reading	140.	50.	19.	9.	----	----	----	----	----	----	----
Release 3											
Arrival Time	1925	1935	1952	2007	2022	2037	2052	2107	2122	2137	2152
Reading	2.P4	*8.5P3	2.8P3	1.1P3	710.	510.	390.	310.	250.	200.	150.
Release 4											
Arrival Time	1952	2000	2015	2030	2045	2100	2115	2130	2145	2200	2215
Reading	8.P4	3.3P4	1.P4	4.P3	2.5P3	1.8P3	1.3P3	1.1P3	850.	700.	600.
End of Releases	2152	2200	2215	2230	2245	2300	2315	2330	2345	2400	2415

Note: Use these values for areas shaded red;
0.5 of these values for areas shadded blue;
0.3 of these values for areas shaded orange;
0.1 of these values for areas shaded yellow;
0.01 of these values for areas shaded green

*8.5P3 = 8.5×10^3

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
I-131 Concentration Centerline of Plume (μCi/cc)

Distance (Miles)	0.5	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.
Release 1											
Arrival Time	1810	1820	1840	1900	1920	1940	1956	2011	2026	2041	2056
Reading	----	----	----	----	----	----	----	----	----	----	----
Release 2											
Arrival Time*	1910	1920	1940	1956	2011	2026	2041	2056	2111	2126	2141
Reading	1.4N9	5.N10	1.7N10	7.N11	----	----	----	----	----	----	----
Release 3											
Arrival Time	1925	1935	1952	2007	2022	2037	2052	2107	2122	2137	2152
Reading	2.3N7	8.N8	2.8N8	1.3N8	7.N9	5.1N9	4.N9	3.N9	2.5N9	2.N9	1.5N9
Release 4											
Arrival Time	1952	2000	2015	2030	2045	2100	2115	2130	2145	2200	2215
Reading	7.N7	2.5N7	9.N8	3.9N8	2.5N8	1.8N8	1.3N8	1.N8	8.N9	7.N9	6.N9
End of Releases	2152	2200	2215	2230	2245	2300	2315	2330	2345	2400	2415

*1.4N9 = 1.4×10^{-9}

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
Inhalation Thyroid Dose Rate Along Centerline of Plume

Distance (Miles)	0.5	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.
Release 1											
Arrival Time	1810	1820	1840	1900	1920	1940	1956	2011	2026	2041	2056
Reading	----	----	----	----	----	----	----	----	----	----	----
Release 2											
Arrival Time*	1910	1920	1940	1956	2011	2026	2041	2056	2111	2126	2141
Reading	6.2	2.2	0.8	0.3	----	----	----	----	----	----	----
Release 3											
Arrival Time	1925	1935	1952	2007	2022	2037	2052	2107	2122	2137	2152
Reading	890.	320.	110.	50.	30.	22.	16.	12.	10.	8.2	6.9
Release 4											
Arrival Time	1952	2000	2015	2030	2045	2100	2115	2130	2145	2200	2215
Reading	3000.	1060.	380.	160.	100.	70.	55.	40.	33.	27.	23.
End of Releases	2152	2200	2215	2230	2245	2300	2315	2330	2345	2400	2415

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
Whole Body Does Rate at Various Field Monitoring Location (mR/hr)
with Plume Front Arrival Times

Field Monitoring Location	NNW-0	NW-1	NNW-1	N-1	N-2	NW-2.1	NNW-2.1	NNW-2.2	NW-2.2
Arrival Time	1816	1826	1832	1830	1840	1840	1842	1852	1852
WB Dose Rate	0.06	----	0.03	----	----	----	----	----	----
Arrival Time	1916	1926	1932	1930	1940	1940	1942	1950	1950
WB Dose Rate	0.14	----	0.09	----	----	----	0.02	0.02	----
Arrival Time	1931	1941	1946	1945	1953	1953	1954	2002	2002
WB Dose Rate	27.	0.7	16.	----	0.04	0.06	2.7	4.0	0.4
Arrival Time	1957	2005	2009	2007	2015	2015	2017	2024	2024
WB Dose Rate	60.	1.5	37.	----	0.09	0.15	6.1	9.1	0.91

Field Monitoring Location	N-3.1	NNW-3	NW-3	NNW-4	N-4	N-5.1	NNW-5.1	NNW-5.2
Arrival Time	1900	1910	1914	1932	1924	1942	1944	1950
WB Dose Rate	----	0.02	----	----	----	----	----	----
Arrival Time	1956	2004	2007	2020	2014	2028	2029	2035
WB Dose Rate	----	0.02	----	----	----	----	0.01	----
Arrival Time	2008	2015	2018	2032	2026	2039	2041	2047
WB Dose Rate	----	2.7	0.01	1.2	----	----	1.4	0.6
Arrival Time	2030	2038	2041	2054	2048	2102	2104	2109
WB Dose Rate	----	6.1	0.03	2.7	----	----	3.0	1.5

Field Monitoring Location	NNW-6.1	NNW-6.2	N-6.2	N-7.1	NNW-7.2	NNW-7.1	NNW-8.3
Arrival Time	2002	2004	2001	2016	2016	2019	2031
WB Dose Rate	----	----	----	----	----	----	----
Arrival Time	2047	2049	2046	2101	2101	2104	2116
WB Dose Rate	----	----	----	----	----	----	----
Arrival Time	2059	2100	2058	2112	2112	2115	2127
WB Dose Rate	0.09	0.92	0.09	----	0.85	0.27	0.54
Arrival Time	2121	2122	2120	2135	2135	2138	2150
WB Dose Rate	0.2	2.1	0.2	---	2.0	0.6	1.2

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
SAM-II Readings at Various Field Monitoring Locations (cpm above background) with Plume Front Arrival Times

Field Monitoring Location	NNW-0	NW-1	NNW-1	N-1	N-2	NW-2.1	NNW-2.1	NNW-2.2
Arrival Time	1816	1826	1832	1830	1840	1840	1842	1852
SAM-II	----	----	----	----	----	----	----	----
Arrival Time	1916	1926	1932	1930	1940	1940	1942	1950
SAM-II	65.	----	29.	----	----	----	6.	9.
Arrival Time	1931	1941	1946	1945	1953	1953	1954	2002
SAM-II	9.1P3	260.	5.5P3	----	13.	26.	910.	1.3P3
Arrival Time	1957	2005	2009	2007	2015	2015	2017	2024
SAM-II	3.0P4	730.	1.8P4	----	47.	83.	3.1P3	4.7P3

Field Monitoring Location	NW-2.2	N-3.1	NNW-3	NW-3	NNW-4	N-4	N-5.1	NNW-5.1
Arrival Time	1852	1900	1910	1914	1932	1924	1942	1944
SAM-II	----	----	----	----	----	----	----	----
Arrival Time	1950	1956	2004	2007	2020	2014	2028	2029
SAM-II	----	----	6	----	----	----	----	----
Arrival Time	2002	2008	2015	2018	2032	2026	2039	2041
SAM-II	140.	----	910.	5.	420.	----	----	440.
Arrival Time	2024	2030	2038	2041	2054	2048	2102	2104
SAM-II	470.	----	3.1P3	16.	1.4P3	----	----	1.5P3

Field Monitoring Location	NNW-5.2	NNW-6.1	NNW-6.2	N-6.2	N-7.1	NNW-7.2	NNW-7.1	NNW-8.3
Arrival Time	1950	2002	2004	2001	2016	2016	2019	2031
SAM-II	----	----	----	----	----	----	----	----
Arrival Time	2035	2047	2049	2046	2101	2101	2104	2116
SAM-II	----	----	----	----	----	----	----	----
Arrival Time	2047	2059	2100	2058	2112	2112	2115	2127
SAM-II	250.	34.	340.	34.	----	310.	90.	180.
Arrival Time	2109	2121	2122	2120	2135	2135	2138	2150
SAM-II	730.	100.	1.0P3	100.	13.	940.	310.	600.

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
I-131 Concentration at Various Field Monitoring Locations
(μCi/cc) with Plume Front Arrival Times

Field Monitoring Location	NNW-0	NW-1	NNW-1	N-1	N-2	NW-2.1	NNW-2.1	NNW-2.2
Arrival Time	1816	1826	1832	1830	1840	1840	1842	1852
I-131 Conc.	----	----	----	----	----	----	----	----
Arrival Time	1916	1926	1932	1930	1940	1940	1942	1950
I-131 Conc.	5.6N10	----	3.4N10	----	----	----	5.4N11	8.1N11
Arrival Time	1931	1941	1946	1945	1953	1953	1954	2002
I-131 Conc.	7.9N8	2.3N9	4.7N8	4.5N12	1.1N10	1.9N10	7.9N9	1.1N8
Arrival Time	1957	2005	2009	2007	2015	2015	2017	2024
I-131 Conc.	2.0N7	6.3N9	1.0N7	1.3N11	4.1N10	7.2N10	2.7N8	4.1N8

Field Monitoring Location	NW-2.2	N-3.1	NNW-3	NW-3	NNW-4	N-4	N-5.1	NNW-5.1
Arrival Time	1852	1900	1910	1914	1932	1924	1942	1944
I-131 Conc.	----	----	----	----	----	----	----	----
Arrival Time	1950	1956	2004	2007	2020	2014	2028	2029
I-131 Conc.	9.0N12	----	5.4N11	----	----	----	----	2.7N11
Arrival Time	2002	2008	2015	2018	2032	2026	2039	2041
I-131 Conc.	1.2N9	2.2N12	7.9N9	4.1N11	3.6N9	2.2N12	----	3.8N9
Arrival Time	2024	2030	2038	2041	2054	2048	2102	2104
I-131 Conc.	4.1N9	1.3N11	2.7N8	1.4N10	1.2N8	6.8N12	2.2N12	1.3N8

Field Monitoring Location	NNW-5.2	NNW-6.1	NNW-6.2	N-62	N-7.1	NNW-7.2	NNW-7.1	NNW-8.3
Arrival Time	1950	2002	2004	2001	2016	2016	2019	2031
I-131 Conc.	----	----	----	----	----	----	----	----
Arrival Time	2035	2047	2049	2046	2101	2101	2104	2116
I-131 Conc.	1.6N11	----	1.6N11	----	----	1.6N11	9.0N12	9.0N12
Arrival Time	2047	2059	2100	2058	2112	2112	2115	2127
I-131 Conc.	2.2N9	2.9N10	2.9N9	2.9N10	2.3N11	2.7N9	7.9N10	1.6N9
Arrival Time	2109	2121	2122	2120	2135	2135	2138	2150
I-131 Conc.	6.3N9	8.8N10	8.8N9	8.8N10	1.1N10	8.1N9	2.7N9	5.2N9

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
Inhalation Thyroid Dose at Various Field Monitoring Locations (mR/hr)
with Plume Front Arrival Times

Field Monitoring Location	NNW-0	NW-1	NNW-1	N-1	N-2	NW-2.1	NNW-2.1	NNW-2.2
Arrival Time	1816	1826	1832	1830	1840	1840	1842	1852
Thyroid Dose Rate	----	----	----	----	----	----	----	----
Arrival Time	1916	1926	1932	1930	1940	1940	1942	1950
Thyroid Dose Rate	2.5	----	1.5	----	----	----	0.24	0.36
Arrival Time	1931	1941	1946	1945	1953	1953	1954	2002
Thyroid Dose Rate	350	10	210	0.02	0.50	0.85	35	50
Arrival Time	1957	2005	2009	2007	2015	2015	2017	2024
Thyroid Dose Rate	1170	28	710	0.06	1.8	3.2	120	180

Field Monitoring Location	NW-2.2	N-3.1	NNW-3	NW-3	NNW-4	N-4	N-5.1	NNW-5.1
Arrival Time	1852	1900	1910	1914	1932	1924	1942	1944
Thyroid Dose Rate	----	----	----	----	----	----	----	----
Arrival Time	1950	1956	2004	2007	2020	2014	2028	2029
Thyroid Dose Rate	0.04	----	0.24	----	----	----	----	0.12
Arrival Time	2002	2008	2015	2018	2032	2026	2039	2041
Thyroid Dose Rate	5.3	0.01	35	0.18	16	0.01	----	17
Arrival Time	2024	2030	2038	2041	2054	2048	2102	2104
Thyroid Dose Rate	18.	0.06	120	0.60	53	0.03	0.01	59

Field Monitoring Location	NNW-5.2	NNW-6.1	NNW-6.2	N-6.2	N-7.1	NNW-7.2	NNW-7.1	NNW-8.3
Arrival Time	1950	2002	2004	2001	2016	2016	2019	2031
Thyroid Dose Rate	----	----	----	----	----	----	----	----
Arrival Time	2035	2047	2049	2046	2101	2101	2104	2116
Thyroid Dose Rate	0.07	----	0.07	----	----	0.07	0.04	0.04
Arrival Time	2047	2059	2100	2058	2112	2112	2115	2127
Thyroid Dose Rate	9.6	1.3	13.	1.3	0.1	12.	3.5	7.1
Arrival Time	2109	2121	2122	2120	2135	2135	2138	2150
Thyroid Dose Rate	28.	2.9	39.	3.9	0.5	36.	12.	23.

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
I-131 Concentration on Downwind Pastures
($\mu Ci/m^2$)

Distance (miles)	0.5	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1815-1830	2.5N4	----	----	----	----	----	----	----	----	----	----
1830-1845	5.0N4	1.N4	----	----	----	----	----	----	----	----	----
1845-1900	7.5N4	2.N4	3.5N5	----	----	----	----	----	----	----	----
1900-1915	4.N2	3.N4	6.7N5	1.4N5	----	----	----	----	----	----	----
1915-1930	8.N2	1.6N2	1.0N4	2.9N5	----	----	----	----	----	----	----
1930-1945	2.N1	6.7N2	5.6N3	4.2N5	----	----	----	----	----	----	----
1945-2000	3.4N1	1.2N1	1.8N2	2.6N3	----	----	----	----	----	----	----
2000-2015	4.8N1	1.6N1	3.5N2	1.0N2	1.4N3	----	----	----	----	----	----
2015-2030	6.2N1	2.N1	5.3N2	1.8N2	6.4N3	1.0N3	----	----	----	----	----
2030-2045	7.6N1	2.6N1	7.0N2	2.6N2	1.1N2	4.6N3	6.9N4	----	----	----	----
2045-2100	9.0N1	3.N1	8.8N2	3.4N2	1.6N2	8.3N3	3.2N3	6.N4	----	----	----
2100-2115	1.0	3.5N1	1.1N1	4.2N2	2.1N2	1.2N2	5.8N3	2.7N3	4.8N4	----	----
2115-2130	1.2	4.N1	1.2N1	5.N2	2.6N2	1.6N2	8.3N3	4.8N3	2.1N3	4.N4	----
2130-2145	1.3	4.5N1	1.4N1	5.8N2	3.N2	1.9N2	1.1N2	6.9N3	3.7N3	1.6N3	3.N4
2145-2400	1.5	4.9N1	1.6N1	6.6N2	3.5N2	2.2N2	1.3N2	9.0N3	5.3N3	3.0N3	1.2N3

NRC/FEMA Observed Emergency Response Exercise
Limerick Generating Station
I-131 Concentration in Milk Produced by
Cows Grazing on Downwind Pastures (μCi/liter)

Distance (miles)	0.5	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1815-1830	1.8N4	----	----	----	----	----	----	----	----	----	----
1830-1845	3.6N4	6.3N5	----	----	----	----	----	----	----	----	----
1845-1900	5.4N4	1.3N4	2.1N5	----	----	----	----	----	----	----	----
1900-1915	2.9N2	1.9N4	4.2N5	8.8N6	----	----	----	----	----	----	----
1915-1930	5.8N2	1.N2	6.3N5	1.8N5	----	----	----	----	----	----	----
1930-1945	1.4N1	4.2N2	3.5N3	2.6N5	----	----	----	----	----	----	----
1945-2000	2.2N1	7.4N2	1.1N2	1.6N3	----	----	----	----	----	----	----
2000-2015	3.1N1	1.0N1	2.2N2	6.5N3	8.8N4	----	----	----	----	----	----
2015-2030	4.0N1	1.3N1	3.3N2	1.1N2	4.N3	6.4N4	----	----	----	----	----
2030-2045	4.9N1	1.6N1	4.2N2	1.6N2	7.N3	2.9N3	4.3N4	----	----	----	----
2045-2100	5.8N1	1.9N1	5.5N2	2.1N2	1.N2	5.2N3	2.0N3	3.8N4	----	----	----
2100-2115	6.7N1	2.2N1	6.6N2	2.6N2	1.3N2	7.5N3	3.6N3	1.7N3	3.N4	----	----
2115-2130	7.6N1	2.5N1	7.7N2	3.1N2	1.6N2	9.8N3	5.2N3	3.N3	1.3N3	2.5N4	----
2130-2145	8.4N1	2.8N1	8.8N2	3.6N2	1.9N2	1.2N2	6.8N3	4.3N3	2.3N3	1.N3	1.9N4
2145-2400	9.3N1	3.1N1	9.9N2	4.1N2	2.2N2	1.4N2	8.4N3	5.6N3	3.3N3	1.9N3	7.5N4

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
ONSITE RADIOLOGICAL SURVEY DATA

	1800-1900	1900-1915	1915-1945	1945-2145
Whole Body Dose Rate (mR/hr)				
Upwind of Line A-A	1.6	5.	850	*1.8P3
Between A-A and B-B	.6	1.9	340	700
Downwind of Line B-B	.14	.38	68	150
SAM-II Count Rate (cpm)				
Upwind of Line A-A	150	1.7P3	2.2P5	9.P5
Between A-A and B-B	60	680	9.4P4	3.8P5
Downwind of Line B-B	<10	150	2.1P4	8.1P4
Iodine-131 Concentration (uCi/cc)				
Upwind of Line A-A	**1.4N9	1.6N8	2.5N6	8.N6
Between A-A and B-B	5.7N10	6.8N9	1.N6	3.3N6
Downwind of Line B-B	-	1.5N9	2.4N7	7.2N7
Inhalation Dose Rate (mrem/hr)				
Upwind of Line A-A	6.2	70	1P4	3.3P4
Between A-A and B-B	2.4	28	4.1P3	1.4P4
Downwind of Line B-B	-	6.2	890	3.P3
Contamination Survey (dpm/100 cm^2)				
Upwind of Line A-A	<10	<10	3.P3	1.2P4
Between A-A and B-B	<10	<10	1.3P3	5.P3
Downwind of Line B-B	<10	<10	250	1.5P3

*1.8P3 = 1.8×10^3
**1.4N9 = 1.4×10^{-9}

Note:

Use these values for areas shaded red; one half of these values for areas shaded blue; one tenth of these values for areas shaded yellow; and one hundredth of these values for areas shaded green.

Note:

Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 177 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
Core Spray	1_A	1.	1.	3.	10.	150.	1500.
	2_A	1.	1.	1.	4.	60.	600.
	3_A	1.	1.	1.	1.	15.	150.
	4_A	1.	1.	1.		6.	60.
	5_A	1.	1.	1.	1.	3.	30.
RCIC	1_C	50.	400.	700.	1.2P3	2.P3	600.
	2_C	12.	100.	175.	300.	500.	150.
Core Spray	1_D	1.	1.	3.	10.	150.	1.5P3
	2_D	1.	1.	1.	4.	40.	400.
	3_D	1.	1.	1.	1.	15.	150.
	4_D	1.	1.	1.	1.	4.	40.
	5_D	1.	1.	1.	1.	1.5	15.
	6_D	1.	1.0	1.	1.	0.1	8.
HPCI	1_H	50.	200.	200.	200.	200.	200.
	2_H	12.	50.	50.	50.	50.	50.
RHR	1_L	10.	10.	30.	100.	300.	1500.
	2_L	2.	2.	5.	20.	60.	300.
	3_L	0.5	0.5	1.	5.	15.	75.
	4_L	0.5	0.5	0.5	2.5	8.	40.
	5_L	0.5	0.5	0.5	1.	4.	20.
	6_L	0.5	0.5	0.5	0.5	1.5	8.
All Other Areas		0.5	0.5	0.5	0.5	1.5	5.
ARM	-01	100.	800.	1.4P3	2.5P3	4.P3	1.3P3
	-02	80.	300.	320.	320.	320.	320.
	-03	1.	1.	1.	1.	2.	20.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 177 Ft (Cont)

		1730 / 1800	1800 / 1900	1900 / 1930	1930 / 2045	2045 / 2145
Ambient Radiation Level (mR/hr)						
Core Spray	1_A	6.P3	1.5P4	2.P4	2.5P4	2.P4
	2_A	2.4P3	6.P3	8.P3	1.P4	8.P3
	3_A	600.	1.5P3	2.P3	2.5P3	2.P3
	4_A	250.	600.	900.	1.3P3	900.
	5_A	120.	300.	400.	500.	400.
RCIC	1_C	600.	600.	600.	600.	600.
	2_C	150.	150.	150.	150.	150.
Core Spray	1_D	6.P3	1.5P4	2.4P4	2.5P4	2.P4
	2_D	1.6P3	4.P3	7.P3	7.P3	6.P3
	3_D	600.	1.5P3	2.4P3	2.5P3	2.P3
	4_D	160.	400.	700.	700.	600.
	5_D	60.	150.	240.	250.	200.
	6_D	30.	80.	120.	130.	100.
HPCI	1_H	200.	200.	200.	200.	200.
	2_H	50.	50.	50.	50.	50.
RHR	1_L	6.P3	6.P3	6.P3	6.P3	6.P3
	2_L	1.2P3	1.2P3	1.2P3	1.2P3	1.2P3
	3_L	300.	300.	300.	300.	300.
	4_L	150.	150.	150.	150.	150.
	5_L	80.	80.	80.	80.	80.
	6_L	30.	30.	30.	30.	30.
All Other Areas		3.	2.	5.	15.	20.
ARM	-01	1.2P3	1.2P3	1.2P3	1.2P3	1.2P3
	-02	320.	320.	320.	320.	320.
	-03	80.	280.	300.	350.	280.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 177 Ft (Cont)

Contamination Survey (dpm/100 cm^2)

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
-Inside-	<100.	<100.	<100.	500.	1.4P3	5.P3
'Inside'	200.	400.	700.	1.P3	1.5P3	4.P3
/Inside/	100.	200.	300.	600.	4.P4	1.P5

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
-Inside-	cpm/100 ft^3	140.	240.	300.	400.	1.8P4	4.P4
	cpm/6 ft^3	<20	<20	<20	24	1.1P5	2.4P3
	% I-131	15.	20.	20.	20.	20.	20.
	% I-133	70.	80.	80.	80.	80.	80.
'Inside'	cpm/100 ft^3	600.	1.P3	1.2P3	1.4P3	1.2P4	1.8P4
	cpm/6 ft^3	40.	60.	72.	80.	720.	1.1P3
	% I-131	5.	10.	15.	20.	20.	20.
	% I-133	15.	50.	85.	80.	80.	80.
/Inside/	cpm/100 ft^3	100.	140.	200.	300.	6.P4	1.4P5
	cpm/6 ft^3	<20	<20	<20	<20	4.P3	8.P3
	% I-131	15.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.

Contamination Survey (dpm/100 cm^2)

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - - -Inside- - - - - - -	1.P4	3.P4	5.P4	7.P4	9.P4
' ' ' ' ' ' 'Inside' ' ' ' ' ' '	9.P3	2.P4	5.P4	6.P4	8.P4
/ / / / / / /Inside/ / / / / / /	2.P5	1.9P5	1.7P5	1.7P5	1.5P5

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - -	cpm/100 ft^3	3.P4	3.2P4	3.2P4	3.2P4	3.2P4
-Inside-	cpm/6 ft^3	1.8P3	2.P3	2.P3	2.P3	2.P3
- - - - - -	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
' ' ' ' ' ' '	cpm/100 ft^3	2.P4	1.P4	1.P4	8.P3	6.P3
'Inside'	cpm/6 ft^3	1.2P3	600.	600.	400.	400.
' ' ' ' ' ' '	% I-131	15.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
/ / / / / /	cpm/100 ft^3	4.P4	1.8P4	1.8P4	1.4P4	1.P4
/Inside/	cpm/6 ft^3	2.4P3	1.2P3	1.2P3	8.P2	600.
/ / / / / /	% I-131	20.	20.	20.	20.	15.
	% I-133	80.	80.	80.	80.	85.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 201 Ft

		1100 1400	1400 1500	1500 1600	1600 1630	1630 1715	1715 1730
Ambient Radiation Level (mR/hr)							
	1_L	2.	2.	6.	20.	60.	300.
	2_L	1.	1.	2.	7.	20.	100.
	3_L	0.5	0.5	0.5	2.	6.	30.
	1_S	0.5	0.5	1.	2.	2.	5.
	2_S	0.5	0.5	0.5	1.	2.	5.
	3_S	0.5	0.5	0.5	1.	2.	5.
All Other Areas		0.5	0.5	0.5	1.	2.	5.
ARM	-06	0.5	8.	50.	80.	120.	160.
	-08	8.	8.	25.	80.	240.	1.2P3
	-09	8.	8.	25.	80.	240.	1.2P3
Contamination Survey (dpm/100 cm^2)							
- - - - - - -Inside- - - - - - -		300.	300.	300.	400.	500.	2.P3
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '		100.	200.	500.	800.	1.3P3	5.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level							
- - - - - -	cpm/100 ft^3	80.	80.	180.	300.	1.4P3	1.6P3
-Inside-	cpm/6 ft^3	<20.	<20	<20	0	84.	100.
- - - - - -	% I-131	10.	20.	20.	15.	20.	20.
	% I-133	60.	80.	80.	75.	80.	80.
' ' ' ' ' ' '	cpm/100 ft^3	160.	200.	600.	800.	5000.	6.P3
'Inside'	cpm/6 ft^3	<20	20.	40.	50.	300.	360.
' ' ' ' ' ' '	% I-131	15.	20.	20.	15.	20.	20.
	% I-133	70.	75.	30.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 201 Ft (Cont)

		1730/1800	[illegible]	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_L	1.2P3	1.2P3	1.2P3	1.2P3	1.2P3
	2_L	400.	400.	400.	400.	400.
	3_L	120.	120.	120.	120.	120.
	1_S	8.	16.	40.	100.	120.
	2_S	5.	10.	16.	40.	50.
	3_S	5.	10.	10.	20.	30.
All Other Areas		10.	10.	10.	15.	20.
ARM	-06	160.	160.	160.	200.	240.
	-08	5.P3	5.P3	5.P3	5.P3	5.P3
	-09	5.P3	5.P3	5.P3	5.P3	5.P3
Contamination Survey (dpm/100 cm²)						
- - - - - - - -Inside- - - - - - - -		4.P3	6.P3	7.P3	1.P4	1.P4
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '		9.P3	1.2P4	1.3P4	1.6P4	1.8P4

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm².

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 201 Ft (Cont)

Airborne Radioactivity Level

- - - - - -	cpm/100 ft^3	3.P3	4.P3	6.P3	8.P3	6.P3
-Inside-	cpm/6 ft^3	180	240.	400.	500.	400
- - - - - -	% I-131	20.	20.	20.	15.	20.
	% I-133	80.	80.	80.	80.	75.
' ' ' ' ' '	cpm/100 ft^3	8.P3	1.2P4	1.6P4	1.2P4	1.P4
'Inside'	cpm/6 ft^3	480.	700.	1.P3	800.	600.
' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 217 Ft

Ambient Radiation Level (mR/hr)

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
	A_S	0.5	0.5	3.	5.	8.	25.
	B_S	0.5	0.5	1.	2.	5.	10.
	C_S	0.5	0.5	0.5	1.	4.	5.
	D_S	0.5	0.5	0.5	0.5	4.	3.
	E_S	0.5	0.5	0.5	0.5	4.	3.
	F_S	0.5	0.5	0.5	0.5	4.	3.
	1_D	0.5	0.5	0.5	0.5	3.	3.
	2_D	0.5	0.5	0.5	0.5	3.	3.
All Other Areas		0.5	0.5	0.5	0.5	3.	3.
ARM	-10	0.5	0.5	2.	8.	15.	20.

Contamination Survey (dpm/100 cm^2)

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
- - - - - - -Inside- - - - - - -	200.	200.	200.	300.	1.P3	4.P3
' ' ' ' ' ' 'Inside' ' ' ' ' ' '	400.	400.	400.	600.	1.2P3	4.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
- - - - - - -Inside- - - - - - -	cpm/100 ft^3	160.	340	600	1.P3	3.2P3	4.P3
	cpm/6 ft^3	<20	20.	40.	60.	200.	240.
	% I-131	15.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	75.	80.	80.
' ' ' ' ' ' 'Inside' ' ' ' ' ' '	cpm/100 ft^3	100	180	400.	600.	1.6P3	2.P3
	cpm/6 ft^3	<20	<20	24.	40.	100.	120
	% I-131	15.	20.	20.	20.	20.	20.
	% I-133	60.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 217 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	A_S	60.	90.	110.	130.	150.
	B_S	20.	45.	50.	55.	60.
	C_S	10.	20.	25.	32.	30.
	D_S	6.	8.	8.	13.	15.
	E_S	3.	4.	4.	7.	8.
	F_S	1.5	2.	2.	3.	4.
	1_D	6.	10.	20.	60.	60.
	2_D	3.	5.	10.	30.	30.
All Other Areas		1.5	1.5	1.0	1.0	1.0
ARM	-10	20.	20.	20.	20.	20.
Contamination Survey (dpm/100 cm^2)						
- - - - - - -Inside- - - - - - -		6.P3	7.P3	1.P4	1.2P4	1.2P4
' ' ' ' ' ' 'Inside' ' ' ' ' ' '		6.5P3	7.5P4	1.1P4	1.2P4	1.3P4

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

- - - - - -	cpm/100 ft^3	6.P3	6.P3	7.P3	7.P3	8.P3
-Inside-	cpm/6 ft^3	400.	400.	500.	500.	500.
- - - - - -	% I-131	10.	15.	20.	20.	20.
	% I-133	70.	80.	80.	80.	80.
' ' ' ' ' ' '	cpm/100 ft^3	2.6P3	3.P3	3.6P3	4.P3	4.P3
'Inside'	cpm/6 ft^3	160.	180.	216.	240.	240
' ' ' ' ' ' '	% I-131	10.	20.	20.	20.	20.
	% I-133	70.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 253 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1D	0.5	0.5	0.5	1.	4.	3.
	2D	0.5	0.5	0.5	1.	4.	3.
All Other Areas		0.5	0.5	0.5	1.	4.	3.
ARM	-15	0.5	0.5	0.5	1.	4.	3.
	-16	0.5	0.5	0.5	1.	4.	3.
	-17	0.5	0.5	0.5	1.	4.	3.
	-18	0.5	0.8	4.	8.	10.	15.
Contamination Survey (dpm/100 cm^2)							
General		400.	500.	700.	900.	1.5P3	3.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Airborne Radioactivity Level							
General	cpm/100 ft^3	80.	160.	160.	240.	600.	1.P3
	cpm/6 ft^3	<20	<20	<20	<20	40.	60.
	% I-131	15.	20.	15.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 253 Ft (Cont)

		1730 / 1800	1800 / 1900	1900 / 1930	1930 / 2045	2045 / 2145
Ambient Radiation Level (mR/hr)						
	1_D	4.	6.	20.	35.	35.
	2_D	3.	2.	8.	12.	12.
All Other Areas		3.	2.	2.	2.	2.
ARM	-15	3.	2.	2.	2.	2.
	-16	3.	2.	2.	2.	2.
	-17	3.	2.	2.	2.	2.
	-18	20.	20.	20.	20.	20.
Contamination Survey (dpm/100 cm^2)						
General		5.P3	6.P3	7.P3	9.P3	1.P4

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level						
General	cpm/100 ft^3	1.2P3	1.2P3	1.4P3	1.8P3	2.P3
	cpm/ 6 ft^3	70.	70.	80.	110.	120.
	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 283 Ft

Ambient Radiation Level (mR/hr)

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Injection	A_C	5.	5.	5.	10.	250.	2.P3
Valve	B_C	5.	5.	5.	5.	120.	1.P3
Area	C_C	3.	5.	5.	5.	60.	500.
	D_C	0.5	5.	5.	5.	30.	250.
Recombiner	A_P	1.	1.	1.	2.	4.	9.
	B_P	1.	1.	1.	1.	2.	5.
	C_P	1.	1.	1.	1.	1.	2.
	D_P	1.	1.	1.	1.	1.	1.
All Other Areas		0.5	1.	1.	2.	3.	7.
ARM	-21	0.5	1.	1.	2.	3.	7.
	-22	0.5	1.	1.	2.	3.	7.
	-23	0.5	1.	1.	2.	3.	7.
	-24	1.	1.	1.	2.	4.	9.

Contamination Survey (dpm/100 cm^2)

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
- - - - - - -Inside- - - - - - -	500.	500.	500.	700.	800.	2.P3
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '	600.	800.	1.P3	1.7P3	1.9P3	4.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
- - - - - -	cpm/100 ft^3	240.	340.	400.	600.	1.4P3	1.4P3
-Inside-	cpm/6 ft^3	<20	20.	24.	24.	78.	78.
- - - - - -	% I-131	20.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.
' ' ' ' ' ' '	cpm/100 ft^3	140.	180.	340.	380.	800.	1.P3
'Inside'	cpm/6 ft^3	<20	<20	22.	22.	48.	60.
' ' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 283 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
Injection	A_C	1.P4	3.P4	3.P4	4.P4	4.P4
Valve	B_C	5.P3	1.5P4	2.P4	2.P4	2.P4
Area	C_C	3.P3	8.P3	1.P4	1.P4	1.P4
	D_C	1.5P3	4.P3	5.P3	5.P3	5.P3
Recombiner	A_P	70.	100.	500.	4.P4	7.P4
	B_P	35.	50.	250.	2.P4	3.5P4
	C_P	20.	25.	120.	1.P4	1.8P4
	D_P	10.	13.	60.	5.P3	9.P3
All Other Areas		7.	6.	5.	5.	5.
ARM	-21	7.	6.	5.	5.	5.
	-22	7.	6.	5.	5.	5.
	-23	7.	6.	5.	5.	5.
	-24	70.	100.	500.	>1.P4	>1.P4

Contamination Survey (dpm/100 cm^2)

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - - -Inside- - - - - - -	3.P3	3.P3	4.P3	4.P3	6.P3
' ' ' ' ' ' 'Inside' ' ' ' ' ' '	6.P3	6.P3	6.P3	7.P3	7.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - -	cpm/100 ft^3	1.6P3	1.6P3	1.6P3	1.6P3	2.P3
-Inside-	cpm/6 ft^3	100.	100.	100.	100.	100.
- - - - - -	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
' ' ' ' ' '	cpm/100 ft^3	1.2P3	1.2P3	1.4P3	1.4P3	1.4P3
'Inside'	cpm/6 ft^3	70.	74.	80.	80.	90.
' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 313 and 331 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	A_P	1.	1.	1.	2.	4.	9.
	B_P	1.	1.	1.	1.	2.	5.
	C_P	1.	1.	1.	1.	1.	2.
	D_P	1.	1.	1.	1.	1.	1.
	1_F	1.	2.	2.	5.	60.	800.
	2_F	1	1.	1.	2.5	6.	80.
	3_F	1	1.	1.	2.	3.5	20.
	4_F	1	1.	1.	2.	3.	5.
All Other Areas		0.5	1.	1.	2.	3.	7.
ARM	-27	1.	1.	1.	1.	1.5	3.0
Contamination Survey (dpm/100 cm^2)							
General		200.	200.	200.	200.	200.	200.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Airborne Radioactivity Level							
General	cpm/100 ft^3	60.	100.	140.	200.	400.	500.
	cpm/6 ft^3	<20	<20	<20	<20	24.	30.
	% I-131	20.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Reactor Enclosure El. 313 and 331 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	A_P	70.	100.	500.	4.P4	7.P4
	B_P	35.	50.	250.	2.P4	3.5P4
	C_P	20.	25.	120.	1.P4	1.8P4
	D_P	10.	13.	60.	5.P3	9.P3
	1_F	1.1P3	1.4P3	1.6P3	1.7P3	1.7P3
	2_F	110.	140.	160.	170.	170.
	3_F	30.	35.	40.	40.	40.
	4_F	10	15.	20.	20.	20.
All Other Areas		7.0	6.	5.	5.	5.
ARM	-27	25.	35.	150.	>1.P4	>1.P4
Contamination Survey (dpm/100 cm^2)						
General		200.	300.	500.	600.	700.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Airborne Radioactivity Level						
General	cpm/100 ft^3	600.	800.	800.	800.	1.P3
	cpm/6 ft^3	40.	48.	50.	60.	60.
	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 200 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_A	80.	30.	15.	15.	15.	15.
	2_A	40.	15.	8.	8.	8.	8.
	3_A	10.	4.	2.	2.	2.	2.
All Other Areas		0.2	0.2	0.2	0.7	1.1	2.
ARM	-04	0.2	0.2	0.2	0.7	1.1	2.
	-05	0.2	0.2	0.2	0.7	1.1	2.
	-07	90.	35.	20.	20.	15.	15.
	-34	0.2	0.2	0.2	0.7	1.1	2.
Contamination Survey (dpm/100 cm^2)							
-Inside-		250.	400.	700.	750.	900.	900.
'Inside'		200.	350.	550.	600.	600.	600.
/Inside/		500.	800.	1.P3	1.1P3	1.1P3	1.3P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

-Inside-	cpm/100 ft^3	40.	60.	40.	160.	240	340
	cpm/6 ft^3	<20	<20	<20	<20	<20	20
	% I-131	20.	20.	20.	15.	20.	20.
	% I-133	80.	80.	80.	70.	80.	80.
'Inside'	cpm/100 ft^3	60.	60.	80.	120.	120.	120.
	cpm/6 ft^3	<20	<20	<20	<20	<20	<20
	% I-131	10.	15.	20.	20.	20.	20.
	% I-133	40.	60.	80.	80.	80.	80.
/Inside/	cpm/100 ft^3	300	300.	400.	600.	1.P3	1.4P3
	cpm/6 ft^3	<20	<20	24.	40.	60.	110.
	% I-131	20.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 200 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_A	15.	15.	15.	15.	15.
	2_A	8.	8.	8.	8.	8.
	3_A	2.	2.	2.	2.	2.
All Other Areas		3.	3.	3.	3.	3.
ARM	-04	3.	3.	3.	3.	3.
	-05	3.	3.	3.	3.	3.
	-07	20.	20.	20.	20.	20.
	-34	3.	3.	3.	3.	3.
Contamination Survey (dpm/100 cm²)						
-Inside-		1.P3	1.P3	1.P3	1.1P3	1.1P3
'Inside'		800.	800.	800.	900.	1.P3
/Inside/		1.7P3	1.7P3	1.7P3	2.P3	2.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm².

Airborne Radioactivity Level

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
-Inside-	cpm/100 ft³	500.	700.	1.P3	1.6P3	3.P3
	cpm/6 ft³	30.	44.	60.	100.	180.
	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
'Inside'	cpm/100 ft³	140.	180.	180.	200.	200.
	cpm/6 ft³	<20	<20	<20	<20	<20
	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
/Inside/	cpm/100 ft³	3.2P3	5.P3	8.P3	1.2P4	1.8P4
	cpm/6 ft³	200.	300.	500.	600.	1.P3
	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 217 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_T	120.	50.	20.	20.	20.	20.
	2_T	60.	25.	10.	10.	10.	10.
	3_T	20.	10.	3.	3.	3.	3.
All Other Areas		0.7	0.7	1.	1.	1.	1.5
ARM	-12	0.7	0.7	1.	1.	1.	1.5
	-13	50.	20.	7.	7.	7.	7.
Contamination Survey (dpm/100 cm^2)							
- - - - - - - -Inside- - - - - - - -		400.	400.	400.	500.	600.	600.
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '		900.	900.	900.	900.	900.	900.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

- - - - - -	cpm/100 ft^3	400.	400.	400.	400.	600.	800.
-Inside-	cpm/6 ft^3	24.	24.	24.	24.	40.	50.
- - - - - -	% I-131	20.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	70.	80.	80.
' ' ' ' ' '	cpm/100 ft^3	300.	600.	1.2P3	1.2P3	1.2P3	1.4P3
'Inside'	cpm/6 ft^3	<20	36.	70.	70.	70.	80.
' ' ' ' ' ' '	% I-131	10.	20.	20.	20.	20.	20.
	% I-133	60.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 217 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mr/hr)						
	1_T	20.	20.	20.	20.	20.
	2_T	10.	10.	10.	10.	10.
	3_T	3.	3.	3.	3.	3.
All Other Areas		1.5	1.5	2.	2.	2.
ARM	-12	1.5	1.5	2.	2.	2.
	-13	7.	7.	7.	7.	7.
Contamination Survey (dpm/100 cm²)						
- - - - - - -Inside- - - - - - -		600.	600.	700.	700.	700.
' ' ' ' ' ' 'Inside' ' ' ' ' ' '		900.	900.	900.	900.	900.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm².

Airborne Radioactivity Level

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - -	cpm/100 ft³	800.	800.	1.P3	1.2P3	1.4P3
-Inside-	cpm/6 ft³	50.	50.	60.	70.	80.
- - - - - -	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	70.	80.
' ' ' ' ' '	cpm/100 ft³	1.4P3	1.4P3	1.4P3	1.4P3	200.
'Inside'	cpm/6 ft³	80.	80.	80.	80.	80.
' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 239 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_S	100.	40.	20.	20..	15.	15.
	2_S	100.	40.	20.	20.	15.	15.
	3_S	20.	8.	4.	4.	3.	3.
	4_S	5.	2.	1.	1.	1.	1.
	1_P	0.5	0.5	0.5	0.5	1.	1.
	2_P	0.5	0.5	0.5	0.5	1.	1.
	3_P	0.5	0.5	0.5	0.5	1.	1.
	4_P	0.5	0.5	0.5	0.5	1.	1.
All Other Areas		0.5	0.5	0.5	0.5	1.	1.
ARM	-19	100.	40.	20.	20.	15.	15.
	-20	100.	40.	20.	20.	15.	15.
Contamination Survey (dpm/100 cm^2)							
- - - - - - -Inside- - - - - - -		300.	300.	300.	400.	500.	600.
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '		<100.	<100.	<100.	<100.	170.	170.
/ / / / / / /Inside/ / / / / / /		<100.	<200.	700.	700.	700.	700.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Airborne Radioactivity Level							
- - - - - -	cpm/100 ft^3	320.	400.	400.	400.	400.	600.
-Inside-	cpm/6 ft^3	<20	26.	36.	26.	26.	40
- - - - - -	% I-131	5.	15.	20.	20.	20.	20.
	% I-133	50.	70.	70.	80.	80.	80.
' ' ' ' ' '	cpm/100 ft^3	40.	100.	120	140.	140.	340.
'Inside'	cpm/ 6 ft^3	<20	<20	<20	<20	<20	<20
' ' ' ' ' ' '	% I-131	10.	20.	20.	20.	20.	20.
	% I-133	70.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 239 Ft (Cont)

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
/ / / / / /cpm/100 ft^3	120.	320	400.	400.	400.	400.
/Inside/ cpm/6 ft^3	<20	<20	24.	24.	24.	24.
/ / / / / / % I-131	15.	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 239 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_S	20.	15.	15.	15.	15.
	2_S	20.	15.	15.	15.	15.
	3_S	4.	3.	3.	3.	3.
	4_S	1.	1.	1.	1.	1.
	1_P	1.	1.	1.	1.	1.
	2_P	1.	1.	1.	1.	1.
	3_P	1.	1.	1.	1.	1.
	4_P	1.	1.	1.	1.	1.
All Other Areas		1.	1.	1.	1.	1.
ARM	-19	20.	15.	15.	15.	15.
	-20	20.	15.	15.	15.	15.

Contamination Survey (dpm/100 cm^2)

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - - -Inside- - - - - - -	600.	600.	600.	700.	700.
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '	170.	170.	170.	200.	200.
/ / / / / / /Inside/ / / / / / /	400.	400.	500.	700.	700.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
- - - - - -	cpm/100 ft^3	800	800	800	1.P3	1.2P3
-Inside-	cpm/6 ft^3	50.	50.	50.	60.	70.
- - - - - -	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
' ' ' ' ' '	cpm/100 ft^3	400.	400.	400.	400.	600.
'Inside'	cpm/6 ft^3	24.	24.	24.	24.	38.
' ' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 239 Ft (Cont)

		1730 / 1800	1800 / 1900	1900 / 1930	1930 / 2045	2045 / 2145
' ' ' ' ' '	'cpm/100 ft^3	600.	800.	800.	800.	1.P3
'Inside	cpm/6 ft^3	34.	48.	50.	48.	60.
' ' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 269 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_G	100.	40.	20.	20.	20.	15.
	2_G	50.	20.	10.	10.	10.	7.
	3_G	10.	4.	2.	2.	2.	1.5
All Other Areas		0.5	0.5	0.5	0.5	1.	1.
ARM	-25	0.5	0.5	0.5	0.5	1.	1.
	-57	0.5	0.5	0.5	0.5	1.	1.
Contamination Survey (dpm/100 cm^2)							
General		500.	600.	600.	600.	600.	

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Airborne Radioactivity Level							
General	cpm/100 ft^3	120.	120.	120.	140.	340.	340.
	cpm/6 ft^3	<20	<20	<20	<20	20.	20.
	% I-131	15.	20.	20.	20.	20.	20.
	% I-133	70.	75.	80.	80.	80.	80.

Turbine Enclosure El. 269 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_G	15.	15.	15.	15.	15.
	2_G	7.	7.	7.	7.	7.
	3_G	1.5	1.5	2.	2.	2.
All Other Areas		1.	1.	1.	1.	1.
ARM	-25	1.	1.	1.	1.	1.
	-57	1.	1.	1.	1.	1.
Contamination Survey (dpm/100 cm^2)						
General		600.	700.	700.	700.	770.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Airborne Radioactivity Level						
General	cpm/100 ft^3	400.	400.	600.	600.	600.
	cpm/6 ft^3	24.	24.	40.	40.	40
	% I-131	15.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 302 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_F	1.	1.	1.	1.	1.	1.
	2_F	0.5	0.5	1.	1.	1.5	1.5
	3_F	0.5	0.5	1.	1.	2.	2.
All Other Areas		0.5	0.5	1.	1.	2.	2.
ARM	-28	0.5	0.5	1.	1.	2.	2.
Contamination Survey (dpm/100 cm^2)							
General		500.	600.	600.	600.	600.	700.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level							
General	cpm/100 ft^3	200.	400.	640.	400.	800.	800.
	cpm/6 ft^3	<20	24.	24.	24.	50.	50.
	% I-131	20.	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 302 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_F	1.	1.	1.	1.	1.
	2_F	1.5	1.5	1.5	1.5	1.5
	3_F	2.	2.	2.	2.	2.
All Other Areas	2.	2.	2.	2.	2.	
ARM	-28	2.	2.	2.	2.	2.
Contamination Survey (dpm/100 cm^2)						
General		700.	70C.	700.	700.	700.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
General-cpm/100	ft^3	800.	1.2P3	1.4P3	1.4P3	2.P3
	cpm/6 ft^3	50.	50.	80.	80.	120.
	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 321, 332, and 350 Ft

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)						
1_F	0.5	0.5	0.5	0.5	1.5	5.
2_F	0.5	0.5	0.5	0.5.	1.	1.
3_F	0.5	0.5	0.5.	0.5	1.	1.
4_F	0.5	0.5	0.5	0.5	1.	1.
1_N	1.	1.	1.	1.	1.	1.
2_N	0.5	0.5	0.5	0.5	0.5	0.5
General-Elevation 321	0.5	0.5	0.5	0.5	0.5	0.5
-Elevation 332	0.5	0.5	0.5	0.5	1.	1.
-Elevation 350	0.5	0.5	0.5	0.5	0.5	0.5
ARM -58	0.5	0.5	0.5	0.5	1.2	2.
Contamination Survey (dpm/100 cm^2)						
General-Elevation 321	600.	700.	1.P3	1.2P3	1.2P3	1.5P3
-Elevation 332	700.	800.	1.2P3	1.3P3	1.4P3	1.6P3
-Elevation 350	1.P3	1.P3	1.4P3	2.P3	2.P3	2.5P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level						
General-Elevation 321						
cpm/100 ft^3	120.	140.	200.	260.	340.	400.
cpm/6 ft^3	<20	<20	<20	<20	20	24.
% I-131	20.	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.	80.
Elevation 332						
cpm/100 ft^3	140	180	260	320	400	600.
cpm/6 ft^3	<20	<20	<20	<20	24.	40.
% I-131	20.	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 321, 332, and 350 Ft (Cont)

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Elevation 350						
cpm/100 ft^3	120.	160	200	240	280	380
cpm/6 ft^3	72.	<20	<20	<20	20.	22.
% I-131	10.	20.	20.	20.	20.	20.
% I-133	70.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Turbine Enclosure El. 321, 332, and 350 Ft (Cont)

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)					
1_F	8.	15.	25.	7.P3	2.6P4
2_F	1.7	3.5	5.	1.7P3	6.P3
3_F	1.	2.	2.	600.	2.P3
4_F	1.	2.	2.	170.	600.
1_N	2.	4.	12.	700.	3.P3
2_N	1.	2.	6.	350.	1.5P3
General-Elevation 321	1.	1.	2.	2.	2.
-Elevation 332	1.	2.	2.	3.	4.
-Elevation 350	1.	1.	2.	2.	3.
ARM -58	4.	7.	10.	3.5P3	1.2P4

Contamination Survey (dpm/100 cm^2)

General-Elevation 321	1.7P3	3.P3	4.P3	6.P3	7.P3
-Elevation 332	2.5P3	4.P3	7.P3	9.P3	1.P4
-Elevation 350	2.5P3	3.P3	4.P3	6.P3	6.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

General-Elevation 321					
cpm/100 ft^3	800.	1.2P3	1.4P3	2.P3	3.4P3
cpm/6 ft^3	50.	70.	80.	120	200.
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.
Elevation 332					
cpm/100 ft^3	1.2P3	1.4P3	2.8P3	3.2P3	4.P3
cpm/6 ft^3	72.	84.	170.	190.	240.
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.
Elevation 350					
cpm/100 ft^3	700.	900.	1.6P3	1.8P3	2000.
cpm/6 ft^3	44.	56.	100	110	120.
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 162 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_T	0.5	0.5	1.	2.	3.	5.
	2_T	0.5	0.5	1.	1.	1.	1.5
	3_T	0.5	0.5	0.5.	1.	1.	1.
All Other Areas		0.2	0.3	0.4	0.8	0.8	0.8
ARM	-41	0.2	0.3	0.4	0.6	0.8	0.8
	-42	0.2	0.3	0.4	0.6	0.8	0.8
Contamination Survey (dpm/100 cm^2)							
	General	300.	600.	1.P3	1.5P3	2.2P3	3.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

General-cpm/100 ft^3	400.	5.4P2	800.	1.4P3	2.6P3	5.P3
cpm/6 ft^3	24.	32.	50.	80.	160	300
% I-131	10.	10.	15.	20.	20.	20.
% I-133	50.	60.	70.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 162 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_T	10.	20.	40.	60.	110.
	2_T	3.	7.	13.	20.	35.
	3_T	1.	2.	4.	7.	10.
All Other Areas		0.8	C.8	2.5	5.	8.
ARM	-41	0.8	0.8	2.5	5.	8.
	-42	0.8	0.8	2.5	5.	8.
Contamination Survey (dpm/100 cm^2)						
General		4.P3	6.P3	9.P3	1.4P4	2.P4

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level					
Ceneral-cpm/100 ft^3	1.P4	1.6P4	1.6P4	1.6P4	1.6P4
cpm/6 ft^3	6.P2	1.P3	1.P3	1.P3	1.P3
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 191 Ft (Cont)

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
	1_L	1.	1.	2.	5.	10.	10.
	2_L	0.5	0.5	0.5	1.5	3.	3.
	3_L	0.5	0.5	0.5.	1.	1.	1.
All Other Areas		0.5	0.5	0.5	1.	1.	1.
ARM	-43	0.5	0.5	0.5	1.	1.	1.
	-46	0.5	0.5	0.5	1.	1.	1.
	-47	0.5	0.5	0.5	1.	1.	1.
Contamination Survey (dpm/100 cm^2)							
	General	400.	700.	900.	1.P3	1.2P3	1.5P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

General-cpm/100 ft^3	340	400	500	540	800	1.2P3
cpm/6 ft^3	20.	24.	30.	32.	50.	70.
% I-131	20.	20.	20.	20.	20.	20.
% I-133	40.	50.	60.	70.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 191 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
	1_L	15.	15.	15.	20.	20.
	2_L	5.	5.	5.	7.	7.
	3_L	1.5	1.5	1.5	2.	2.
All Other Areas		1.	1.	1.	1.	2.
ARM	-43	1.	1.	1.	1.	2.
	-46	1.	1.	1.	1.	2.
	-47	1.	1.	1.	1.	2.
Contamination Survey (dpm/100 cm^2)						
General		2.P3	3.P3	4.P3	5.P3	7.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Airborne Radioactivity Level					
General-cpm/100 ft^3	1.5P3	2.P3	2.6P3	3.P3	3.6P3
cpm/6 ft^3	80.	120.	160.	180.	2.2P2
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 217 Ft

		1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)							
All Areas		0.2	0.2	0.4	0.5	0.5	0.8
ARM	-51	0.2	0.2	0.4	0.5	0.5	0.8
Contamination Survey (dpm/100 cm²)							
- - - - - - -Inside- - - - - - -		100.	200.	250.	300.	350.	600.
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '		300.	400.	500.	600.	700.	1.2P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm².

Airborne Radioactivity Level

- - - - - - -Inside- - - - - - -	cpm/100 ft³	80.	120.	160.	220.	280.	360.
	cpm/6 ft³	<20	<20	<20	<20	<20	22.
	% I-131	10.	20.	20.	20.	20.	20.
	% I-133	70.	80.	80.	80.	80.	80.
' ' ' ' ' ' 'Inside' ' ' ' ' ' '	cpm/100 ft³	120	180	2.8P2	400.	5.P2	6.P2
	cpm/6 ft³	<20	<20	<20	24.	30.	40.
	% I-131	20.	20.	15.	20.	20.	20.
	% I-133	30.	50.	75.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 217 Ft (Cont)

		1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
Ambient Radiation Level (mR/hr)						
All Areas		1.	1.	1.	1.	1.
ARM	-51	1.	1.	1.	1.	1.

Contamination Survey (dpm/100 cm^2)

- - - - - - - -Inside- - - - - - - -	800.	800.	800.	800.	800.
' ' ' ' ' ' ' 'Inside' ' ' ' ' ' ' '	1.5P3	2.P3	2.5P3	3.P3	4.P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level

- - - - - -	cpm/100 ft^3	500.	700.	800.	900.	1.P3
-Inside-	cpm/6 ft^3	30.	42.	48.	54.	60.
- - - - - -	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.
' ' ' ' ' ' '	cpm/100 ft^3	800.	1.P3	1.4P2	1.6P3	2.P3
'Inside'	cpm/6 ft^3	50.	60.	80.	100.	120.
' ' ' ' ' ' '	% I-131	20.	20.	20.	20.	20.
	% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 237 and 257 Ft

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Ambient Radiation Level (mR/hr)						
^{1}D	0.1	0.1	0.2	0.3	0.5	0.5
^{2}D	0.1	0.1	0.1	0.3	0.5	0.5
^{1}W	0.2	0.2	0.4	0.6	1.0	1.0
^{2}W	0.2	0.2	0.4	0.6	1.0	1.0
General-Elevation 237	0.2	0.2	0.4	0.6	1.0	1.0
-Elevation 257	0.1	0.1	0.2	0.3	0.5	0.5
ARM -55	0.1	0.1	0.2	0.3	0.5	0.5
Contamination Survey (dpm/100 cm^2)						
General-Elevation 237	200.	300.	400.	500.	600.	1.P3
-Elevation 257	100.	200.	300.	350.	400.	700.

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm^2.

Airborne Radioactivity Level						
General-Elevation 237						
cpm/100 ft^3	80.	100.	120	180.	360.	300.
cpm/ó ft^3	<20	<20	<20	<20	<20	<20
% I-131	20.	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 237 and 257 Ft (Cont)

	1100/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730
Elevation 257						
cpm/100 ft^3	60.	80.	100.	140.	180.	200.
cpm/6 ft^3	<20	<20	<20	<20	<20	<20
% I-131	20.	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY RESPONSE EXERCISE
LIMERICK GENERATING STATION
Radwaste Enclosure El. 237 and 257 Ft (Cont)

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145	
Ambient Radiation Level (mR/hr)						
	1_D	0.7	0.8	0.8	0.8	1.0
	2_D	0.7	0.8	0.8	0.8	1.0
	1_W	1.4	1.5	1.5	1.5	1.5
	2_W	1.4	1.5	1.5	1.5	1.5
General-Elevation 237	1.4	1.5	1.5	1.5	1.5	
-Elevation 257	0.7	0.8	0.8	0.8	1.0	
ARM	-55	0.7	0.8	0.8	0.8	1.0

Contamination Survey (dpm/100 cm²)

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
General-Elevation 237	1.2P3	1.5P3	1.6P3	1.7P3	2.P3
-Elevation 257	800.	1.P3	1.P3	1.1P3	1.1P3

NOTE: Survey meter readings of swipes in cpm are 1/10 of contamination values in dpm/100 cm².

Airborne Radioactivity Level

	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
General-Elevation 237					
cpm/100 ft³	400.	500.	600.	700.	700.
cpm/6 ft³	24.	30.	36.	44.	46.
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.
Elevation 257					
cpm/100 ft³	260.	320.	360.	400.	500.
cpm/6 ft³	<20	20.	22.	24.	30.
% I-131	20.	20.	20.	20.	20.
% I-133	80.	80.	80.	80.	80.

NRC/FEMA OBSERVED EMERGENCY REPONSE EXERCISE
LIMERICK GENERATING STATION
Area Monitor Readings (mR/hr)

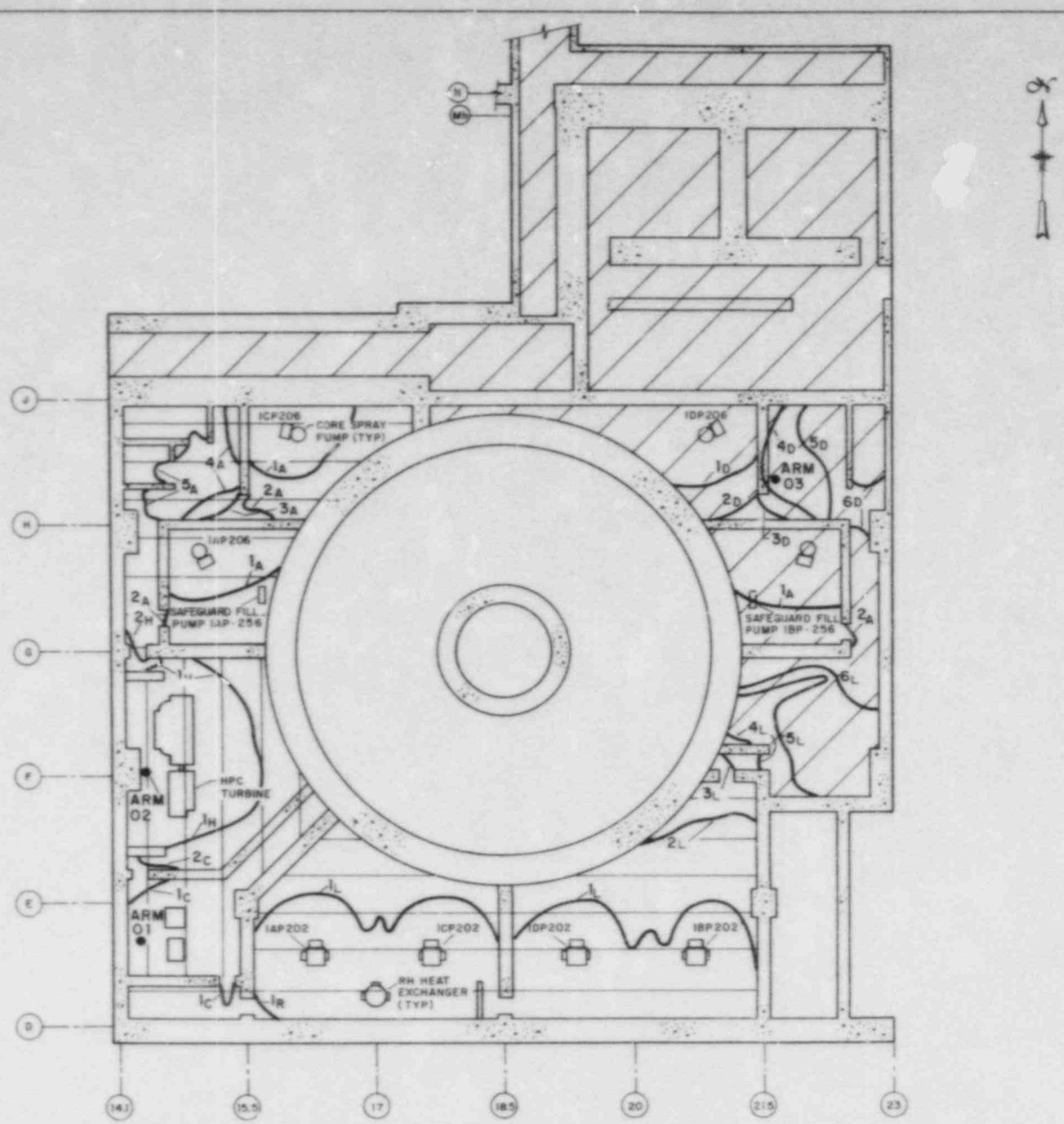
ARM No.	Location	Full Scale Reading	1200/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
RE-01	RCIC Pump Compartment	1.P4	100.	800.	1.4P3	2.5P3	4.P3	1.3P3	1.2P3	1.2P3	1.2P3	1.2P3	1.2P3
-02	HPCI Pump Compartment	1.P4	80.	300.	320.	320.	320.	320.	320.	320.	320.	320.	320.
-03	Sump Compart- ment	1.P4	1.	1.	1.	1.	2.	20.	80.	200.	300.	350.	280.
-04	CRD Pumps Area	1.P4	0.2	0.2	0.2	0.7	1.1	2.	3.	3.	3.	3.	3.
-05	Turb.Aux.Bay Hallway	1.P4	0.2	0.2	0.2	0.7	1.1	2.	3.	3.	3.	3.	3.
-06	Isolation Valve Compartment	1.P4	0.5	8.	50.	80.	120.	160.	160.	160.	160.	200.	240.
-07	Condensate Pump Compartment	1.P4	90.	35.	20.	20.	15.	15.	20.	20.	20.	20.	20.
-08	RHR Div.I Compartment	1.P4	8.	8.	25.	80.	240.	1.2P3	5.P3	5.P3	5.P3	5.P3	5.P3
-09	RHR Div.II Compartment	1.P4	8.	8.	25.	80.	240.	1.2P3	5.P3	5.P3	5.P3	5.P3	5.P3
-10	Steam Vent Area Stairwell	1.P4	0.5	0.5	2.	8.	15.	20.	20.	20.	20.	20.	20.
-12	Hallway,Cond.Filt. Demin.	1.P4	0.7	0.7	1.	1.	1.	1.5	1.5	1.5	2.	2.	2.
-13	Condensate Area	1.P6	50.	20.	7.	7.	7.	7.	7.	7.	7.	7.	7.
-15	CRD HCU Area East	1.P4	0.5	0.5	0.5	1.	4.	3.	3.	2.	2.	2.	2.
-16	CRD HCU Area West	1.P4	0.5	0.5	0.5	1.	4.	3.	3.	2.	2.	2.	2.
-17	Neutron Mon. System Area	1.P4	0.5	0.5	0.5	1.	4.	3.	3.	2.	2.	2.	2.
-18	Neutron Mon. Drive Mech.	1.P4	0.5	0.8	4.	8.	10.	15.	20.	20.	20.	20.	20.

NRC/FEMA OBSERVED EMERGENCY REPONSE EXERCISE
LIMERICK GENERATING STATION
Area Monitor Readings (mR/hr) (Cont)

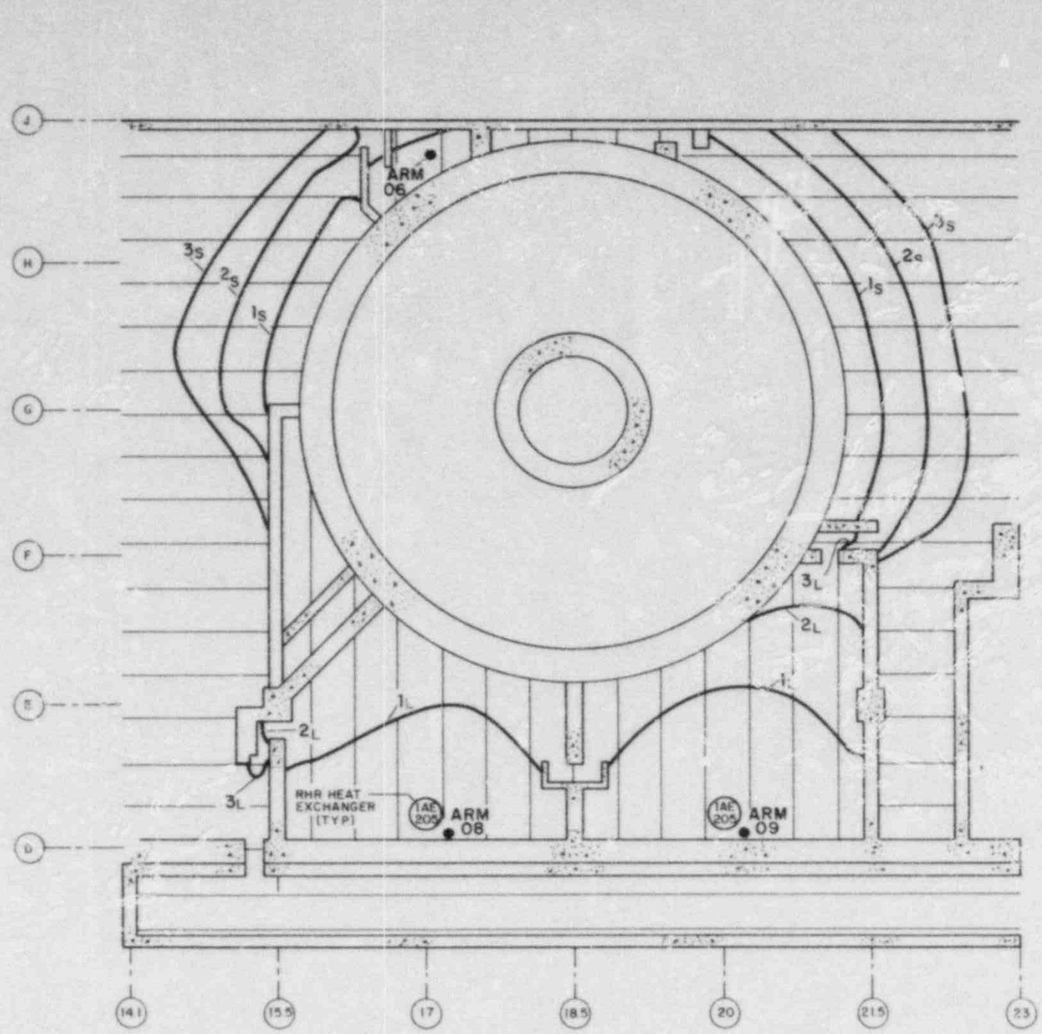
ARM No.	Location	Full Scale Reading	1200/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
RE-19	Turb.Aux.Bay Hallway East	1.P6	100.	40.	20.	20.	15.	15.	15.	15.	15.	15.	15.
-20	Turb.Aux.Bay Hallway West	1.P6	100	40.	20.	20.	15.	15.	15.	15.	15.	15.	15.
-21	RWCU Heat Exchanger Area	1.P4	0.5	1.	1.	2.	3.	7.	7.	6.	5.	5.	5.
-22	RWCU Pump Area	1.P4	0.5	1.	1.	2.	3.	7.	7.	6.	5.	5.	5.
-23	SLC System Area	1.P4	0.5	1.	1.	2.	3.	7.	7.	6.	5.	5.	5.
-24	RWCU Instr. Rack Area	1.P4	1.	1.	1.	2.	4.	9.	70.	100.	500.	>1.P4	>1.P4
-25	Turb. Aux. Bay	1.P4	0.5	0.5	0.5	0.5	1.	1.	1.	1.	1.	1.	1.
-27	RWCU Filter Area	1.P4	1.	1.	1.	1.	1.5	30.	25.	35.	150.	>1.P4	>1.P4
-28	Eq.Comp. Ex. Filter Area	1.P4	0.5	0.5	1.	1.	2.	2.	2.	2.	2.	2.	2.
-34	H_2/O_2 Analyzer Area	1.P4	0.2	0.2	0.2	0.7	1.1	2.	3.	3.	3.	3.	3.
-36	OSC Area	1.P4	0.5	0.5	0.5	0.5	1.	1.	1.	1.	1.	1.	1.
-41	Sludge Disch. Mixing Pump Room	1.P4	0.2	0.3	0.4	0.6	0.8	0.8	0.8	0.8	2.5	5.	8.
-42	Radwaste Enclosure Hallway	1.P4	0.2	0.3	0.4	0.6	0.8	0.8	0.8	0.8	2.5	5.	8.
-43	Conc. Storage Disch Pump Room	1.P4	0.5	0.5	0.5	1.	1.	1.	1.	1.	1.	1.	2.
-46	Fuel Pool Holding Pump Room	1.P4	0.5	0.5	0.5	1.	1.	1.	1.	1.	1.	1.	2.
-47	Precoat Tank and Pump Room	1.P4	0.5	0.5	0.5	1.	1.	1.	1.	1.	1.	1.	2.
-51	Radwaste Enclosure Hallway	1.P4	0.2	0.2	0.4	0.5	0.5	0.8	1.	1.	1.	1.	1.

NRC/FEMA OBSERVED EMERGENCY REPONSE EXERCISE
LIMERICK GENERATING STATION
Area Monitor Readings (mR/hr) (Cont)

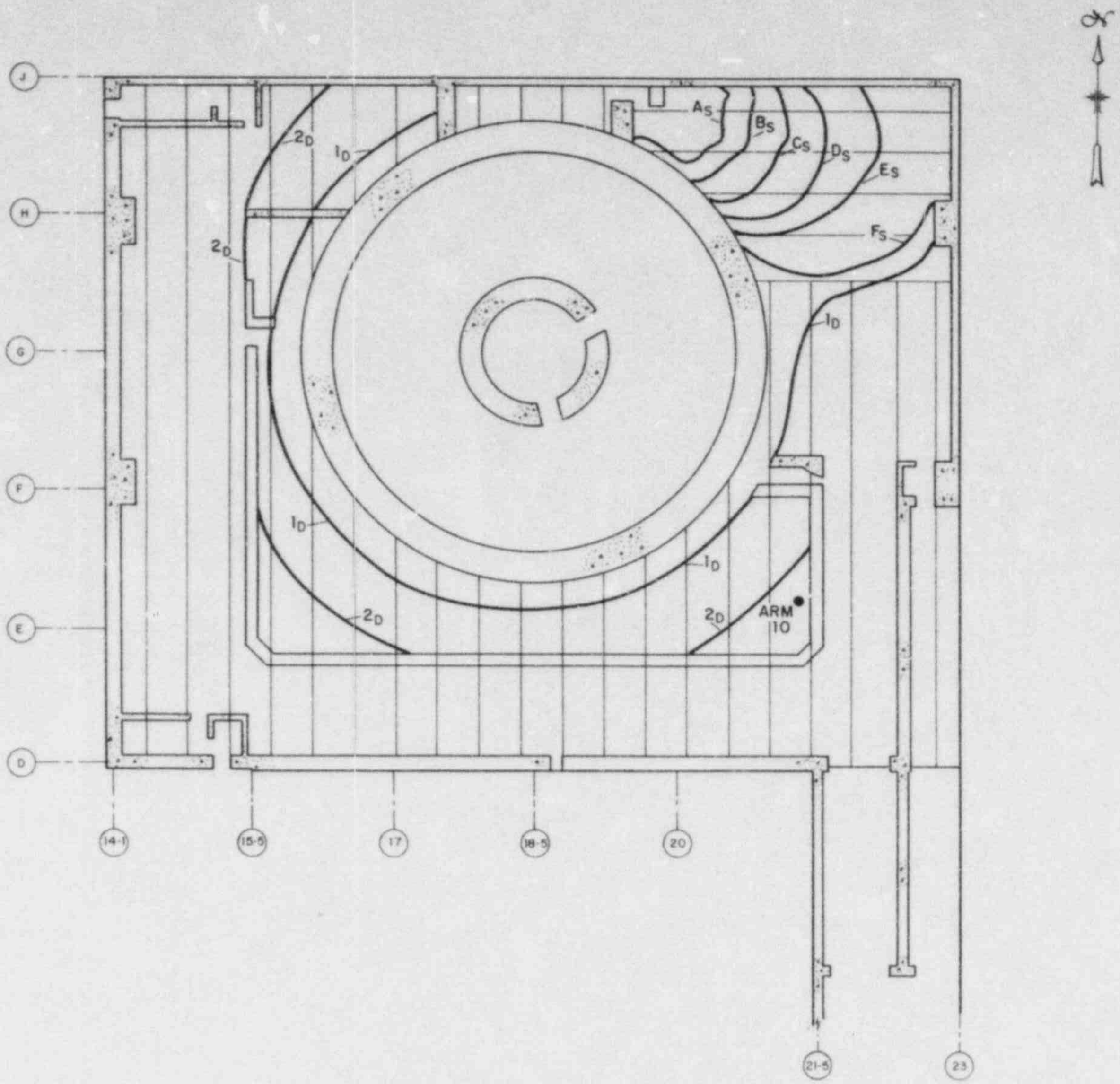
ARM No.	Location	Full Scale Reading	1200/1400	1400/1500	1500/1600	1600/1630	1630/1715	1715/1730	1730/1800	1800/1900	1900/1930	1930/2045	2045/2145
ARM-55	Radwaste Ex. Fan Area	1.P4	0.1	0.1	0.2	0.3	0.5	0.5	0.7	0.8	0.8	0.8	1.
-56	Control Room	1.P4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
-57	Turb. Area Operating Floor	1.P4	0.5	0.5	0.5	0.5	1.	1.	1.	1.	1.	1.	1.
-58	SGTS Filter Room	1.P4	0.5	0.5	0.5	0.5	1.2	2.	4.	7.	10.	3.5P3	>1.P4
-60	North Stack Sample Room	1.P4	.5	.5	.5	.5	.5	.5	.5	.5	1.5	100.	430.



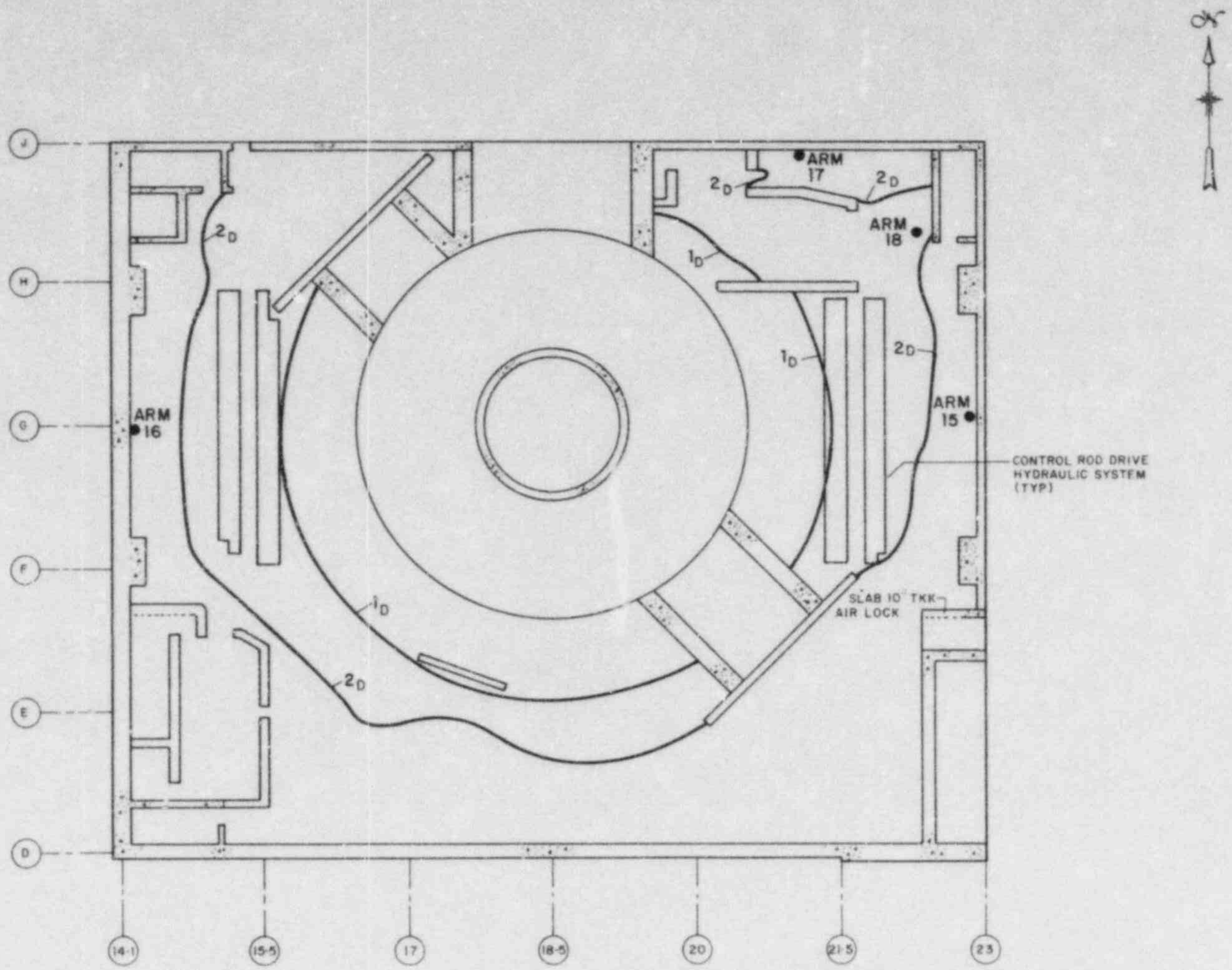
REACTOR ENCLOSURE
EL. 177'
LIMERICK GENERATING STATION



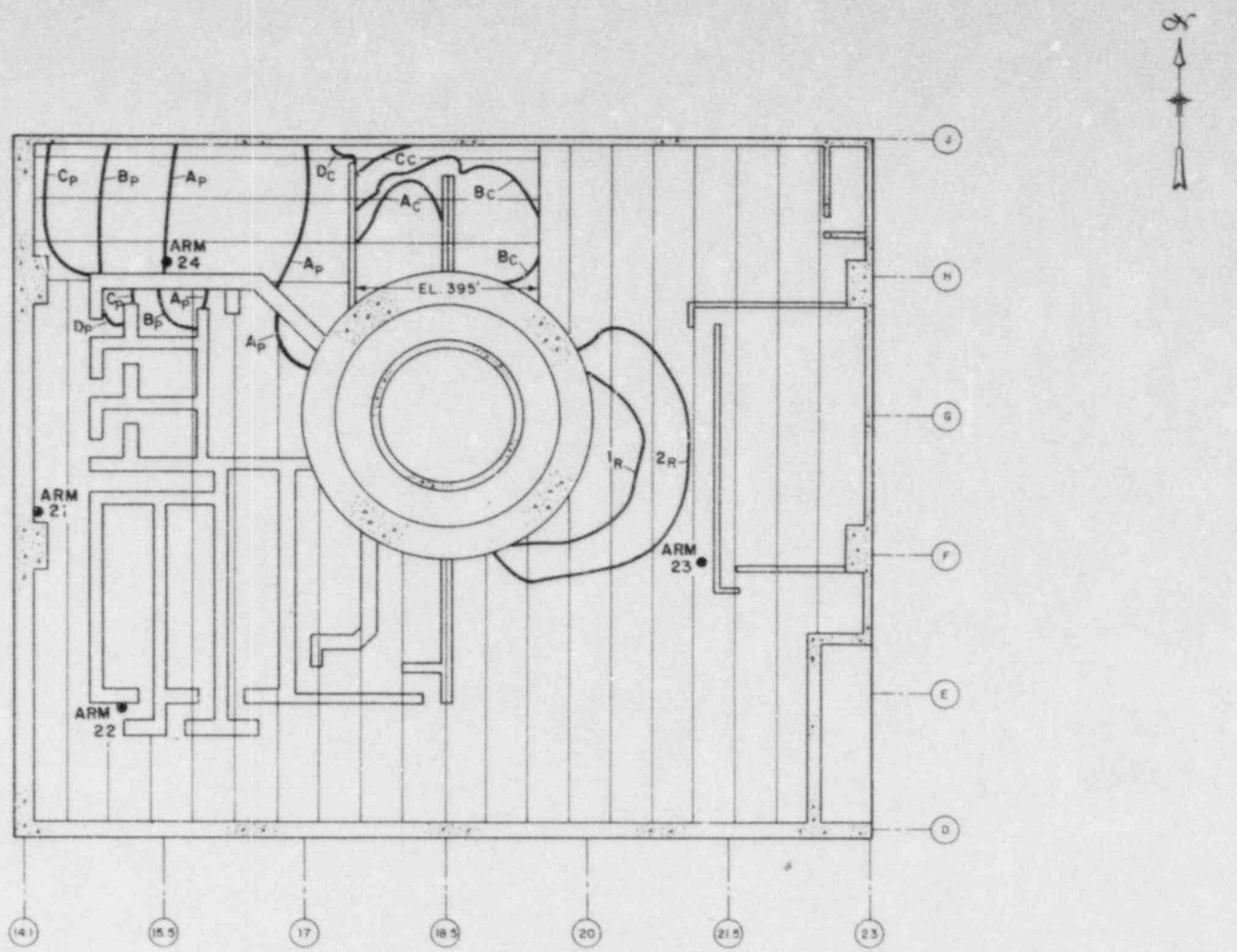
REACTOR ENCLOSURE
EL. 201'
LIMERICK GENERATING STATION



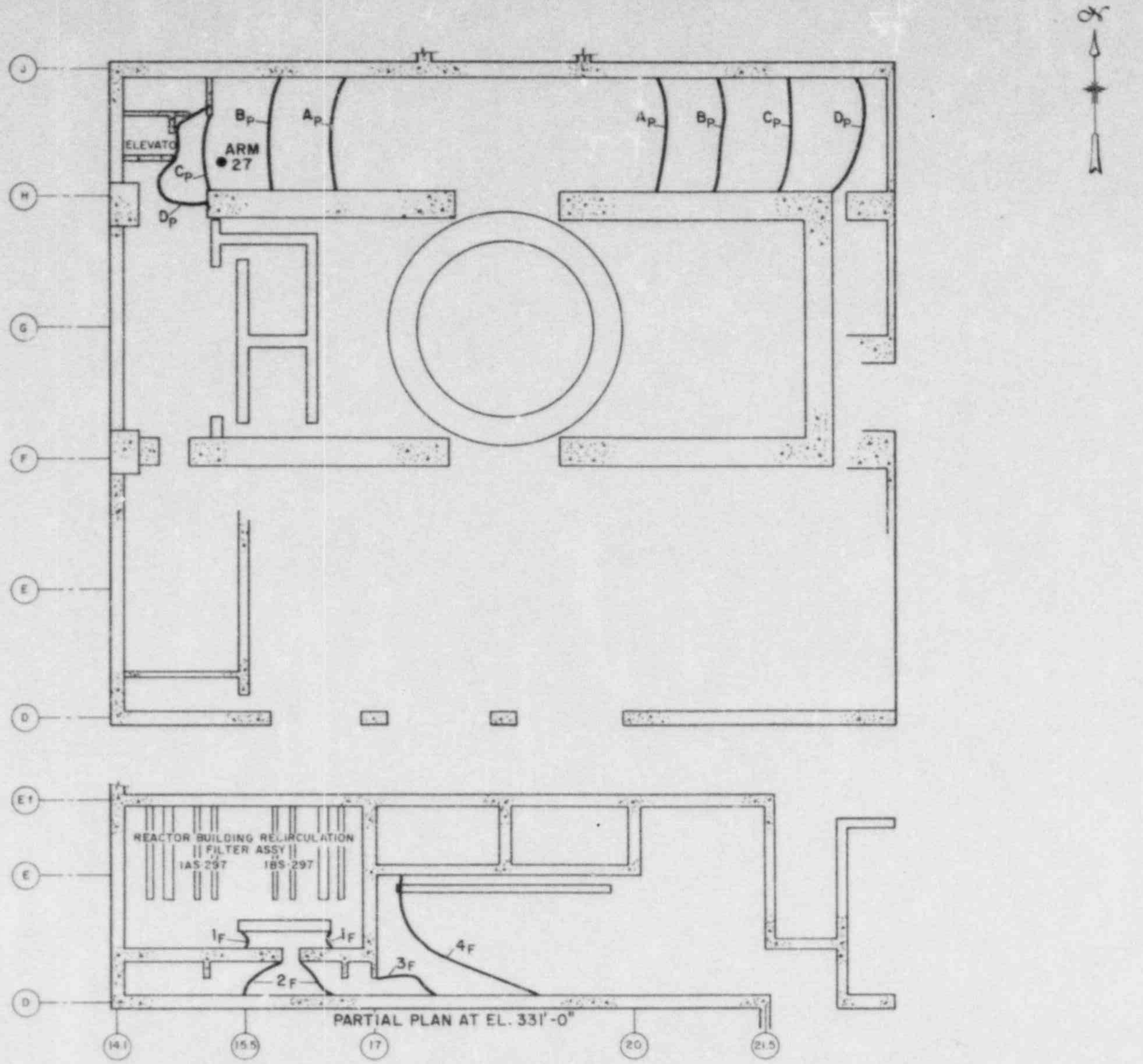
REACTOR ENCLOSURE
EL. 217'
LIMERICK GENERATING STATION



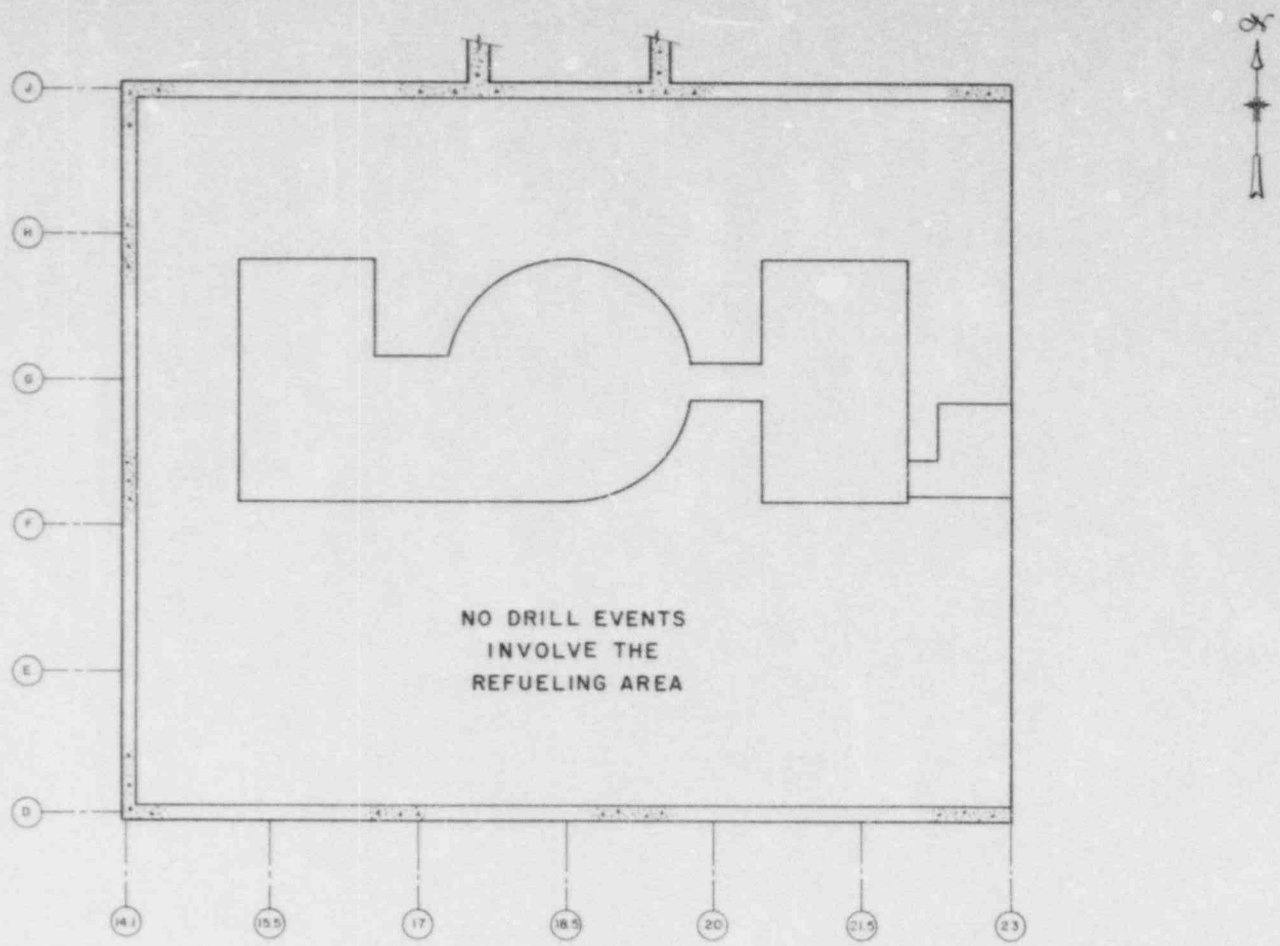
REACTOR ENCLOSURE
EL. 253'
LIMERICK GENERATING STATION



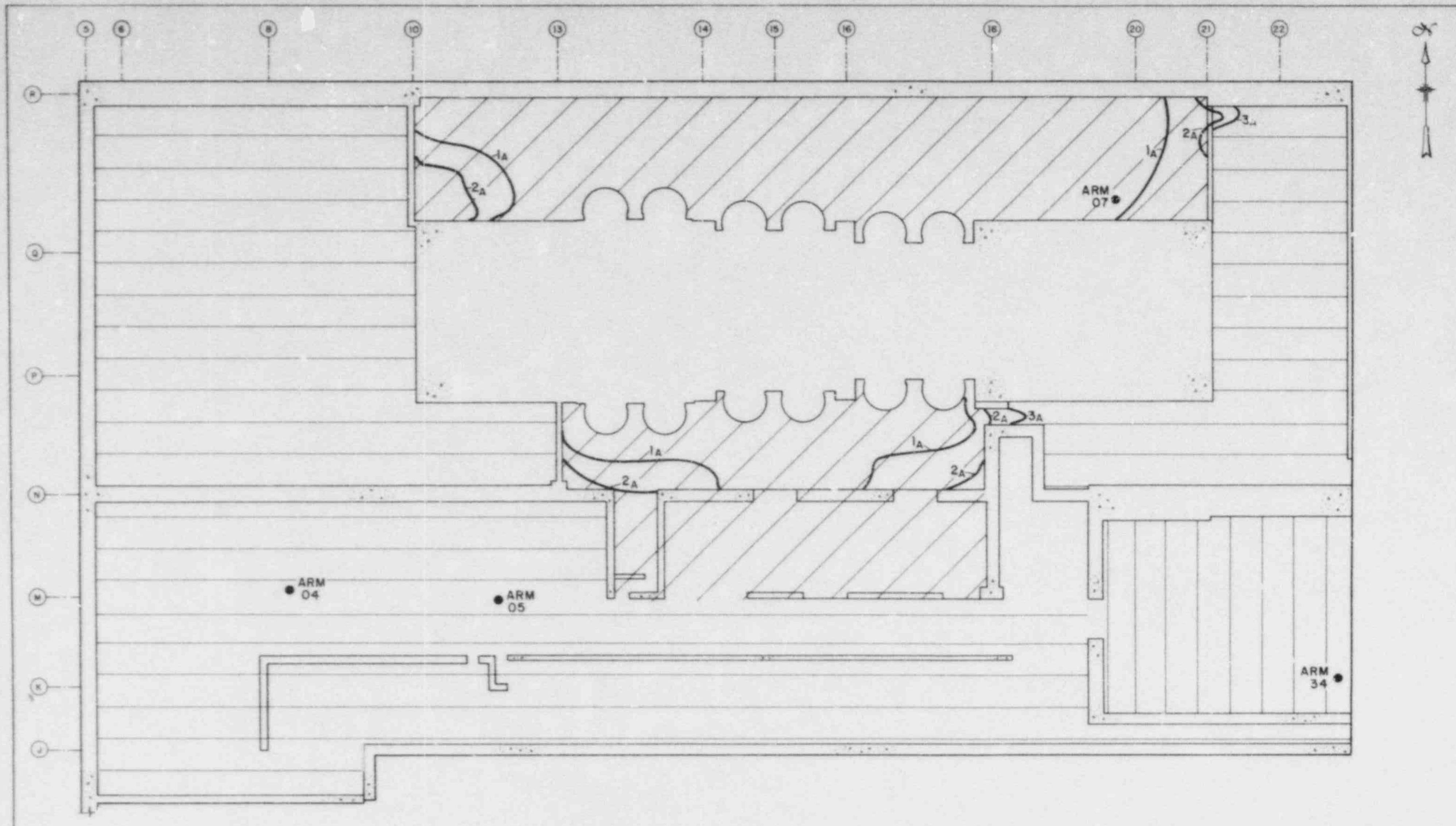
REACTOR ENCLOSURE
EL. 283'
LIMERICK GENERATING STATION



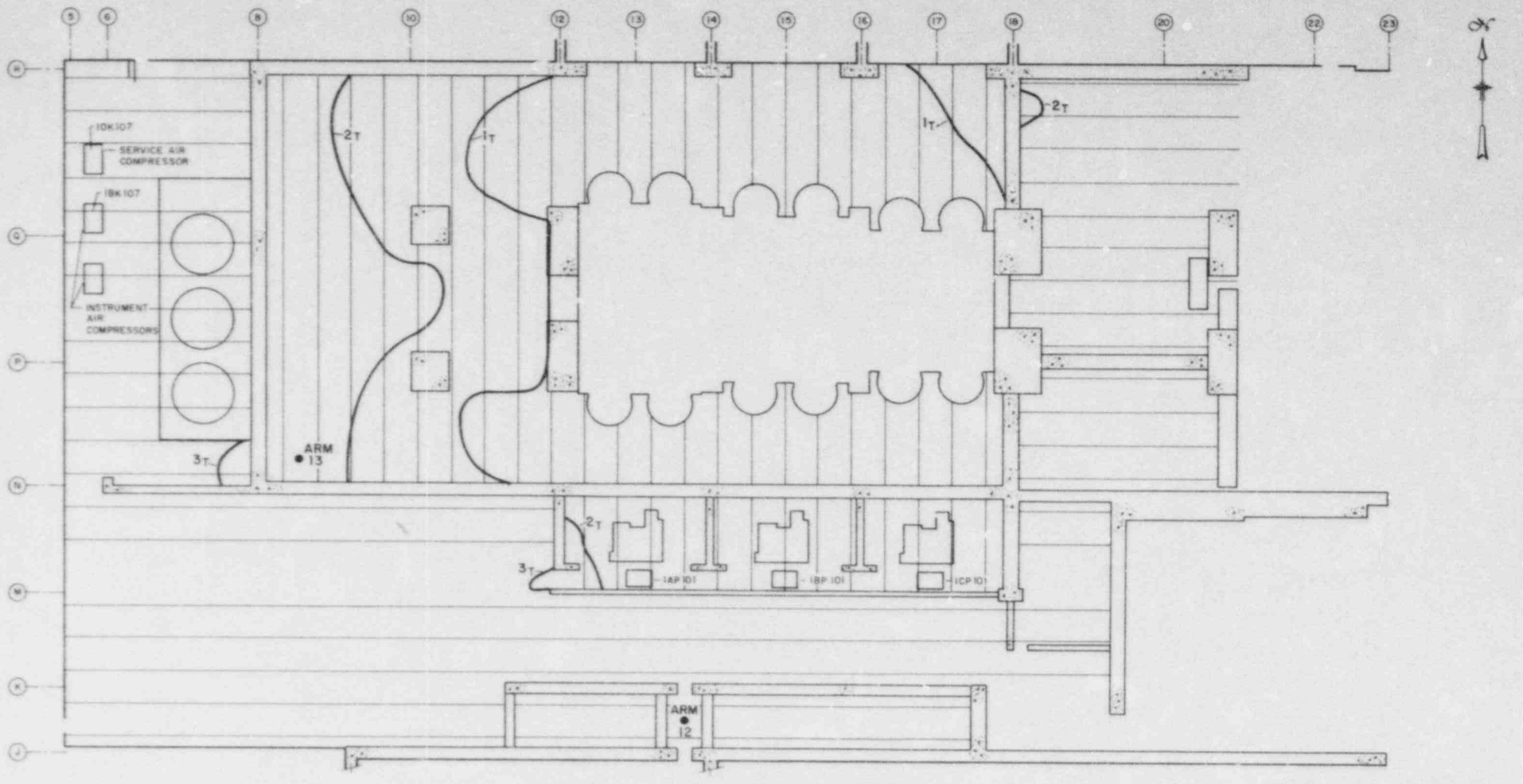
REACTOR ENCLOSURE
EL. 313'
LIMERICK GENERATING STATION



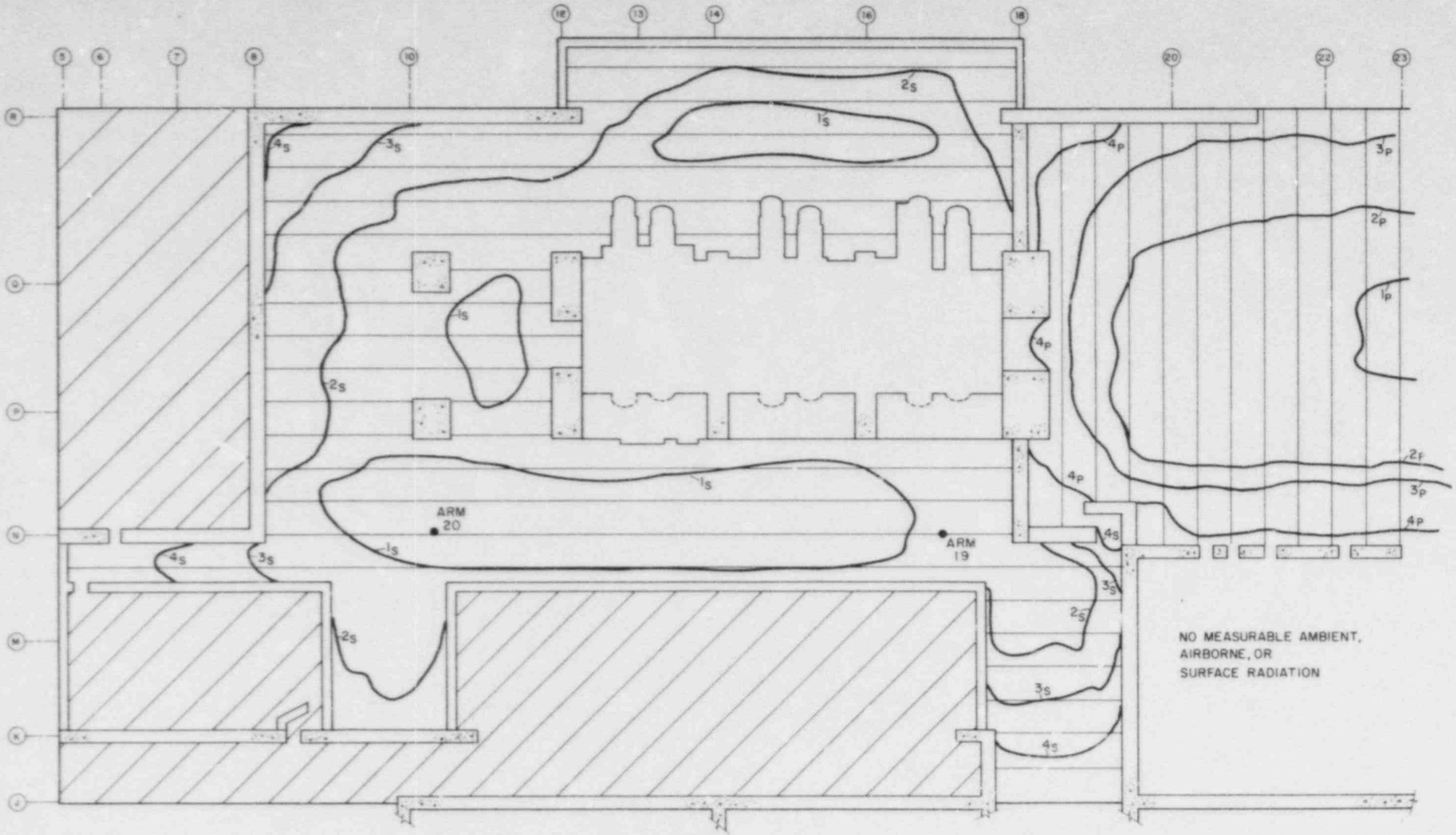
REACTOR ENCLOSURE
EL 352'
LIMERICK GENERATING STATION



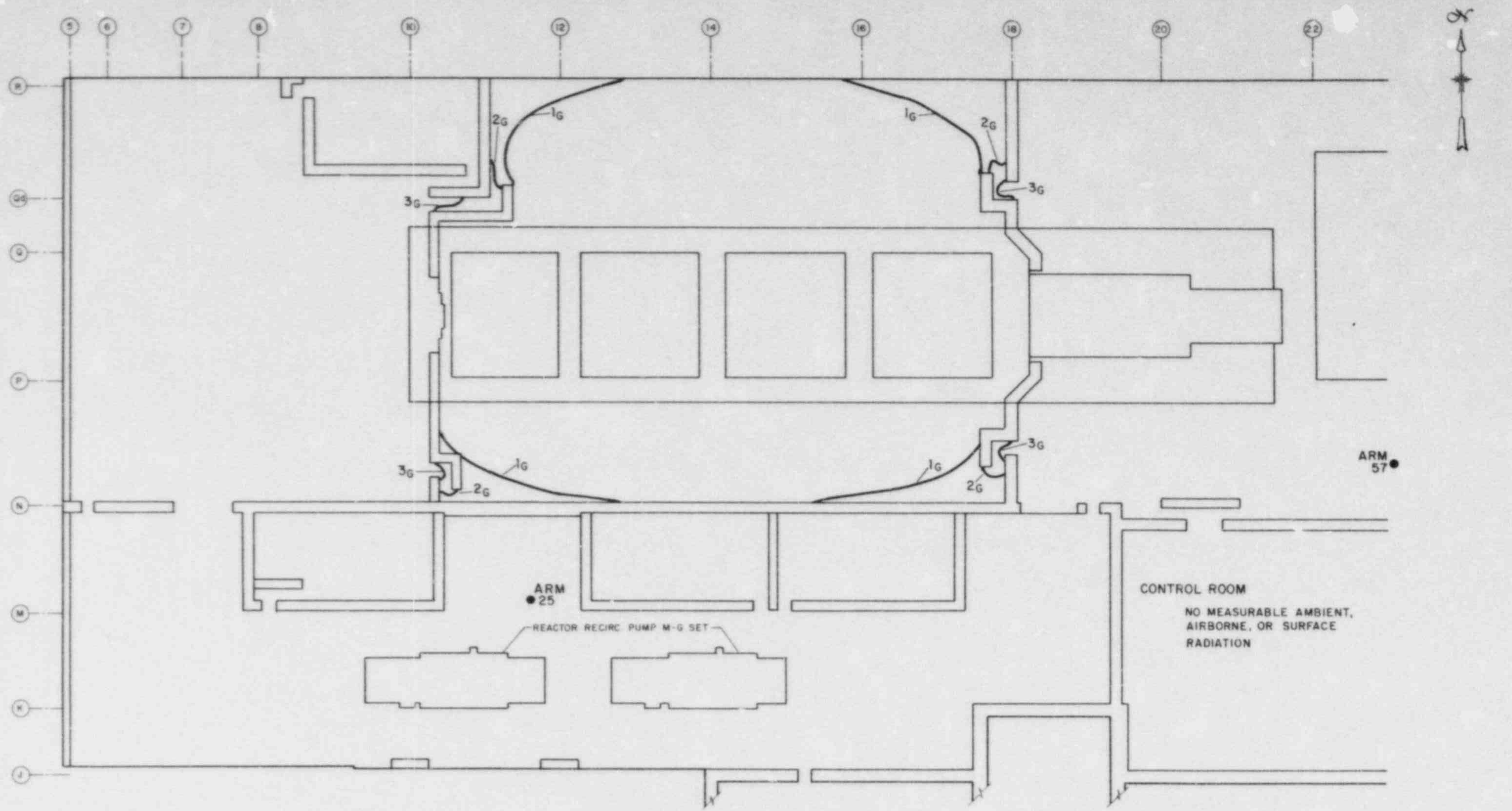
TURBINE ENCLOSURE
EL. 200'
LIMERICK GENERATING STATION



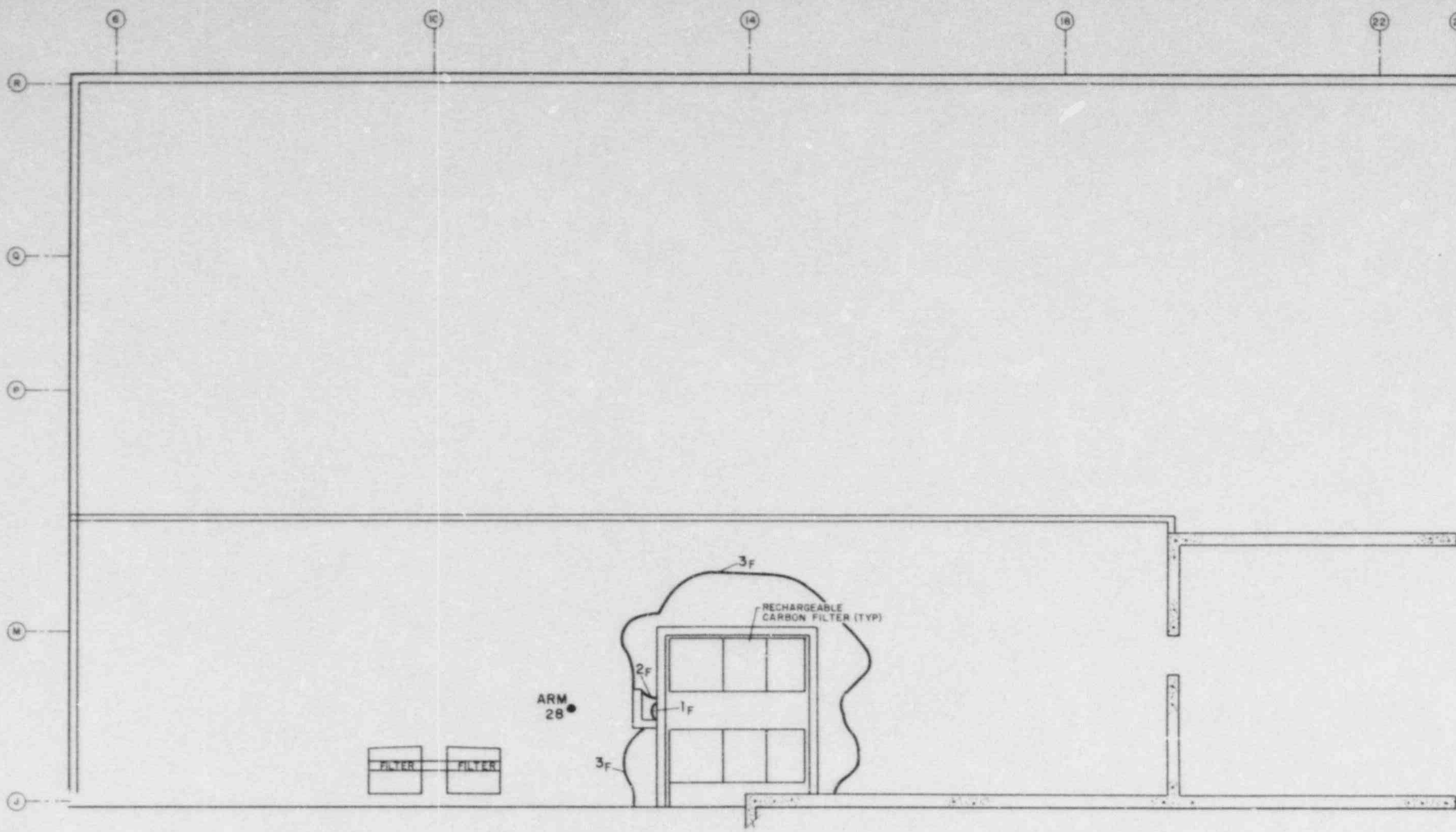
TURBINE ENCLOSURE
EL. 217'
LIMERICK GENERATING STATION



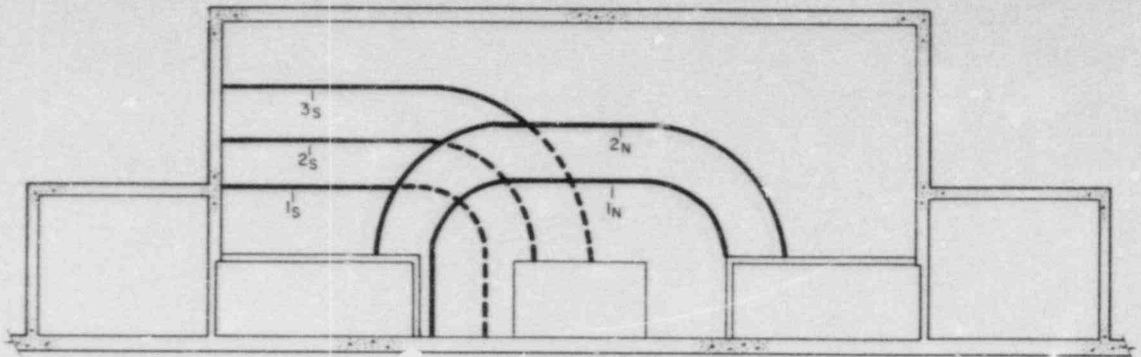
TURBINE ENCLOSURE
EL. 239'-0"
LIMERICK GENERATING STATION



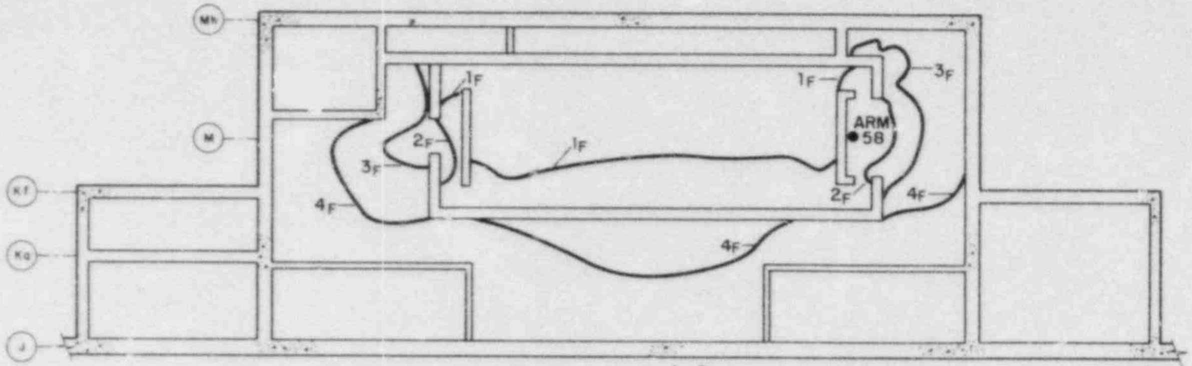
TURBINE ENCLOSURE
EL. 269'
LIMERICK GENERATING STATION



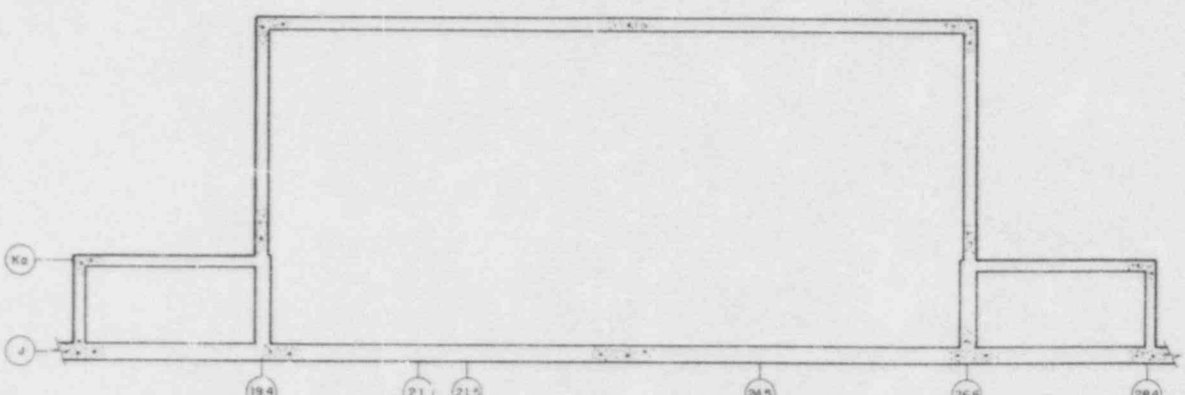
TURBINE ENCLOSURE
EL. 302'
LIMERICK GENERATING STATION



PLAN AT EL 350'-0"

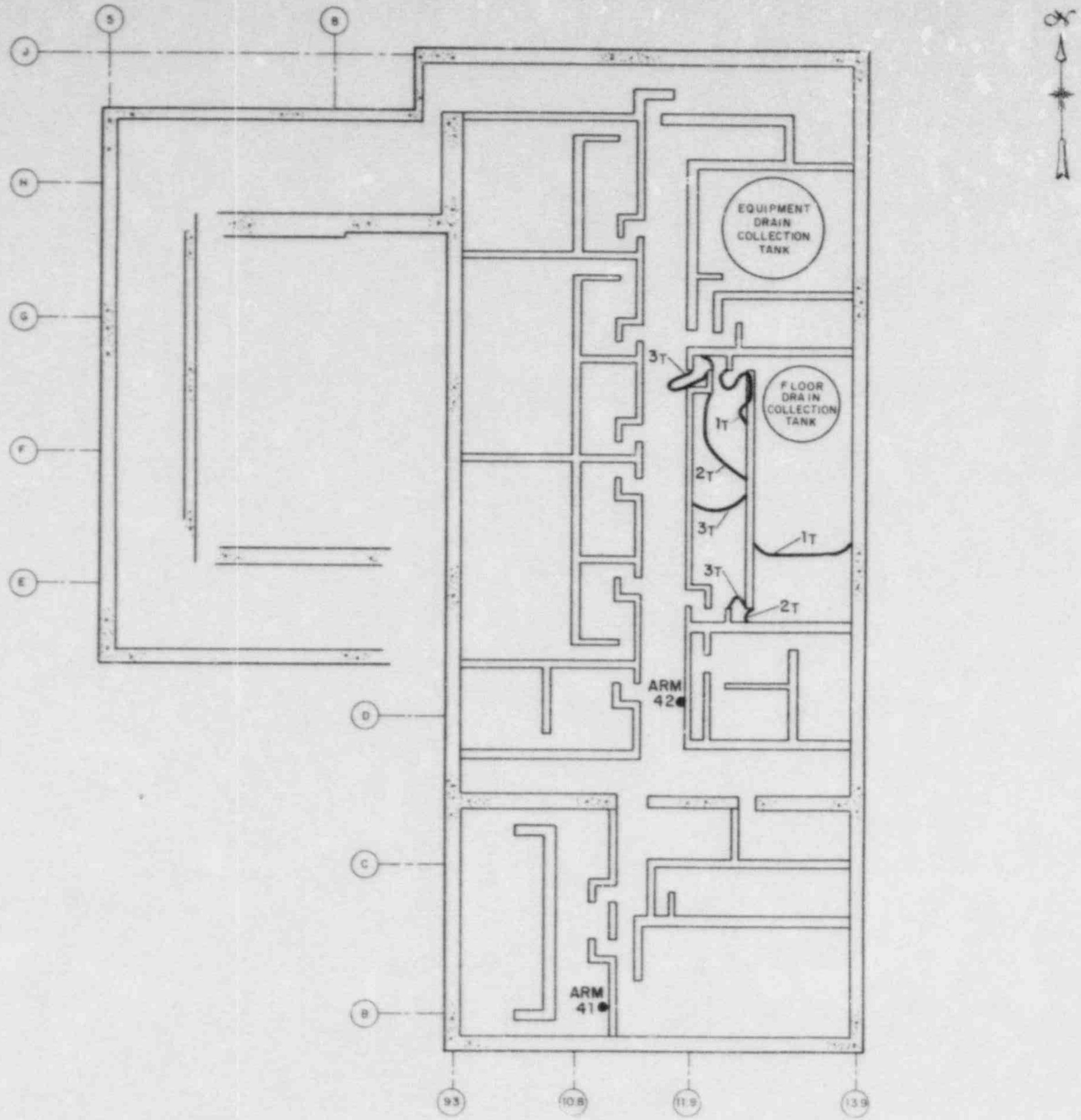


PLAN AT EL 332'-0"

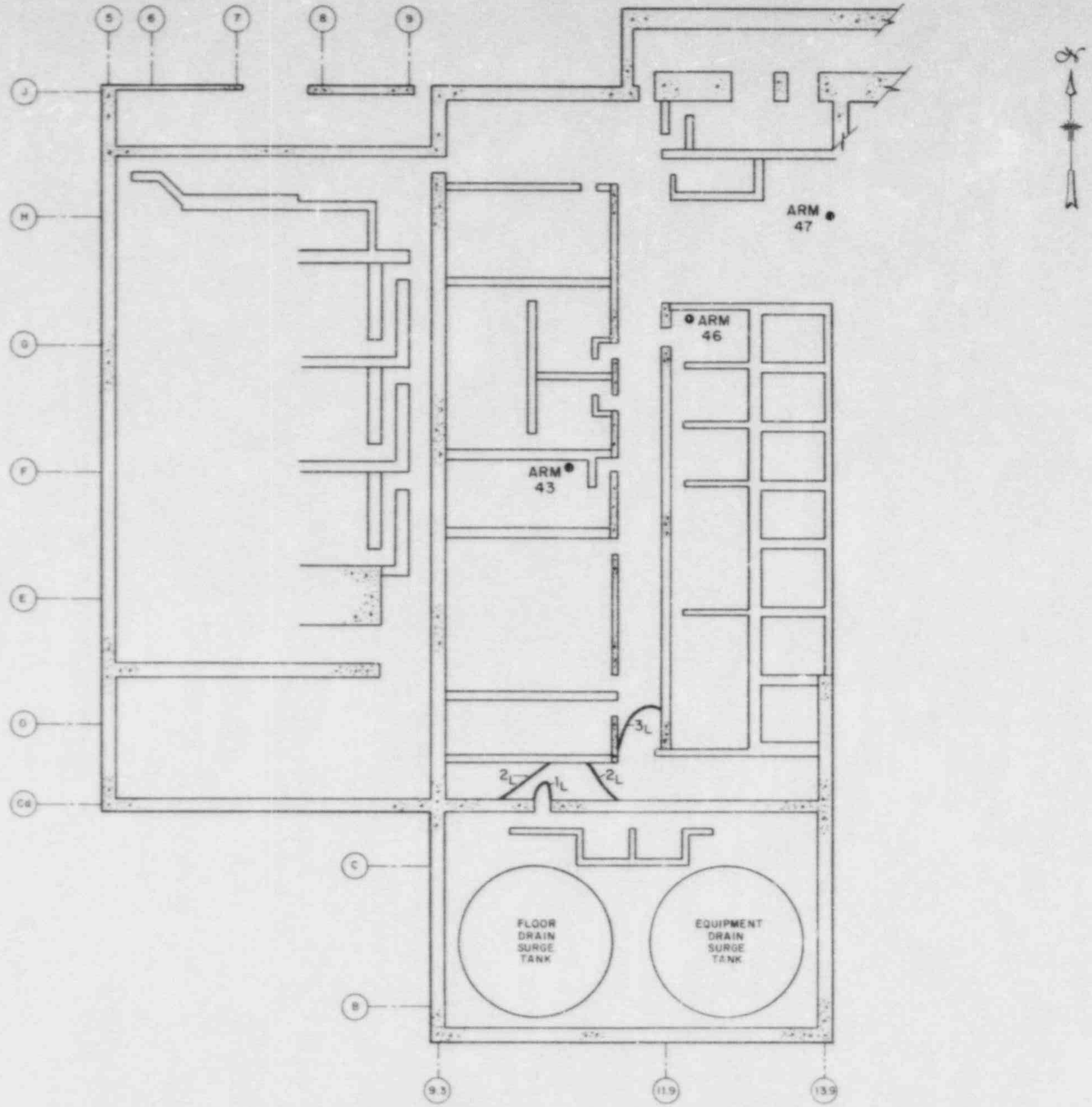


PLAN AT EL 321'-0"

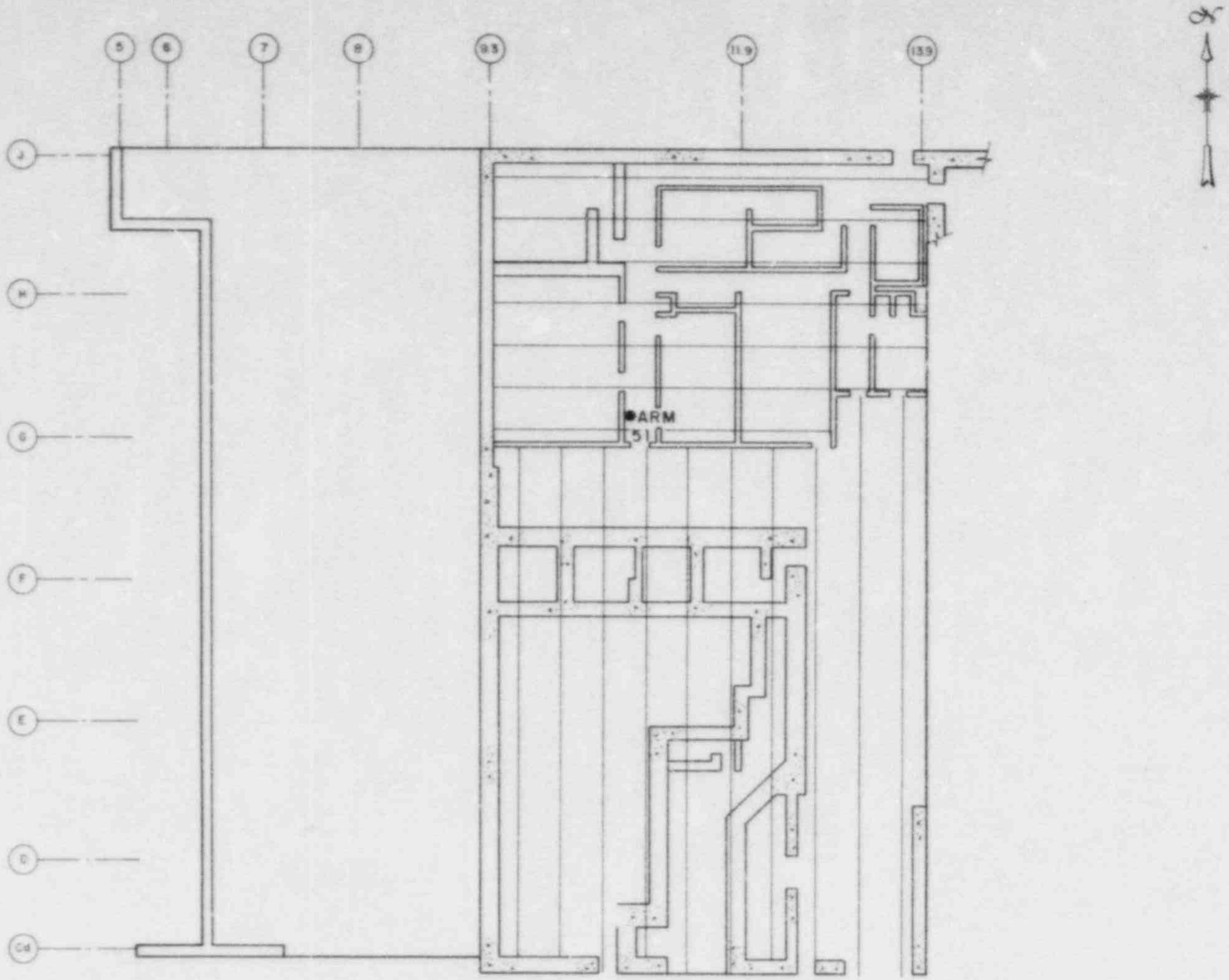
PLANS AT EL 321'-0", 332'-0" & 350'-0"
LIMERICK GENERATING STATION



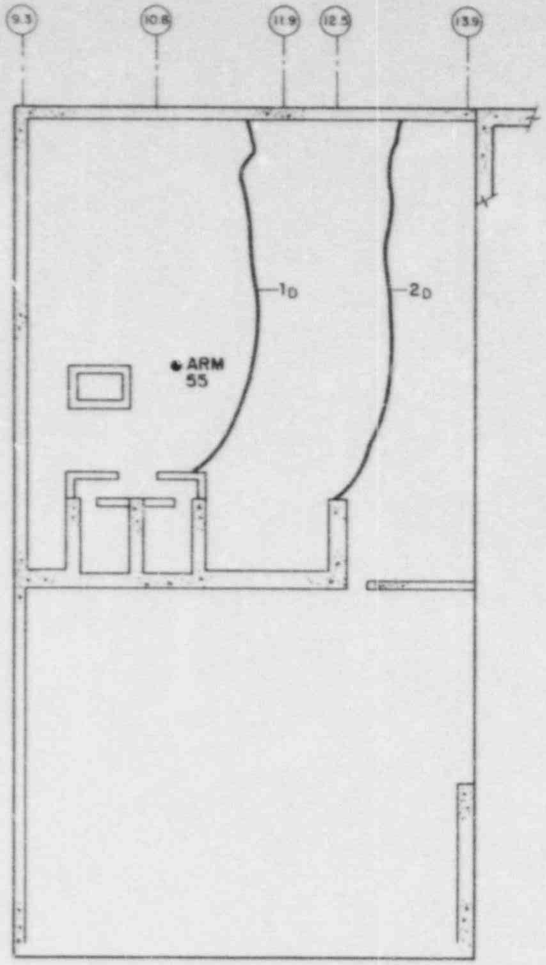
RADWASTE ENCLOSURE
PLAN AT EL. 162'-0"
LIMERICK GENERATING STATION



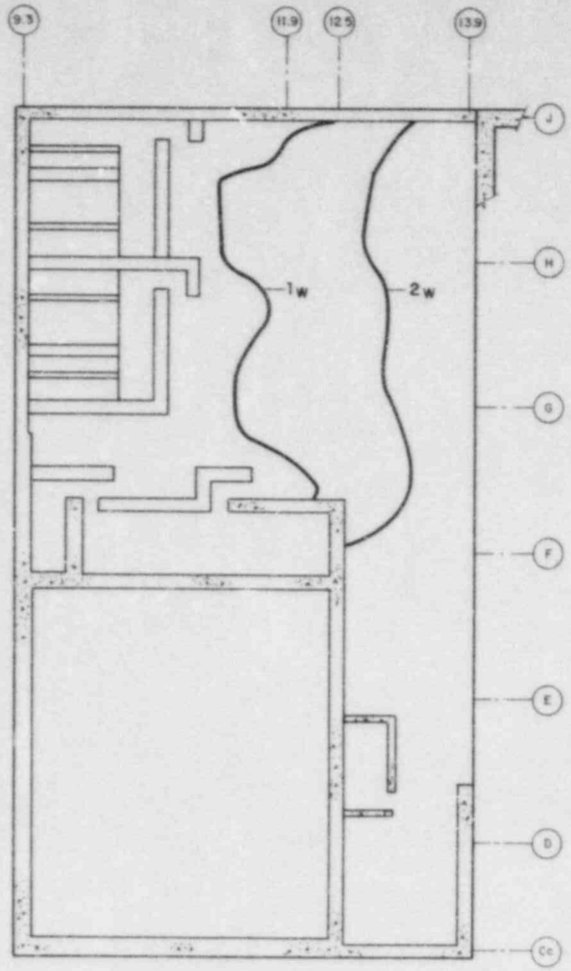
RADWASTE ENCLOSURE
EL. 191'
LIMERICK GENERATING STATION



RADWASTE ENCLOSURE
PLAN AT EL. 217'-0"
LIMERICK GENERATING STATION



PLAN AT EL. 257'-0"



PLAN AT EL. 237'-0"

RADWASTE ENCLOSURE
PLAN AT EL. 237'-0"
& EL. 257'-0"
LIMERICK GENERATING STATION

EVENT SUMMARY

Event No.	Time	Location	Description	Initiation	Page Number
1	1105	Turbine Enclosure	Fire Instrument Air Compressor	Control Room Message	3G-1
2	1430	Radwaste Enclosure	Contaminated Injury	Control Room Message	3G-4
3	1600	North Parking Lot	Construction Workers Site Evacuation	After Alert Declared	3G-17
4	1615	Reactor Enclosure	RHR Pump B Flow Decreases	Control Room Message	3G-18
5	1650	Reactor Enclosure	Search & Rescue	Control Room Message	3G-21
6	1715	Turbine Enclosure	Co_2 Storage Tank Low Press.	Control Room Message	3G-23
7	1730	Reactor Enclosure	Fire in RHR Hx Room	Control Room Message	3G-25
8	1845	Reactor Enclosure	Purge Exhaust Line Leakage	Control Room Message	3G-28
9	1900	Chemistry Lab.	High Activity Cooling Tower Sample	Chemistry Controller Message	3G-33
10	2040	Reactor Enclosure	Core Spray Pump A Trips	Control Room Message	3G-35

EVENT NO. 1

Fire at The Instrument Air Compressor (1AK101)

Approximate Time of Event:	1105
Location:	Instrument air compressor (1AK101) area in turbine enclosure el 217 ft-0 in.
Problem:	Fire has broken out at the instrument air compressor (1AK101) and is spreading. The sprinkler system in the area is inoperable and the fire threatens the nearby lube oil storage tanks.
Response:	Dispatch Fire Fighting Group members to the scene. They will determine that assistance will be necessary from Linfield/Limerick Fire Department. The fire is extinguished at 1145.
Controller Locations:	One in the area.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 1 CUE CARD NO. 1-1

FOR: FIRE FIGHTING GROUP MEMBERS TIME: 1105

LOCATION: TURBINE ENCLOSURE
217 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

Instrument air compressor 1AK101 is on fire. The sprinkler system in the area is inoperable and the fire is spreading rapidly to nearby lube oil storage tanks.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 1 | CUE CARD NO. 1-2

FOR: FIRE FIGHTING GROUP MEMBERS | TIME: 1145

LOCATION: TURBINE ENCLOSURE
217 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

FIRE IS OUT.

****

THIS IS A DRILL

****

EVENT NO. 2

Contaminated Injured Individual

Approximate Time of Event:	1430
Location:	Fuel pool holding pump 00P340 in radwaste enclosure el 191 ft-0 in, Rm 236B.
Problem:	An assistant plant operator who was dispatched for routine inspection in the radwaste enclosure is found unconscious lying in a puddle that appears to be leakage from the fuel pool holding pump (00P340). He is bleeding from a head laceration.
Response:	The Search and Rescue/First Aid group should be dispatched to the area. Remove the man's contaminated clothing, put him in clean anticontamination clothing, and escort the man out of the radwaste enclosure to the personnel decontamination room where he should be externally decontaminated and be prepared for transfer to the Pottstown Memorial Medical Center. In the medical center, he should be treated for his bleeding from the head laceration and then released to the RMC for treatment of possible internal contamination.
Controller Locations:	One initially in the radwaste enclosure and then in the ambulance going to the Hospital. One at Hospital.

FOR CONTROLLER USE ONLY

TABLE 3G-4A

CONTAMINATED OPERATOR'S VITAL SIGNS

	Right After Injury (Unconscious)	Ambulance Arrives (Conscious But Disoriented)	Leaving Ambulance Proper Care	Leaving Ambulance Improper Care	After Hospital Treatment
Pupils	Dilated & Responsive	Dilated & Responsive	Dilated & Responsive	Dilated & Responsive	Dilated & Responsive
Blood Pressure	106/76	90/60	110/78	80/60	120/80
Pulse	100	116	116	120	88
Skin	Pale, Cool & Clammy	Pale, Cool & Clammy	Pale, Cool & Clammy	Pale, Cool & Clammy	Normal, Warm & Dry
Respiration	12	16-18	16-18	18	12-25

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-1

FOR: OPERATOR INSPECTING RADWASTE ENCLOSURE TIME: 1430

LOCATION: RADWASTE ENCLOSURE
191 FT-0 IN., EL; RM 236B

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

YOU SLIP AND FALL IN A PUDDLE NEAR FUEL POOL
HOLDING PUMP (00P340). YOU GO UNCONSCIOUS.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-2

FOR: PERSON FINDING THE INJURED OPERATOR TIME: 1430

LOCATION: RADWASTE ENCLOSURE
191 FT-0 IN., EL; RM 236B

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

THE MAN IS UNCONSCIOUS LYING IN A
PUDDLE THAT COULD BE LEAKAGE FROM FUEL POOL
HOLDING PUMP (00P340). HE IS BLEEDING FROM A
HEAD LACERATION.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-3

FOR: SEARCH AND RESCUE/FIRST AID GROUP LEADER TIME: 1430+

LOCATION: RADWASTE ENCLOSURE
191 FT-0 IN., EL; RM 236B

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

THE MAN IS LYING UNCONSCIOUS WITH HIS HANDS AND FACE IN A PUDDLE THAT LOOKS LIKE LEAKAGE FROM FUEL POOL HOLDING PUMP (00P340). HE IS BLEEDING FROM A HEAD LACERATION.

GENERAL AREA RADIATION 1.0 MR/HR
INJURED EXTERNAL CONTAMINATION LEVELS UP TO 20,000 CPM (SURVEY INSTRUMENT).

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-4

FOR: SEARCH AND RESCUE/FIRST AID GROUP LEADER PERSONNEL TIME: 1430+

LOCATION: DECONTAMINATION AREA

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAMINATION LEVELS AFTER REMOVAL OF SHIRT
(SURVEY INSTRUMENT):
RIGHT ARM - FRONT FROM SHOULDER TO WRIST
2,000 CPM
RIGHT SIDE OF FACE, JAW, AND LIPS 10,000 CPM
LEFT HAND, WRIST, AND FOREARM 6,000 CPM

****

THIS IS A DRILL

****

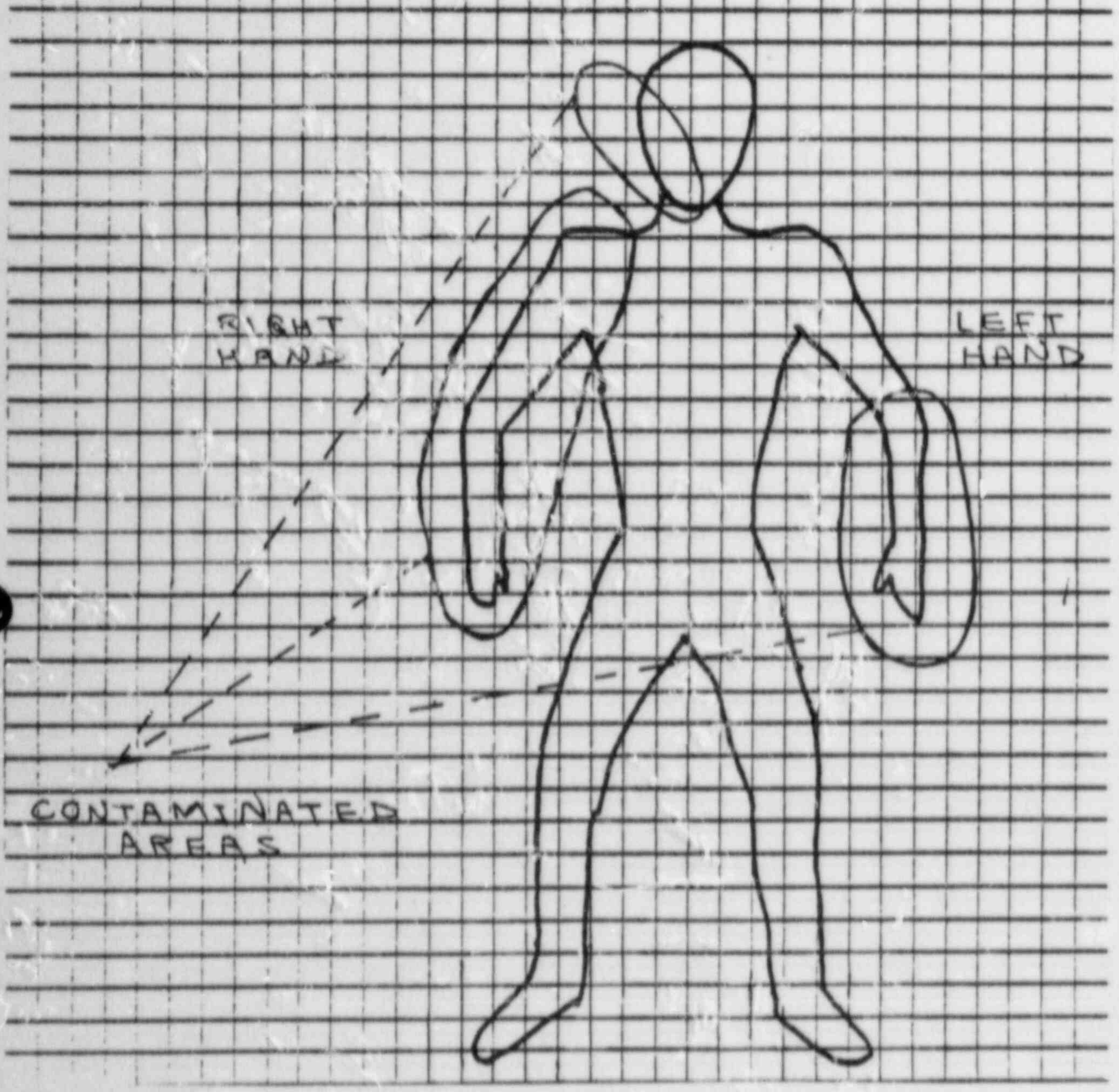


Figure 3G-2-1 Contaminated Areas of Body

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-5

FOR: SEARCH AND RESCUE/FIRST AID GROUP LEADER TIME: 1430+

LOCATION: DECOMTAMINATION AREA

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAMINATION LEVELS AFTER INITIAL CLEANING OF CONTAMINATED AREAS ARE (SURVEY INSTRUMENT):

RIGHT ARM - FRONT FROM SHOULDER TO WRIST	<100 CPM
RIGHT SIDE OF FACE, JAW, AND LIPS	3,000 CPM
LEFT HAND, WRIST, AND FOREARM	2,500 CPM

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-6

FOR: SEARCH AND RESCUE/FIRST AID GROUP LEADER TIME: 1430+

LOCATION: DECONTAMINATION AREA

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAMINATION LEVELS AFTER 2ND CLEANING OF
CONTAMINATED AREAS ARE (SURVEY INSTRUMENT):

RIGHT SIDE OF FACE, JAW, AND LIPS	<100 CPM
LEFT HAND, WRIST, AND FOREARM	1,500 CPM

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-7

FOR: SEARCH AND RESCUE/FIRST AID GROUP LEADER TIME: 1430+

LOCATION: DECONTAMINATION AREA

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAMINATION LEVELS AFTER 3RD CLEANING OF
CONTAMINATED AREAS ARE (SURVEY INSTRUMENT):
LEFT HAND, WRIST, AND FOREARM 1,000 CPM

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-8

FOR: HOSPITAL STAFF TIME: 1430+

LOCATION: POTTSTOWN MEMORIAL MEDICAL CENTER

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MAN'S CONTAMINATED TO (20,000/1,000)*CPM
ALONG WITH INJURY.

*DEPENDING ON WHETHER HE WAS DECONTAMINATED
AT LGS.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-9

FOR: LGS HEALTH PHYSICS TECHNICAN TIME: 1430+

LOCATION: AMBULANCE GOING TO POTTSTOWN
MEMORIAL MEDICAL CENTER

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAMINATION LEVELS INSIDE THE AMBULANCE ARE
LIMITED TO THE STRETCHER (400 CPM > BKGND).

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-10

FOR: LGS HEALTH PHYSICS TECHNICIAN TIME: 1430+

LOCATION: AMBULANCE GOING TO POTTSTOWN
MEMORIAL MEDICAL CENTER

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAMINATION LEVELS INSIDE THE AMBULANCE AFTER DECONTAMINATION ARE 100 CPM BKGND.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 2 CUE CARD NO. 2-11

FOR: WHOLE BODY COUNTER OPERATOR TIME: 1430+

LOCATION: WHOLE BODY COUNTER* (LGS, RMC)

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

SCAN INDICATES NEGATIVE FOR POSSIBLE INGESTION
OF RADIONUCLIDES.

*SIMULATE THE EVENT IF WHOLE BODY COUNTER IS NOT ACCESSIBLE.

****

THIS IS A DRILL

****

EVENT NO. 3

PreSelected Construction Workers Site Evacuation

Approximate Time of Event:	1600
Location:	North parking lot.
Problem:	After an "Alert" has been declared by the control room, preselected Unit 2 construction personnel should evacuate.
Response:	All preselected construction workers should report to North parking lot for personnel accountability.
Controller Locations:	One at North parking lot.

FOR CONTROLLER USE ONLY

EVENT NO. 4

RHR Pump (1BP202) Discharge Flow Drop

Approximate Time of Event:	1615
Location:	RHR discharge valve (HV-51-1F047B) in reactor enclosure el 217 ft-0 in.
Problem:	Discharge flow on RHR pump (1BP202) starts decreasing to 500 gpm. There are no apparent problem indications in the control room.
Response:	An operator is sent to investigate the problem locally. An extremely loud noise is heard at the RHR discharge valve (HV-51-1F047B). The valve has partially closed and the operator's attempts to manually open the valve are unsuccessful. Due to the noise, the operator does not hear the announcement to evacuate the reactor enclosure at 1630, nor can he clearly communicate with the control room. Finally, a Search and Rescue/First Aid Group finds him and asks him to evacuate the reactor building.
Controller Locations:	One accompanying the operator from the control room.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 4 CUE CARD NO. 4-1

FOR: CONTROL ROOM OPERATOR TIME: 1615

LOCATION: CONTROL ROOM

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

THERE ARE NO PROBLEM INDICATIONS IN THE CONTROL ROOM.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 4 CUE CARD NO. 4-2

FOR: OPERATOR INVESTIGATING RHR PUMP B TIME: 1615+

LOCATION: REACTOR ENCLOSURE
217 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

AN EXTREMELY LOUD NOISE IS HEARD AT RHR DISCHARGE VALVE HV-51-1F047B. THE VALVE HAS PARTIALLY CLOSED AND ATTEMPTS TO MANUALLY OPEN IT ARE UNSUCCESSFUL. YOU CANNOT CLEARLY COMMUNICATE WITH THE CONTROL ROOM DUE TO HIGH BACKGROUND NOISE.

****

THIS IS A DRILL

****

EVENT NO. 5

Search and Rescue/First Aid Group

Approximate Time of Event:	1650
Location:	RHR discharge valve (HV-51-1F047B) in reactor enclosure el 217 ft-0 in.
Problem:	An operator was dispatched to investigate the cause for RHR pump B discharge flow drop at 1615. Communication with the dispatched operator becomes very difficult due to extreme background noise. Due to high radiation levels, evacuation of the reactor building is ordered at 1630. The operator is still unaccounted for at 1650.
Response:	A Search and Rescue/First Aid Group is dispatched to find the operator. They find the operator and evacuate the reactor building.
Controller Locations:	One accompanying the Search Group from the OSC.

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 5 | CUE CARD NO. 5-1

FOR: SEARCH AND RESCUE/FIRST AID GROUP | TIME: 1650+

LOCATION: DECONTAMINATION AREA

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

RESULTS OF PERSONNEL CONTAMINATION SURVEY WITH INSTRUMENT ARE <100 cpm.

****

THIS IS A DRILL

****

EVENT NO. 6

Low Pressure Alarm at The CO_2 Storage Unit (00S133)

Approximate Time of Event:	1715
Location:	CO_2 Storage Unit 00S133, in turbine enclosure el 239 ft-0 in.
Problem:	A low pressure alarm from the CO_2 storage unit (00S133) is received at 1715.
Response:	A Damage Repair Group is dispatched to investigate the problem. The control room is notified that the pressure relief valve PSV-22-065 is leaking and the CO_2 portion of the Fire Protection System is inoperable due to low tank (00S133) pressure at 1730. A continuous fire watch is established for those areas in which redundant systems or components could be damaged. For other areas, establish an hourly fire watch patrol.
Controller Locations:	One in the control room. One accompanying the dispatched Damage Repair Group.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 6 CUE CARD NO. 6-1

FOR: DAMAGE REPAIR GROUP LEADER INVESTIGATING STORAGE UNIT 00S133 LOW PRESSURE ALARM

TIME: 1715+

LOCATION: TURBINE ENCLOSURE
239 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

A WHISTLING NOISE CAN BE HEARD AT PRESSURE RELIEF VALVE PSV-22-065. LOW TANK (00S133) PRESSURE ALARM.

****

THIS IS A DRILL

****

EVENT NO. 7

Fire at The East RHR Heat Exchanger Room (103)

Approximate Time of Event:	1730
Location:	East RHR heat exchanger room (103) in reactor enclosure el 177 ft-0 in.
Problem:	Alarms sound at 1730 indicating a fire in the east RHR heat exchanger room on reactor enclosure el 177 ft-0 in. Cause of the fire is unknown, but it is fueled by scaffolding material brought there in preparation for an inspection of the RHR heat exchanger. The fire has disabled both RHR pump B & D motors.
Response:	Fire Fighting Group members are dispatched to the scene and they are able to extinguish the fire at 1800.
Controller Locations:	One in the area.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 7 CUE CARD NO. 7-1

FOR: FIRE FIGHTING GROUP MEMBERS TIME: 1730+

LOCATION: REACTOR ENCLOSURE
117 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

EAST RHR HEAT EXCHANGER ROOM (103) IS ON FIRE. THE FIRE IS FUELED BY SCAFFOLDING MATERIAL LEFT NEAR THE RHR HEAT EXCHANGER. OFFSITE ASSISTANCE IS NOT NEEDED. MOTORS FOR BOTH RHR PUMPS B AND D HAVE BEEN DISABLED.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 7 CUE CARD NO. 7-2

FOR: FIRE FIGHTING GROUP MEMBERS TIME: 1800

LOCATION: REACTOR ENCLOSURE
117 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

FIRE IS OUT.

****

THIS IS A DRILL

****

EVENT NO. 8

Containment Purge Exhaust Line Leakage

Approximate Time of Event:	1845
Location:	Containment purge exhaust line isolation valves (HV-57-113), (HV-57-114) and (HV-57-115) in reactor enclosure el 283.
Problems:	Status lights on the control board indicate the containment isolation valve (HV-57-114) in the containment purge system has backed off the fully closed position at 1845. Reactor enclosure local radiation levels in the area of the containment purge system line are increasing. The releases are due to leakage pass the closed isolation valve (HV-57-115) in the containment purge line. Status lights on the control board indicate that the containment purge line isolation valve (HV-57-115) is unseated at 1915.
Response:	Damage Repair Group is sent to investigate and try to shut the valves locally. Dispatched personnel estimate that it will take 10 hours to terminate the release. The containment purge line valve (HV-57-115) is repaired at 2145 and releases to the atmosphere are terminated.
Controller Locations:	One accompanying the dispatched team.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 8 CUE CARD NO. 8-1

FOR: GROUP INVESTIGATING CONTAINMENT PURGE EXHAUST VALVES. TIME: 1845+

LOCATION: REACTOR ENCLOSURE
283 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAINMENT PURGE EXHAUST VALVE HV-57-114 HAS BACKED OFF CLOSED-POSITION. EFFORTS TO MANUALLY SHUT VALVES HV-57-113 OR HV-57-114 ARE UNSUCCESSFUL.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 8 CUE CARD NO. 8-2

FOR: GROUP INVESTIGATING CONTAINMENT PURGE EXHAUST VALVES. TIME: 1915+

LOCATION: REACTOR ENCLOSURE
283 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAINMENT PURGE EXHAUST VALVE HV-57-115 HAS ALSO BACKED OFF CLOSED-POSITION AND IS OPEN. THE MANUAL HANDWHEEL DOES NOT TURN. REPAIR ESTIMATES ARE 10 HOURS TO SHUT THIS VALVE.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 8 | CUE CARD NO. 8-3

FOR: GROUP INVESTIGATING CONTAINMENT PURGE EXHAUST VALVES. | TIME: 2145

LOCATION: REACTOR ENCLOSURE
283 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAINMENT PURGE EXHAUST VALVE HV-57-115 IS REPAIRED.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 8 CUE CARD NO. 8-4

FOR: GROUP INVESTIGATING CONTAINMENT PURGE EXHAUST VALVES. TIME: 2200

LOCATION: REACTOR ENCLOSURE
283 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CONTAINMENT PURGE EXHAUST VALVE HV-57-114 IS REPAIRED.

****

THIS IS A DRILL

****

EVENT NO. 9

Cooling Tower Blowdown Sample Analysis

Approximate Time of Event:	1900
Location:	Chemistry laboratory, radwaste enclosure el 217 ft-0 in.
Problem:	The result of the 1830 sample of the cooling tower blowdown is 7N6 µci/cc. Samples taken at 1815 and 1845 were both negative.
Response:	The control room and city authorities are informed for possible Schuulkill River contamination.
Controller Locations:	One in chemistry laboratory.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 9 CUE CARD NO. 9-1

FOR: CHEMISTRY TECHNICIAN TIME: 1900

LOCATION: CHEMISTRY LAB., RADWASTE ENCLOSURE
217 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

COOLING TOWER BLOWDOWN SAMPLE TAKEN AT 1830 INDICATES 7N6 μCi/cc, FROM WHICH AT LEAST 60 PERCENT OF THE ACTIVITIY IS DUE TO TECHNETIUM - 99M.

SAMPLES TAKEN AT 1815 AND 1845 ARE BOTH NEGATIVE.

****

THIS IS A DRILL

****

EVENT NO. 10

Core Spray Pump A Trip

Approximate Time of Event:	2040
Location:	Core Spray Pump 1AP206 in reactor enclosure el 177 ft-0 in.
Problem:	Core Spray Pump 1AP206 trips at 2040. Core Spray Pump C is not affected and continues to operate.
Response:	After all attempts from the control room fail, a Damage Repair Group is dispatched to determine cause/solution for the pump trip. Due to high area radiation levels, the Group has to evacuate the reactor building without sufficient time to diagnose the problem. Core Spray Pumps B and D are manually initiated and Core Spray Pump C is tripped.
Controller Locations:	One accompanying the dispatched team from OSC.

FOR CONTROLLER USE ONLY

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 10 CUE CARD NO. 10-1

FOR: GROUP INVESTIGATING CORE SPRAY PUMP 1AP206 TIME: 2040+

LOCATION: REACTOR ENCLOSURE
177 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

CORE SPRAY PUMP A IS SHUT OFF.
THE PUMP MOTOR IS SMOKING AND FEELS VERY HOT.
CORE SPRAY PUMP C IS RUNNING.

****

THIS IS A DRILL

****

DRILL/EXERCISE SCENARIO FORMAT

EMERGENCY PREPAREDNESS DRILL

DRILL TYPE/EVENT NO. 10 CUE CARD NO. 10-2

FOR: GROUP INVESTIGATING CORE SPRAY PUMP 1AP206 TIME: 2040+

LOCATION: REACTOR ENCLOSURE
177 FT-0 IN., EL

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

DUE TO HIGH AREA RADIATION LEVELS, YOU HAVE TO
LEAVE AND RETURN IN ABOUT 2 HOURS.

****

THIS IS A DRILL

****

Date 7/25 Time 1100

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Full Power

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Initial Conditions:

Unit 1 has accumulated 8 full power months of operation since the previous refueling. At that time, 15 fuel assemblies of a new design were installed so that they could be qualified under commercial operating conditions. The 15 fuel assemblies represent about 2 percent of the fuel in the core. On two occasions in the past three months, Unit 1 has experienced reactor trips caused by spurious main steam isolation valve (MSIV) closure signal. All power generation equipment is operating, and all safety system equipment is operable. The initial plant and reactor system values are shown in the attached table.

The meteorological conditions at 1100 are characterized by the influence of an almost stationary high pressure area centered over Greenwich, Connecticut. The clockwise flow around its center is evident by the following ground level Limerick generating station met tower data:

Wind Direction	Southeast (137 degrees)
Wind Speed	5.2 mph
Temperature	71°F
Delta Temperature	-1.3°F
Sigma Theta	6.7 degrees azimuth

The National Weather Service indicates that the high is expected to slowly drift to the South during the next 12 to 24 hours. Skies will remain sunny with light winds gradually backing to the South-Southeast.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1100

MESSAGE FOR: Control Room

SIMULATED PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Initial Conditions:

Unit 1 has accumulated 8 full power months of operation since the previous refueling. At that time, 15 fuel assemblies of a new design were installed so that they could be qualified under commercial operating conditions. The 15 fuel assemblies represent about 2 percent of the fuel in the core. On two occasions in the past three months, Unit 1 has experienced reactor trips caused by spurious main steam isolation valve (MSIV) closure signal. All power generation equipment is operating, and all safety system equipment is operable. The initial plant and reactor system values are shown in the attached table.

The meteorological conditions at 1100 are characterized by the influence of an almost stationary high pressure area centered over Greenwich, Connecticut. The clockwise flow around its center is evident by the following ground level Limerick generating station met tower data:

Wind Direction	Southeast (137 degrees)
Wind Speed	5.2 mph
Temperature	71°F
Delta Temperature	-1.3°F
Sigma Theta	6.[illegible] degrees azimuth

The National Weather Service [illegible] that the high is expected to slowly drift to the [illegible] during the next 12 to 24 hours. Skies will remain sunny with light winds gradually backing to the South-Southeast.

TABLE 4

Limerick Generating Station Initial Plant and Reactor System Values

Reactor Level	+35	inches	Drywell Press	0.6	psig
Reactor Pressure	1020	psig	Drywell Atmos Temp	130	°F
Reactor Power	100	% Full Power	Supp Pool Press	0.6	psig
Core Plate DP	100	% Full Power	Supp Pool Temp	90	°F
Core Flow	100	lb/hr x 10^6	Supp Pool Level	22.1	feet
Total Steam Flow	14	lb/hr x 10^6	Main Stm Line Rad Mon	1100	mR/hr
Total Feedwater Flow	14	lb/hr x 10^6	Containment Rad Level	2	R/hr
Condenser Vacuum	29	inches Hg	Cond Stor Tank Level	38	feet
Hotwell Level	40	inches	RCIC Flow	0	gpm
CRD Charging Pressure	1300	psig	HPCI Flow	0	gpm
Inst. Gas to ADS Pressure	110	psig	RHR A Flow	0	gpm
Equip. Drain Coll Tank Level	3	feet	RHR B Flow	0	gpm
Equip. Drain Surge Tank Level	3	feet	RHR C Flow	0	gpm
Floor Drain Coll Tank Level	4	feet	RHR D Flow	0	gpm
Floor Drain Surge Tank Level	3	feet	Core Spray A Flow	0	gpm
H_2 Concentration	0	%	Core Spray B Flow	0	gpm
O_2 Concentration	2.8	%	RHR Hx Outlet Temp	80	°F
SGTS Flow	0	cfm	RHR SW Inlet Temp	80	°F
North Vent Stack Concentration	5N6	μCi/cc	North Vent Stack Release Rate	7P2	μCi/sec

B2-1471200-15

TABLE [illegible] (con't)
Limerick Generating Station
Area Radiation Monitor Readings
(mR/hr)

Time: 1100 Date: 7-25-84

ARM No.	Location	Reading	ARM No.	Location	Reading
RE-01	RCIC Pump Compartment	100.	RE-22	RWCU Pump Area	0.5
RE-02	HPCI Pump Compartment	80.	RE-23	Standby Liquid Control Sys. Area	0.5
RE-03	Sump Compartment	1.	RE-24	RWCU Instrument Rack Area	1.
RE-04	CRD Pumps Area	0.2	RE-25	Turbine Auxiliary Bay	0.5
RE-05	Turbine Aux. Bay Hallway	0.2	RE-27	RWCU Filter Area	1.
RE-06	Isolation Valve Compartment	0.5	RE-28	Equip. Compt. Exh. Filters Area	0.5
RE-07	Condensate Pump Compartment	90.	RE-34	Hydrogen/Oxygen Analyzers Area	0.2
RE-08	RHR Division I Compartment	8.	RE-36	OSC Area	0.5
RE-09	RHR Division II Compartment	8.	RE-41	Sludge Discharge Mixing Pump Room	0.2
RE-10	Steam Vent Area Stairwell	0.5	RE-42	Radwaste Enclosure Hallway	0.2
RE-12	Hallway, Condensate Filter Demins.	0.7	RE-43	Concentrate Stor. Disch. Pump Room	0.5
RE-13	Condensate Area	50.	RE-46	Fuel Pool Holding Pump Room	0.5
RE-15	CRD HCU Area East	0.5	RE-47	Precoat Tank & Pump Room	0.5
RE-16	CRD HCY Area West	0.5	RE-51	Radwaste Enclosure Hallway	0.2
RE-17	Neutron Monitoring System Area	0.5	RE-55	Radwaste Exhaust Fan Area	0.1
RE-18	Neutron Monitoring Drive Mechanism	0.5	RE-56	Control Room	0.1
RE-19	Turbine Auxiliary Bay Hallway East	100.	RE-57	Turbine Area Operating Floor	0.5
RE-20	Turbine Auxiliary Bay Hallway West	100.	RE-58	Standby Gas Treatment Filter Room	0.5
RE-21	RWCU Heat Exchanger Area	0.5	RE-60	North Vent Stack Sample	0.5

TABLE 1 (cont)

LIMERICK GENERATING STATION

TIME: 1100 DATE: 7-25-84

	Reactor Coolant Activity Concentration (μCi/gm)	Drywell and Suppression Chamber Air Concentration (μCi/gm)
Kr-85	4.N2	1.N6
Kr-85M	8.N1	2.N5
Kr-87	6.N4	2.N5
Kr-88	2.	5.N5
Xe-133	4.	1.N4
Xe-135	4.	1.N4
Total Noble Gas	1.P2	2.N3
I-131	5.N3	2.N8
I-133	1.N1	3.N9
Total Iodine	8.N1	2.N7
Gross Beta	1.6P2	4.N3

TABLE 1 (cont)

LIMERICK GENERATING STATION

SUPPRESSION POOL ACTIVITY CONCENTRATIONS (μCi/gm)

TIME: 1100 DATE: 7-25-84

I-131	5.N7
I-133	3.N8
Total Noble Gas	7.N7
Gross Beta	2.N5

TABLE 1 (cont)

LIMERICK GENERATING STATION

ISOTOPIC STACK CONCENTRATIONS

TIME: 1100 DATE: 7-25-84

	North Vent[1] (µCi/cc)	South Vent[2] (µCi/cc)
Kr-85	2.0N8	2.0N8
Kr-85M	4.2N7	1.3N7
Kr-87	1.2N7	2.4N7
Kr-88	9.0N7	3.6N7
Xe-133	1.8N6	9.2N7
Xe-135	1.8N6	1.8N7

[1] Assume North Vent Stack Flow Rate of 300,000 cfm.

[2] Assume South Vent Stack Flow Rate of 120,000 cfm.

Date 7/25 Time 1105

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Alarm is received in the control room due to a fire in the turbine enclosure at elevation 217 ft-0 in. Offsite assistance is required.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Fire ALARM at instrument air compressor 1AK101 in turbine enclosure. (Event No. 1)

ACTION EXPECTED: "Unusual Event" should be declared. Fire Fighting Group should be dispatched to the scene.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1105

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Fire ALARM at instrument air compressor 1AK101 in turbine enclosure.

ACTION EXPECTED:

Date 7/25 Time 1315

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Spurious MSIV's closure which causes Reactor Scram. Reactor vessel pressure increases to 1170 psig. Reactor water level decreases.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: MSIVs close.
Reactor scrams.
SRVs open.

ACTION EXPECTED: "Unusual Event" should be declared.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1315

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: MSIVs close.
Reactor scrams.
SRVs open.

ACTION EXPECTED:

Date 7/25 Time 1316

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: The reactor pressure and water level have decreased to 1050 psig and -38 in., respectively.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: HPCI and RCIC systems are initiated.
Standby gas treatment system (SGTS) is initiated.

ACTION EXPECTED: Two SRVs are kept open to control pressure.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1316

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: HPCI and RCIC systems are initiated.
Standby gas treatment system (SGTS) is initiated.

ACTION EXPECTED:

Date 7/25 Time 1325

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor pressure and water level are 1025 psig and +50 in., respectively.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: High drywell pressure ALARM

ACTION EXPECTED: HPCI pump is manually operated for pressure/level control.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1325

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: High drywell pressure ALARM

ACTION EXPECTED:

Date 7/25 Time 1330

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Drywell pressure has increased to 1.68 psig.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment group isolations occur on high drywell pressure. HPCI is initiated in injection mode and trips at +54 in.

ACTION EXPECTED: HPCI is initiated and operated for pressure/level control when the high reactor water level signal clears.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1330

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment group isolations occur cn high drywell pressure. HPCI is initiated in injection mode and trips at +54 in.

ACTION EXPECTED:

Date 7/25 Time 1400

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor pressure and water level are 860 psig and +50 in, respectively. Suppression pool temperature is 110°F.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: RHR A and B pumps are lined up for suppression pool cooling mode.

ACTION EXPECTED: Depressurization of the reactor using SRVs has begun since 1345.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1400

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: RHR A and B pumps are lined up for suppression pool cooling mode.

ACTION EXPECTED:

Date 7/25 Time 1430

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor vessel cooldown is continued.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: An assistant operator has been found unconscious lying in a puddle that appears to be leakage from the fuel pool holding pump (OOP340). He is bleeding from a head laceration. (Event No. 2)

ACTION EXPECTED: Search and rescue/first aid group should be dispatched to the area. "Unusual Event" should be declared.

Date 7/25 Time 1430

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: An assistant operator has been found unconscious lying in a puddle that appears to be leakage from the fuel pool holding pump (00P340). He is bleeding from a head laceration.

ACTION EXPECTED:

Date 7/25 Time 1545

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor pressure and water level are 440 psig and +50 in., respectively.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Core Spray (CS) and RHR in the LPCI mode are initiated.

ACTION EXPECTED: RHR A and B pumps are returned to suppression pool cooling mode.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1545

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Core Spray (CS) and RHR in the LPCI mode are initiated.

ACTION EXPECTED:

Date 7/25 Time 1600

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Sample analyses reveal primarily noble gases in the drywell atmosphere.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Drywell radiation level has increased to 100 R/hr.

ACTION EXPECTED: "Alert" should be declared.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1600

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Drywell radiation level has increased to 100 R/hr.

ACTION EXPECTED:

Date 7/25 Time 1615

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor pressure and water level are 380 psig and +50 in., respectively.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: RHR pump B flow has decreased to 500 gpm. (Event No. 4)

ACTION EXPECTED: An operator is dispatched to investigate the problem with the RHR pump B.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1615

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: RHR pump B flow has decreased to 500 gpm.

ACTION EXPECTED:

Date 7/25 Time 1630

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Airborne radiation levels in the reactor enclosure start rising significantly due to small leakage from the primary containment.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Due to high airborne radiation levels, evacuation of the Unit 1 reactor enclosure is required.

ACTION EXPECTED: Reactor enclosure personnel accounting and investigation for high airborne radiation source.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1630

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Due to high airborne radiation levels, evacuation of the Unit 1 reactor enclosure is required.

ACTION EXPECTED:

Date 7/25 Time 1650

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Airborne radiation levels in the reactor enclosure still rising.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: The person investigating RHR pump B is unaccounted for. (Event No. 5)

ACTION EXPECTED: A Search and Rescue/First Aid Group is dispatched to find the person investigating the RHR pump B and to ask him to evacuate reactor enclosure.

FOR CONTROLLER USE ONLY

Date 7/25 . Time 1650

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: The person investigating RHR pump B is unaccounted for.

ACTION EXPECTED:

Date 7/25 Time 1700

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor pressure is 300 psig. Drywell pressure is leveling off at 4.5 psig.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: RCIC and HPCI pumps are manually tripped.

ACTION EXPECTED: Reactor vessel is flooded with CS and LPCI.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1700

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: RCIC and HPCI pumps are manually tripped.

ACTION EXPECTED:

Date 7/25 Time 1715

MESSAGE FOR: Control Room

SIMULATED PLANT CONDITIONS: LPCI is manually tripped once the reactor vessel is flooded. Cooldown is continued by circulating reactor vessel inventory through the SRVs to the suppression pool using available CS pumps.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: CO_2 storage unit 00S133 low pressure ALARM. (Event No. 6)

ACTION EXPECTED: Investigation for the cause of the ALARM.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1715

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: CO_2 storage unit 00S133 low pressure ALARM.

ACTION EXPECTED:

Date 7/25 Time 1730

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor vessel cooldown is continued.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: CO_2 portion of the fire protection system is inoperable due to low tank pressure. (Event No. 6)

ACTION EXPECTED: A continuous fire watch should be established for those areas in which redundant systems or components could be damaged. For other areas, an hourly fire watch patrol is established.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1730

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: CO_2 portion of the fire protection system is inoperable due to low tank pressure.

ACTION EXPECTED:

Date 7/25 Time 1730

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Reactor vessel cooldown is continued.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: East RHR heat exchanger room (103) fire ALARM.
RHR pump B trips. (Event No. 7)

ACTION EXPECTED: Fire Fighting Group is dispatched to the scene.

Date 7/25 Time 1730

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: East RHR heat exchanger room (103) fire ALARM.
RHR pump B trips.

ACTION EXPECTED:

Date 7/25 Time 1730+

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Cause of the fire is unknown, but it is fueled by scaffolding material brought there in preparation for an inspection of the RHR heat exchangers. Fire has disabled both RHR pump B and D motors.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Drywell radiation level 1000 R/hr.

ACTION EXPECTED: "Site Emergency" should be declared.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1730+

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Drywell radiation level 1000 R/hr.

ACTION EXPECTED:

Date 7/25 Time 1845

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Containment purge exhaust isolation valve HV-57-114 indicates open position.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Status lights on the control board indicate the containment isolation valve HV-57-114 in the containment purge system has backed off the fully closed position. (Event No. 8)

ACTION EXPECTED: Repeated attempts from the control room to close the valve.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1845

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Status lights on the control board indicate the containment isolation valve HV-57-114 in the containment purge system has backed off the fully closed position.

ACTION EXPECTED:

Date 7/25 Time 1915

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Repeated attempts from the control room to close the containment purge exhaust isolation valves are unsuccessful.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment purge exhaust isolation valve HV-57-115 indicates open position. (Event No. 8)

ACTION EXPECTED: Personnel will be dispatched to try to shut the valves locally.

FOR CONTROLLER USE ONLY

Date 7/25 Time 1915

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment purge exhaust isolation valve HV-57-115 indicates open position.

ACTION EXPECTED:

Date 7/25 Time 2040

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: The radiation release path to the atmosphere is still open. It is estimated that it will take about 9 hours to terminate the release.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: CS pump A trips.
CS pump C is not affected and continues to operate. (Event No. 10)

ACTION EXPECTED: Personnel will be dispatched to investigate the problem.
CS B and D pumps are manually initiated.
CS pump C is tripped.

FOR CONTROLLER USE ONLY

Date 7/25 Time 2040

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: CS pump A trips.
CS pump C is not affected and continues to operate.

ACTION EXPECTED:

Date 7/25 Time 2145

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Releases to the atmosphere are terminated.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment purge exhaust isolation valve HV-57-115 is repaired. (Event No. 8)

ACTION EXPECTED: Deescalation of emergency to "Site Emergency" and later to "Alert" status is considered.

FOR CONTROLLER USE ONLY

Date 7/25 Time 2145

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment purge exhaust isolation valve HV-57-115 is repaired.

ACTION EXPECTED:

Date 7/25 Time 2200

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS: Releases to the atmosphere are terminated.

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment purge exhaust isolation valve HV-57-114 is repaired. (Event No. 8)

ACTION EXPECTED: Deescalation of emergency to "Site Emergency" and later to "Alert" status is considered.

FOR CONTROLLER USE ONLY

Date 7/25 Time 2200

CONTINGENCY MESSAGE

MESSAGE FOR: Control Room

SIMULATED
PLANT CONDITIONS:

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE: Containment purge exhaust isolation valve HV-57-114 is repaired.

ACTION EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 1830

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Headquarters engineering support is needed to devise supplementary radwaste processing methods. Temporary system and storage tanks should be sent to LGS as soon as possible.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 1830

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Headquarters engineering support is needed to devise supplementary radwaste processing methods. Temporary system and storage tanks should be sent to LGS as soon as possible.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 1850

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Headquarters support is needed to expedite the following purchasing requirements:

300 Anticontamination Suits and Hoods

500 Pairs of Rubber Gloves

1,000 Rolls of 2 in. Masking Tape

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 1850

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Headquarters support is needed to expedite the following purchasing requirements:

300 Anticontamination Suits and Hoods

500 Pairs of Rubber Gloves

1,000 Rolls of 2 in. Masking Tape

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 1910

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Investigate arrangements for feeding emergency center and plant personnel on an extended basis.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 1910

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Investigate arrangements for feeding emergency center and plant personnel on an extended basis.

ACTIONS EXPECTED:

HEADER SUPPORT MESSAGE DATE: 7/25/84 TIME: 1925

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

The Lieutenant Governor is requesting a visit to the TSC and a briefing of the plant status. State House press representatives will accompany him. A PECO representative should be assigned to contact him.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADER SUPPORT MESSAGE DATE: 7/25/84 TIME: 1925

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

The Lieutenant Governor is requesting a visit to the TSC and a briefing of the plant status. State House press representatives will accompany him. A PECO representative should be assigned to contact him.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2030

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

There is an immediate need for 20 RM-14 Friskers at LGS. Units should be purchased or borrowed from supporting organizations.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2030

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

There is an immediate need for 20 RM-14 Friskers at LGS. Units should be purchased or borrowed from supporting organizations.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE 7/25/84 TIME: 2050

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

A call has been received from a Lieutenant of the Pennsylvania State Police. He would like to coordinate road blocking status with a PECO representative in Philadelphia.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE 7/25/84 TIME: 2050

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

A call has been received from a Lieutenant of the Pennsylvania State Police. He would like to coordinate road blocking status with a PECO representative in Philadelphia.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2110

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

A call has been received from a panicked nearby resident requesting help. A family member who was outside when the public alert sirens came on, has started vomiting and there is fear for high radiation dose exposure.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2110

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

A call has been received from a panicked nearby resident requesting help. A family member who was outside when the public alert sirens came on, has started vomiting and there is fear for high radiation dose exposure.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2130

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

I&C support is requested from headquarters to analyze the effects of steam and radiation in containment on instrumentation. Need to know from environmental qualification data if any instruments are susceptible to continue reading on scale after failure.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2130

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

I&C support is requested from headquarters to analyze the effects of steam and radiation in containment on instrumentation. Need to know from environmental qualification data if any instruments are susceptible to continue reading on scale after failure.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2150

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Construction personnel are required to erect a temporary wooden storage building, with 200,000 cu ft storage capacity. Building will be used to store emergency equipment enroute to LGS and is to be erected near the information center parking lot area.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2150

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Construction personnel are required to erect a temporary wooden storage building, with 200,000 cu ft storage capacity. Building will be used to store emergency equipment enroute to LGS and is to be erected near the information center parking lot area.

ACTIONS EXPECTED:

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2210

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Headquarters QA/QC support is needed to inspect emergency repair methods and approve welding in process.

ACTIONS EXPECTED:

Submit request to Site Emergency Coordinator.

FOR CONTROLLER USE ONLY

HEADQUARTERS SUPPORT MESSAGE DATE: 7/25/84 TIME: 2210

MESSAGE FOR: EMERGENCY DIRECTOR

****

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations.

****

MESSAGE:

Headquarters QA/QC support is needed to inspect emergency repair methods and approve welding in process.

ACTIONS EXPECTED:

Time 1100 Hours | LGS 7/25

Parameter	Value	Units	Parameter	Value	Units
Reactor Level	+35	inches	Drywell Press	0.6	psig
Reactor Pressure	1020	psig	SGTS Flow	0	cfm
Reactor Power	100	% Full Power	Drywell Atmos Temp	130	°F
Core Plate DP	100	% Full Power	Supp Pool Press	0.6	psig
Core Flow	100	lb/hr x 10^6	Supp Pool Temp	90	°F
Total Steam Flow	14	lb/hr x 10^6	Supp Pool Level	22.1	feet
Total Feedwater Flow	14	lb/hr x 10^6	Main Stm Line Rad Mon	1100	mR/hr
Condenser Vacuum	29	inches Hg	Containment Rad Level	2	R/hr
Hotwell Level	40	inches	Cond Stor Tank Level	38	feet
CRD Charging Pressure	1300	psig	RCIC Flow	0	gpm
Inst. Gas to ADS Pressure	110	psig	HPCI Flow	0	gpm
Equip. Drain Coll Tank Level	3	feet	RHR A Flow	0	gpm
Equip. Drain Surge Tank Level	3	feet	RHR B Flow	0	gpm
Floor Drain Coll Tank Level	4	feet	Core Spray A Flow	0	gpm
Floor Drain Surge Tank Level	3	feet	Core Spray B Flow	0	gpm
H_2 Concentration	0	%	RHR Hx Outlet Temp	80	°F
O_2 Concentration	2.8	%	RHR SW Inlet Temp	80	°F
			RHR C Flow	0	gpm
			RHR D Flow	0	gpm

3J-1

Time 1130 Hours | LGS 7/25

Reactor Level	+35 inches	Drywell Press	0.6 psig
Reactor Pressure	1020 psig	SGTS Flow	0 cfm
Reactor Power	100 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	100 % Full Power	Supp Pool Press	0.6 psig
Core Flow	100 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	14 lb/hr x 10^6	Supp Pool Level	22.1 feet
Total Feedwater Flow	14 lb/hr x 10^6	Main Stm Line Rad Mon	1100 mR/hr
Condenser Vacuum	29 inches Hg	Containment Rad Level	2 R/hr
Hotwell Level	40 inches	Cond Stor Tank Level	38 feet
CRD Charging Pressure	1300 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1200 Hours | LGS 7/25

Reactor Level	+35 inches	Drywell Press	0.6 psig
Reactor Pressure	1020 psig	SGTS Flow	0 cfm
Reactor Power	100 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	100 % Full Power	Supp Pool Press	0.6 psig
Core Flow	100 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	14 lb/hr x 10^6	Supp Pool Level	22.1 feet
Total Feedwater Flow	14 lb/hr x 10^6	Main Stm Line Rad Mon	1100 mR/hr
Condenser Vacuum	29 inches Hg	Containment Rad Level	2 R/hr
Hotwell Level	40 inches	Cond Stor Tank Level	38 feet
CRD Charging Pressure	1300 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-3

Time 1230 Hours | LGS 7/25

Reactor Level	+35 inches	Drywell Press	0.6 psig
Reactor Pressure	1020 psig	SGTS Flow	0 cfm
Reactor Power	100 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	100 % Full Power	Supp Pool Press	0.6 psig
Core Flow	100 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	14 lb/hr x 10^6	Supp Pool Level	22.1 feet
Total Feedwater Flow	14 lb/hr x 10^6	Main Stm Line Rad Mon	1100 mR/hr
Condenser Vacuum	29 inches Hg	Containment Rad Level	2 R/hr
Hotwell Level	40 inches	Cond Stor Tank Level	38 feet
CRD Charging Pressure	1300 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1300 Hours

Reactor Level	+35 inches	Drywell Press	0.6 psig
Reactor Pressure	1020 psig	SGTS Flow	0 cfm
Reactor Power	100 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	100 % Full Power	Supp Pool Press	0.6 psig
Core Flow	100 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	14 lb/hr x 10^6	Supp Pool Level	22.1 feet
Total Feedwater Flow	14 lb/hr x 10^6	Main Stm Line Rad Mon	1100 mR/hr
Condenser Vacuum	29 inches Hg	Containment Rad Level	2 R/hr
Hotwell Level	40 inches	Cond Stor Tank Level	38 feet
CRD Charging Pressure	1300 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1315 Hours | LGS 7/25

Reactor Level	+35 inches	Drywell Press	0.6 psig
Reactor Pressure	1020 psig	SGTS Flow	0 cfm
Reactor Power	100 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	100 % Full Power	Supp Pool Press	0.6 psig
Core Flow	100 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	14 lb/hr x 10^6	Supp Pool Level	22.1 feet
Total Feedwater Flow	14 lb/hr x 10^6	Main Stm Line Rad Mon	1100 mR/hr
Condenser Vacuum	29 inches Hg	Containment Rad Level	2 R/hr
Hotwell Level	40 inches	Cond Stor Tank Level	38 feet
CRD Charging Pressure	1300 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1315+ Hours

LGS 7/25

Reactor Level	0 inches	Drywell Press	0.6 psig
Reactor Pressure	1100 psig	SGTS Flow	0 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	20 % Full Power	Supp Pool Press	0.6 psig
Core Flow	20 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.2 feet
Total Feedwater Flow	2 lb/hr x 10^6	Main Stm Line Rad Mon	150 mR/hr
Condenser Vacuum	25 inches Hg	Containment Rad Level	1 R/hr
Hotwell Level	40 inches	Cond Stor Tank Level	38 feet
CRD Charging Pressure	1300 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1317 Hours | LGS 7/25

Reactor Level	-40 inches	Drywell Press	0.8 psig
Reactor Pressure	1040 psig	SGTS Flow	7000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	130 °F
Core Plate DP	20 % Full Power	Supp Pool Press	0.6 psig
Core Flow	20 lb/hr x 10^6	Supp Pool Temp	90 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.6 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	120 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	1 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	36.6 feet
CRD Charging Pressure	1300 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-8

Time 1325 Hours | LGS 7/25

Reactor Level	+50 inches
Reactor Pressure	1025 psig
Reactor Power	0 % Full Power
Core Plate DP	20 % Full Power
Core Flow	20 lb/hr x 10^6
Total Steam Flow	0 lb/hr x 10^6
Total Feedwater Flow	0 lb/hr x 10^6
Condenser Vacuum	0 inches Hg
Hotwell Level	39 inches
CRD Charging Pressure	1300 psig
Inst. Gas to ADS Pressure	110 psig
Equip. Drain Coll Tank Level	3 feet
Equip. Drain Surge Tank Level	3 feet
Floor Drain Coll Tank Level	4 feet
Floor Drain Surge Tank Level	3 feet
H_2 Concentration	0 %
O_2 Concentration	2.8 %

Drywell Press	1.5 psig
SGTS Flow	3000 cfm
Drywell Atmos Temp	144 °F
Supp Pool Press	0.8 psig
Supp Pool Temp	91 °F
Supp Pool Level	22.7 feet
Main Stm Line Rad Mon	85 mR/hr
Containment Rad Level	1 R/hr
Cond Stor Tank Level	26.6 feet
RCIC Flow	630 gpm
HPCI Flow	5600 gpm
RHR A Flow	0 gpm
RHR B Flow	0 gpm
Core Spray A Flow	0 gpm
Core Spray B Flow	0 gpm
RHR Hx Outlet Temp	80 °F
RHR SW Inlet Temp	80 °F
RHR C Flow	0 gpm
RHR D Flow	0 gpm

Time 1330 Hours LGS 7/25

Reactor Level	+50 inches	Drywell Press	1.68 psig
Reactor Pressure	1020 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	150 °F
Core Plate DP	20 % Full Power	Supp Pool Press	1.0 psig
Core Flow	20 lb/hr x 10^6	Supp Pool Temp	93 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.7 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	70 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	1 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	26. feet
CRD Charging Pressure	1300 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1345 Hours | LGS 7/25

Reactor Level	+50 inches	Drywell Press	2.2 psig
Reactor Pressure	1000 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	162 °F
Core Plate DP	15 % Full Power	Supp Pool Press	1.1 psig
Core Flow	15 lb/hr x 10^6	Supp Pool Temp	99 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	35 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	1 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	24.2 feet
CRD Charging Pressure	1300 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	0 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	0 %	RHR Hx Outlet Temp	80 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-11

Time 1400 Hours

LGS 7/25

Reactor Level	+50 inches	Drywell Press	2.4 psig
Reactor Pressure	860 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	168 °F
Core Plate DP	10 % Full Power	Supp Pool Press	1.2 psig
Core Flow	10 lb/hr x 10^6	Supp Pool Temp	110 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.9 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	2 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	22.4 feet
CRD Charging Pressure	1160 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	10,000 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	95 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-12

Time 1415 Hours | LGS 7/25

Reactor Level	+50	inches
Reactor Pressure	750	psig
Reactor Power	0	% Full Power
Core Plate DP	5	% Full Power
Core Flow	5	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	1050	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	2.8	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	190	°F
Supp Pool Press	1.2	psig
Supp Pool Temp	116	°F
Supp Pool Level	23.0	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	4	R/hr
Cond Stor Tank Level	20.6	feet
RCIC Flow	630	gpm
HPCI Flow	5600	gpm
RHR A Flow	10,000	gpm
RHR B Flow	10000	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	95	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-13

Time 1532 Hours

Reactor Level	+50 inches	Drywell Press	3.3 psig
Reactor Pressure	670 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	208 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.3 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	120 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.1 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	6 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	18.4 feet
CRD Charging Pressure	1000 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	10000 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	95 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1145 Hours

LGS 7/25

Reactor Level	+50 inches	Drywell Press	3.6 psig
Reactor Pressure	620 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	222 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.5 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	123 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.2 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	9 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	17. feet
CRD Charging Pressure	950 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	10,000 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	95 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-15

Time 1500 Hours

LGS 7/25

Reactor Level	+50 inches	Drywell Press	4.0 psig
Reactor Pressure	560 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	235 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.6 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	126 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.3 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	14 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	15.2 feet
CRD Charging Pressure	900 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	10,000 gpm
Floor Drain Coll Tank Level	4 feet	Co Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	96 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1515 Hours LGS 7/25

Reactor Level	+50 inches	Drywell Press	4.2 psig
Reactor Pressure	520 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	240 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.6 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	127 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.4 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	40 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	13.4 feet
CRD Charging Pressure	850 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	10,000 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	97 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-17

Time 1550 Hours | LGS 7/25

Reactor Level	+50	inches
Reactor Pressure	480	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	800	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	4.3	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	244	°F
Supp Pool Press	1.7	psig
Supp Pool Temp	128	°F
Supp Pool Level	23.5	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	60	R/hr
Cond Stor Tank Level	12.4	feet
RCIC Flow	630	gpm
HPCI Flow	5600	gpm
RHR A Flow	10,000	gpm
RHR B Flow	10,000	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	98	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-18

Time 1545 Hours

LGS 7/25

Reactor Level	+50	inches
Reactor Pressure	440	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	750	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	4.4	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	247	°F
Supp Pool Press	1.8	psig
Supp Pool Temp	130	°F
Supp Pool Level	23.6	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	80	R/hr
Cond Stor Tank Level	11.2	feet
RCIC Flow	630	gpm
HPCI Flow	5600	gpm
RHR A Flow	10000	gpm
RHR B Flow	10,000	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	100	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-19

Time 1600 Hours | LGS 7/25

Reactor Level	+50 inches	Drywell Press	4.4 psig
Reactor Pressure	410 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	250 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.8 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	130 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.7 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	100 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	10.2 feet
CRD Charging Pressure	720 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	10,000 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	100 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-20

Time 1615 Hours

LGS 7/25

Reactor Level	+50 inches	Drywell Press	4.5 psig
Reactor Pressure	380 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	252 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.8 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	130 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	150 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	9.2 feet
CRD Charging Pressure	700 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	500 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	100 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1630 Hours

LGS 7/25

Reactor Level	+50 inches	Drywell Press	4.5 psig
Reactor Pressure	350 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	253 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.8 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	130 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	23.9 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	200 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	8.2 feet
CRD Charging Pressure	650 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	500 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	100 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1645 Hours LGS 7/25

Reactor Level	+50 inches	Drywell Press	4.5 psig
Reactor Pressure	325 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	254 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.9 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	130 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	24 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	300 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	7.2 feet
CRD Charging Pressure	625 psig	RCIC Flow	630 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	5600 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	500 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	100 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

B2-1471200-15

3J-23

Time 1722 Hours | LGS 7/25

Reactor Level	+50	inches
Reactor Pressure	300	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	600	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	4.5	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	255	°F
Supp Pool Press	2.0	psig
Supp Pool Temp	130	°F
Supp Pool Level	24.1	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	400	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	500	gpm
Core Spray A Flow	5000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	100	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	5000	gpm
RHR D Flow	0	gpm

Time 1715 Hours

LGS 7/25

Reactor Level	+125	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	$lb/hr \times 10^6$
Total Steam Flow	0	$lb/hr \times 10^6$
Total Feedwater Flow	0	$lb/hr \times 10^6$
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	4.4	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	225	°F
Supp Pool Press	1.9	psig
Supp Pool Temp	129	°F
Supp Pool Level	23.6'	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	500	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	500	gpm
Core Spray A Flow	5000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	99	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	5000	gpm
RHR D Flow	0	gpm

3J-25

Time 1730 Hours

LGS 7/25

Reactor Level	+275	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	4.4	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	225	°F
Supp Pool Press	1.9	psig
Supp Pool Temp	129	°F
Supp Pool Level	23.2'	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	1000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	500	gpm
Core Spray A Flow	5000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	99	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	5000	gpm
RHR D Flow	0	gpm

Time 1745 Hours

LGS 7/25

Reactor Level	+325 inches
Reactor Pressure	30 psig
Reactor Power	0 % Full Power
Core Plate DP	1 % Full Power
Core Flow	1 lb/hr x 10^6
Total Steam Flow	0 lb/hr x 10^6
Total Feedwater Flow	0 lb/hr x 10^6
Condenser Vacuum	0 inches Hg
Hotwell Level	39 inches
CRD Charging Pressure	350 psig
Inst. Gas to ADS Pressure	110 psig
Equip. Drain Coll Tank Level	3 feet
Equip. Drain Surge Tank Level	3 feet
Floor Drain Coll Tank Level	4 feet
Floor Drain Surge Tank Level	3 feet
H_2 Concentration	.1 %
O_2 Concentration	2.8 %

Drywell Press	4.3 psig
SGTS Flow	3000 cfm
Drywell Atmos Temp	225 °F
Supp Pool Press	1.9 psig
Supp Pool Temp	128 °F
Supp Pool Level	22.8 feet
Main Stm Line Rad Mon	25 mR/hr
Containment Rad Level	1200 R/hr
Cond Stor Tank Level	6.2 feet
RCIC Flow	0 gpm
HPCI Flow	0 gpm
RHR A Flow	10,000 gpm
RHR B Flow	0 gpm
Core Spray A Flow	2000 gpm
Core Spray B Flow	0 gpm
RHR Hx Outlet Temp	98 °F
RHR SW Inlet Temp	80 °F
RHR C Flow	0 gpm
RHR D Flow	0 gpm

Time 1800 Hours

LGS 7/25

Reactor Level	+325 inches
Reactor Pressure	30 psig
Reactor Power	0 % Full Power
Core Plate DP	1 % Full Power
Core Flow	1 lb/hr x 10^6
Total Steam Flow	0 lb/hr x 10^6
Total Feedwater Flow	0 lb/hr x 10^6
Condenser Vacuum	0 inches Hg
Hotwell Level	39 inches
CRD Charging Pressure	350 psig
Inst. Gas to ADS Pressure	110 psig
Equip. Drain Coll Tank Level	3 feet
Equip. Drain Surge Tank Level	3 feet
Floor Drain Coll Tank Level	4 feet
Floor Drain Surge Tank Level	3 feet
H_2 Concentration	.1 %
O_2 Concentration	2.8 %

Drywell Press	4.2 psig
SGTS Flow	3000 cfm
Drywell Atmos Temp	224 °F
Supp Pool Press	1.9 psig
Supp Pool Temp	127 °F
Supp Pool Level	22.8 feet
Main Stm Line Rad Mon	25 mR/hr
Containment Rad Level	1400 R/hr
Cond Stor Tank Level	6.2 feet
RCIC Flow	0 gpm
HPCI Flow	0 gpm
RHR A Flow	10,000 gpm
RHR B Flow	0 gpm
Core Spray A Flow	2000 gpm
Core Spray B Flow	0 gpm
RHR Hx Outlet Temp	97 °F
RHR SW Inlet Temp	80 °F
RHR C Flow	0 gpm
RHR D Flow	0 gpm

Time 1815 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	4.2 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	224 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.9 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	126 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	1500 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	96 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 1830 Hours | LGS 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	4.0	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	224	°F
Supp Pool Press	1.9	psig
Supp Pool Temp	125	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	2000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	2000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	95	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-30

Time 1845 Hours

LGS 7/25

Parameter	Value	Units
Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Parameter	Value	Units
Drywell Press	3.8	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	224	°F
Supp Pool Press	1.9	psig
Supp Pool Temp	124	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	4000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	2000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	95	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-31

Time 1900 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	3.8 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	223 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.9 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	122 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	6000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	95 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-32

Time 1915 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	3.7 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	222 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.8 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	120 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	8000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	94 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-33

Time 1930 Hours | LGS 7/25

Reactor Level	+325 inches	Drywell Press	3.5 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	222 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.8 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	119 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	10,000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	94 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-34

Time 1945 Hours

LGS 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	$lb/hr \times 10^6$
Total Steam Flow	0	$lb/hr \times 10^6$
Total Feedwater Flow	0	$lb/hr \times 10^6$
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	3.4	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	222	°F
Supp Pool Press	1.8	psig
Supp Pool Temp	117	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	12,000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	2000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	94	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-35

Time 2000 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	3.3 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	221 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.7 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	115 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	15000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	94 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 2015 Hours

Reactor Level	+325 inches	Drywell Press	3.1 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	221 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.7 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	113 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	18,000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	94 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 2030 Hours | LGS 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	2.9	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	220	°F
Supp Pool Press	1.7	psig
Supp Pool Temp	112	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	18000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	2000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	94	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-38

Time 2045 Hours | LGS | 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	$lb/hr \times 10^6$
Total Steam Flow	0	$lb/hr \times 10^6$
Total Feedwater Flow	0	$lb/hr \times 10^6$
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	2.8	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	220	°F
Supp Pool Press	1.6	psig
Supp Pool Temp	110	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	18000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	2000	gpm
Core Spray B Flow	0	gpm
RHR Hx Outlet Temp	94	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-39

Time 2100 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	2.7 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	220 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.6 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	108 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	18000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	93 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-40

Time 2115 Hours | LGS 7/25

Reactor Level	+325 inches	Drywell Press	2.5 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	219 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.6 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	106 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	18,000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	93 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-41

Time 2130 Hours | LGS 7/25

Reactor Level	+325 inches	Drywell Press	2.4 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	218 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.5 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	104 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	18000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	93 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 2145 Hours | | LGS | 7/25

Reactor Level	+325 inches	Drywell Press	2.4 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	218 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.5 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	102 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	15,000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	90 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-43

Time 2200 Hours | LGS 7/25

Reactor Level	+335 inches	Drywell Press	2.0 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	218 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.4 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	100 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	10,000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	2000 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	0 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	90 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 2215 Hours | LGS 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	1.9	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	218	°F
Supp Pool Press	1.4	psig
Supp Pool Temp	100	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	9000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	2000	gpm
RHR Hx Outlet Temp	90	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-45

Time 2230 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	1.8 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	317 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.4 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	100 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	8000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	2000 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	90 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-46

Time 2245 Hours

LGS 7/25

Reactor Level	+323	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	1.8	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	218	°F
Supp Pool Press	1.4	psig
Supp Pool Temp	100	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	7500	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	2000	gpm
RHR Hx Outlet Temp	90	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

3J-47

Time 2300 Hours

LGS 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	lb/hr x 10^6
Total Steam Flow	0	lb/hr x 10^6
Total Feedwater Flow	0	lb/hr x 10^6
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	1.7	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	217	°F
Supp Pool Press	1.4	psig
Supp Pool Temp	100	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	7000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	2000	gpm
RHR Hx Outlet Temp	90	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

Time 2315 Hours

LGS 7/25

Reactor Level	+325	inches
Reactor Pressure	30	psig
Reactor Power	0	% Full Power
Core Plate DP	1	% Full Power
Core Flow	1	$lb/hr \times 10^6$
Total Steam Flow	0	$lb/hr \times 10^6$
Total Feedwater Flow	0	$lb/hr \times 10^6$
Condenser Vacuum	0	inches Hg
Hotwell Level	39	inches
CRD Charging Pressure	350	psig
Inst. Gas to ADS Pressure	110	psig
Equip. Drain Coll Tank Level	3	feet
Equip. Drain Surge Tank Level	3	feet
Floor Drain Coll Tank Level	4	feet
Floor Drain Surge Tank Level	3	feet
H_2 Concentration	.1	%
O_2 Concentration	2.8	%

Drywell Press	1.7	psig
SGTS Flow	3000	cfm
Drywell Atmos Temp	216	°F
Supp Pool Press	1.3	psig
Supp Pool Temp	100	°F
Supp Pool Level	22.8	feet
Main Stm Line Rad Mon	25	mR/hr
Containment Rad Level	6000	R/hr
Cond Stor Tank Level	6.2	feet
RCIC Flow	0	gpm
HPCI Flow	0	gpm
RHR A Flow	10,000	gpm
RHR B Flow	0	gpm
Core Spray A Flow	0	gpm
Core Spray B Flow	2000	gpm
RHR Hx Outlet Temp	90	°F
RHR SW Inlet Temp	80	°F
RHR C Flow	0	gpm
RHR D Flow	0	gpm

Time 2330 Hours

LGS 7/25

Reactor Level	+325 inches	Drywell Press	1.6 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	216 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.3 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	100 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	5500 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	2000 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	90 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F

RHR C Flow	0 gpm
RHR D Flow	0 gpm

3J-50

Time 2325 Hours | LGS 7/25

Reactor Level	+325 inches	Drywell Press	1.6 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	216 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.3 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	100 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	5000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	7 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	2000 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	90 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-51

Time 2400 Hours | LGS | 7/25

Reactor Level	+325 inches	Drywell Press	1.5 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	216 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.3 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	100 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	5000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	2000 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	90 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

Time 0015 Hours | LCS 7/25

Reactor Level	+325 inches	Drywell Press	1.4 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	212 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.3 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	99 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	5000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	2000 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	89 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-53

Time 00?? Hours | LGS | 7/25

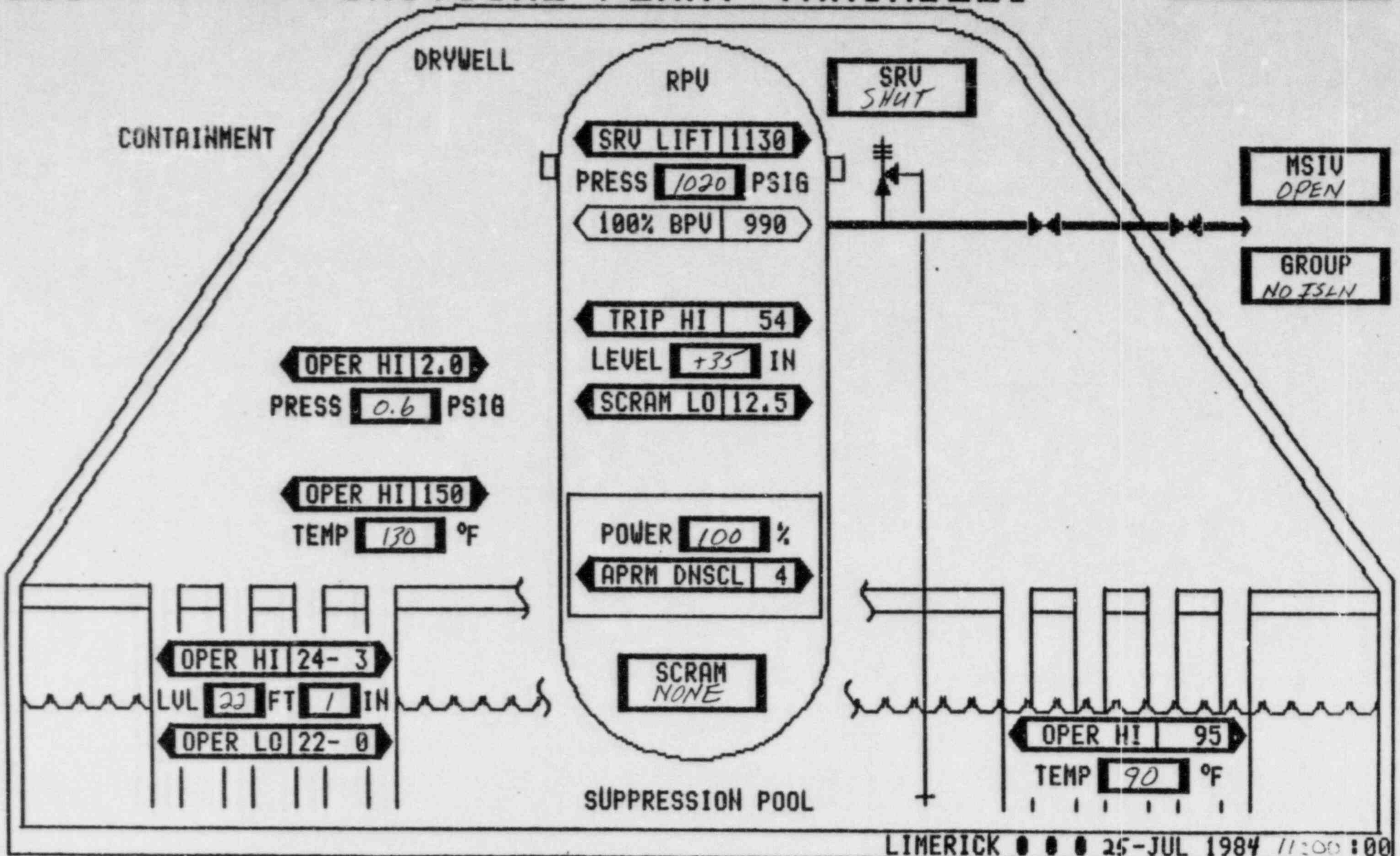
Reactor Level	+325 inches	Drywell Press	1.3 psig
Reactor Pressure	30 psig	SGTS Flow	3000 cfm
Reactor Power	0 % Full Power	Drywell Atmos Temp	213 °F
Core Plate DP	1 % Full Power	Supp Pool Press	1.1 psig
Core Flow	1 lb/hr x 10^6	Supp Pool Temp	98 °F
Total Steam Flow	0 lb/hr x 10^6	Supp Pool Level	22.8 feet
Total Feedwater Flow	0 lb/hr x 10^6	Main Stm Line Rad Mon	25 mR/hr
Condenser Vacuum	0 inches Hg	Containment Rad Level	5000 R/hr
Hotwell Level	39 inches	Cond Stor Tank Level	6.2 feet
CRD Charging Pressure	350 psig	RCIC Flow	0 gpm
Inst. Gas to ADS Pressure	110 psig	HPCI Flow	0 gpm
Equip. Drain Coll Tank Level	3 feet	RHR A Flow	10,000 gpm
Equip. Drain Surge Tank Level	3 feet	RHR B Flow	0 gpm
Floor Drain Coll Tank Level	4 feet	Core Spray A Flow	0 gpm
Floor Drain Surge Tank Level	3 feet	Core Spray B Flow	2000 gpm
H_2 Concentration	.1 %	RHR Hx Outlet Temp	88 °F
O_2 Concentration	2.8 %	RHR SW Inlet Temp	80 °F
		RHR C Flow	0 gpm
		RHR D Flow	0 gpm

3J-54

Time 0045 Hours | LGS 7/25

Reactor Level	+325	inches	Drywell Press	1.1	psig
Reactor Pressure	30	psig	SGTS Flow	3000	cfm
Reactor Power	0	% Full Power	Drywell Atmos Temp	212	°F
Core Plate DP	1	% Full Power	Supp Pool Press	1.0	psig
Core Flow	1	lb/hr x 10^6	Supp Pool Temp	96	°F
Total Steam Flow	0	lb/hr x 10^6	Supp Pool Level	22.8	feet
Total Feedwater Flow	0	lb/hr x 10^6	Main Stm Line Rad Mon	25	mR/hr
Condenser Vacuum	0	inches Hg	Containment Rad Level	5000	R/hr
Hotwell Level	39	inches	Cond Stor Tank Level	6.2	feet
CRD Charging Pressure	350	psig	RCIC Flow	0	gpm
Inst. Gas to ADS Pressure	110	psig	HPCI Flow	0	gpm
Equip. Drain Coll Tank Level	3	feet	RHR A Flow	10,000	gpm
Equip. Drain Surge Tank Level	3	feet	RHR B Flow	0	gpm
Floor Drain Coll Tank Level	4	feet	Core Spray A Flow	0	gpm
Floor Drain Surge Tank Level	3	feet	Core Spray B Flow	2000	gpm
H_2 Concentration	.1	%	RHR Hx Outlet Temp	86	°F
O_2 Concentration	2.8	%	RHR SW Inlet Temp	80	°F
			RHR C Flow	0	gpm
			RHR D Flow	0	gpm

313 RPV NORMAL CRITICAL PLANT VARIABLES CNTMT NORMAL



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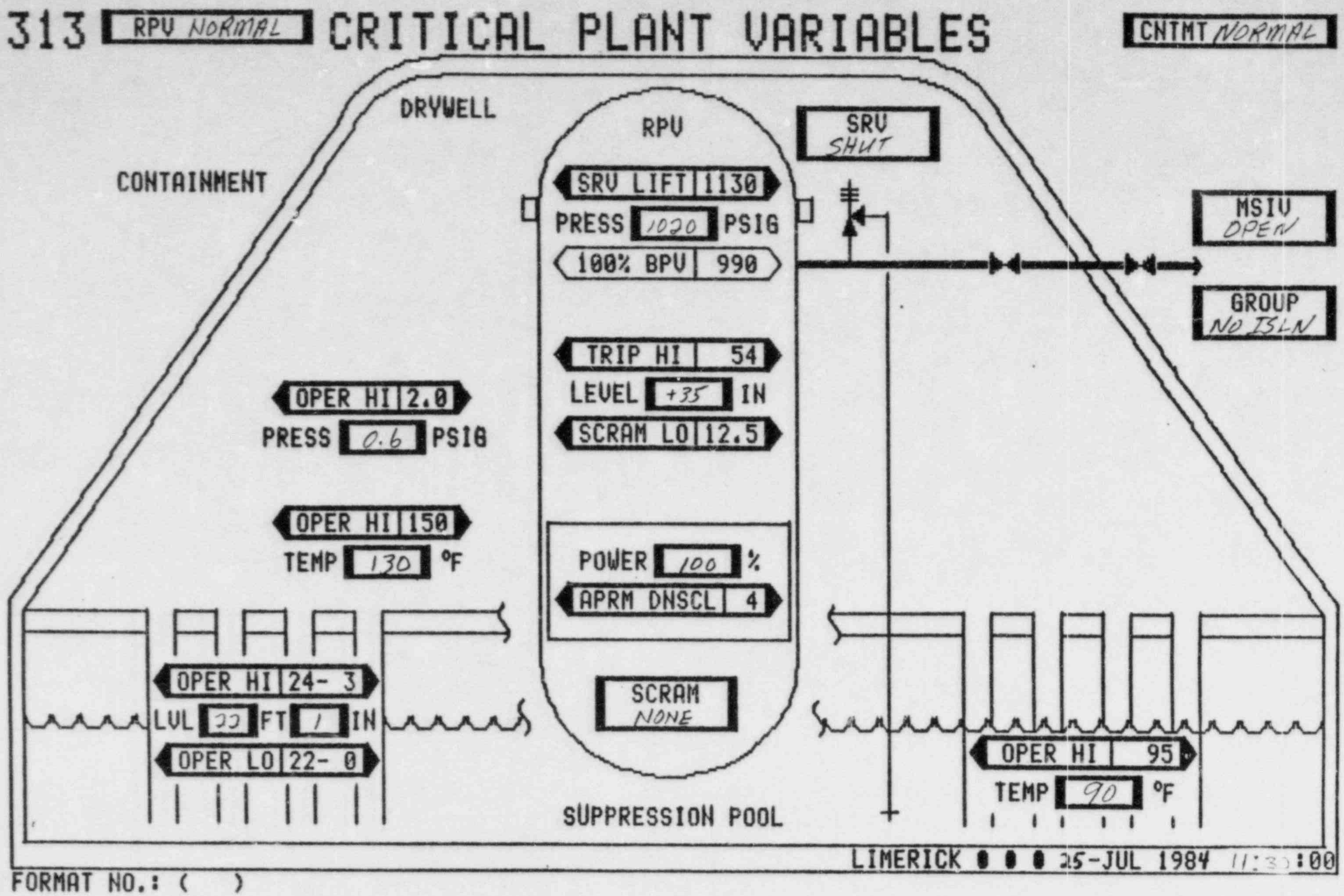
3J-56


313
RPV NORMAL
CRITICAL PLANT VARIABLES
CNTMT NORMAL
DRYWELL
CONTAINMENT
RPV
SRV SHUT
SRV LIFT 1130
PRESS 1020 PSIG
100% BPV 990
MSIV OPEN
GROUP NO ISLN
TRIP HI 54
LEVEL +35 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 0.6 PSIG
OPER HI 150
TEMP 130 °F
POWER 100 %
APRM DNSCL 4
SCRAM NONE
OPER HI 24- 3
LVL 22 FT 1 IN
OPER LO 22- 0
OPER HI 95
TEMP 90 °F
SUPPRESSION POOL
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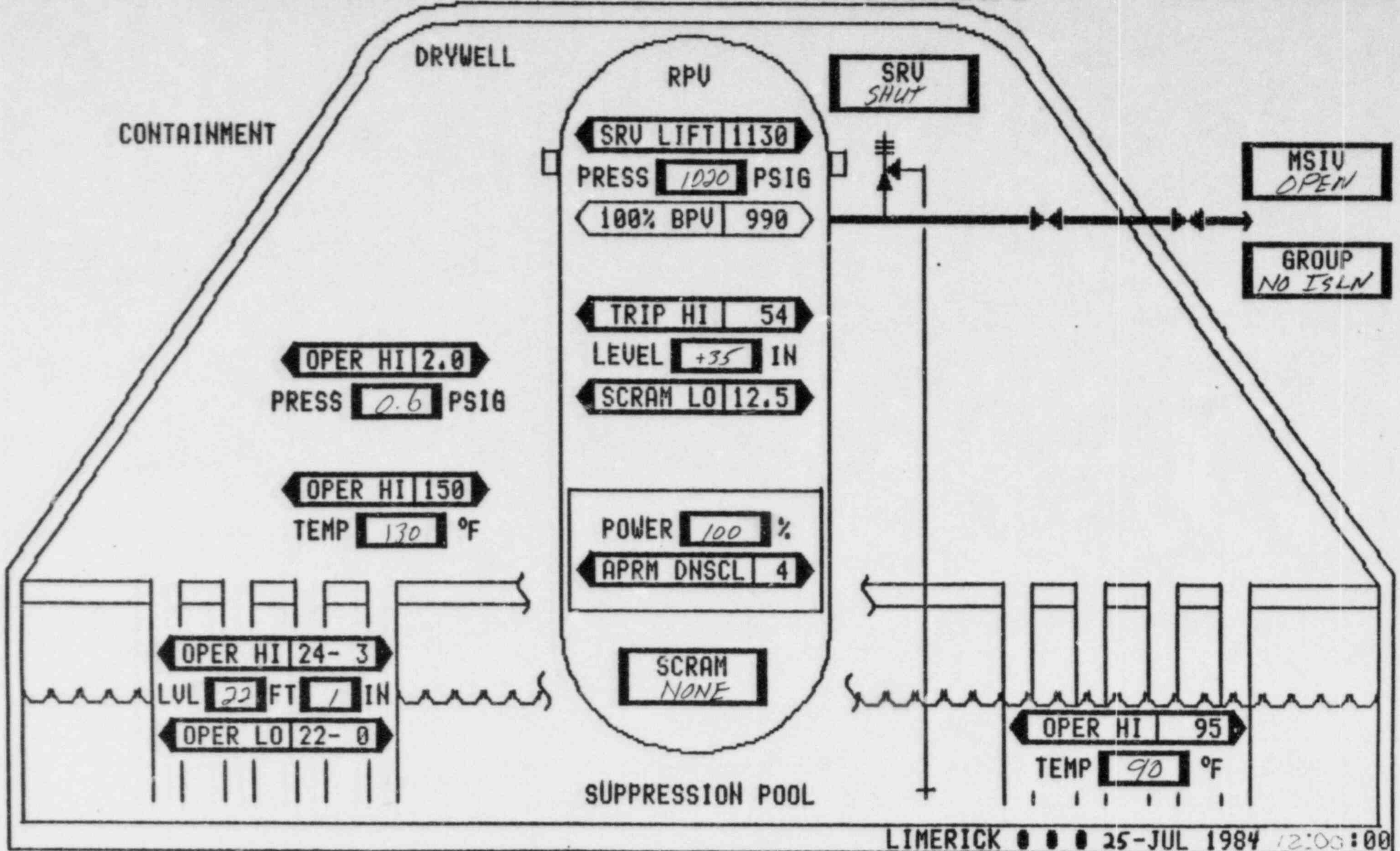
FORMAT NO.: ( )

3J-57

313 RPV *NORMAL*

CRITICAL PLANT VARIABLES

CNTMT *NORMAL*



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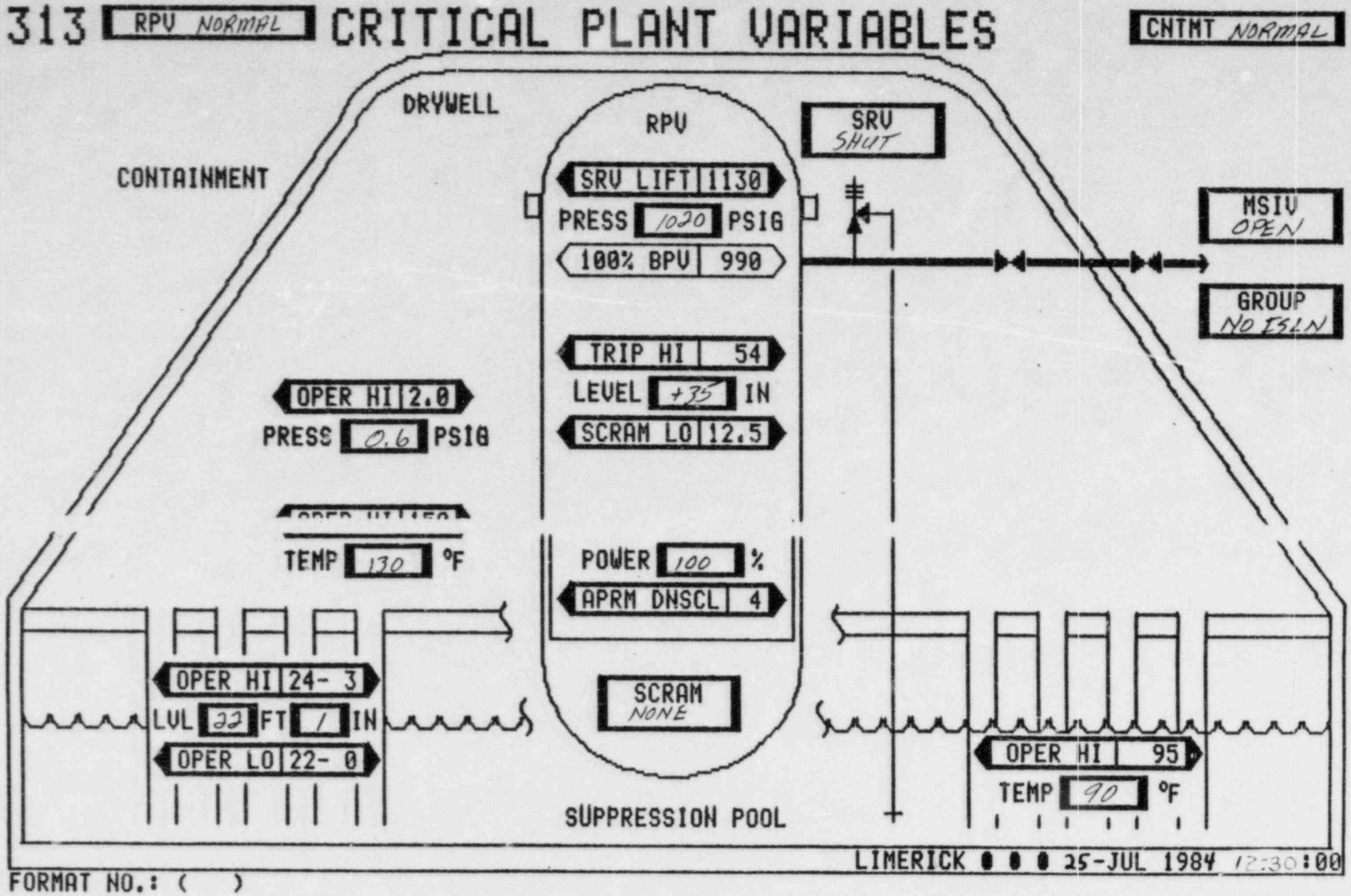
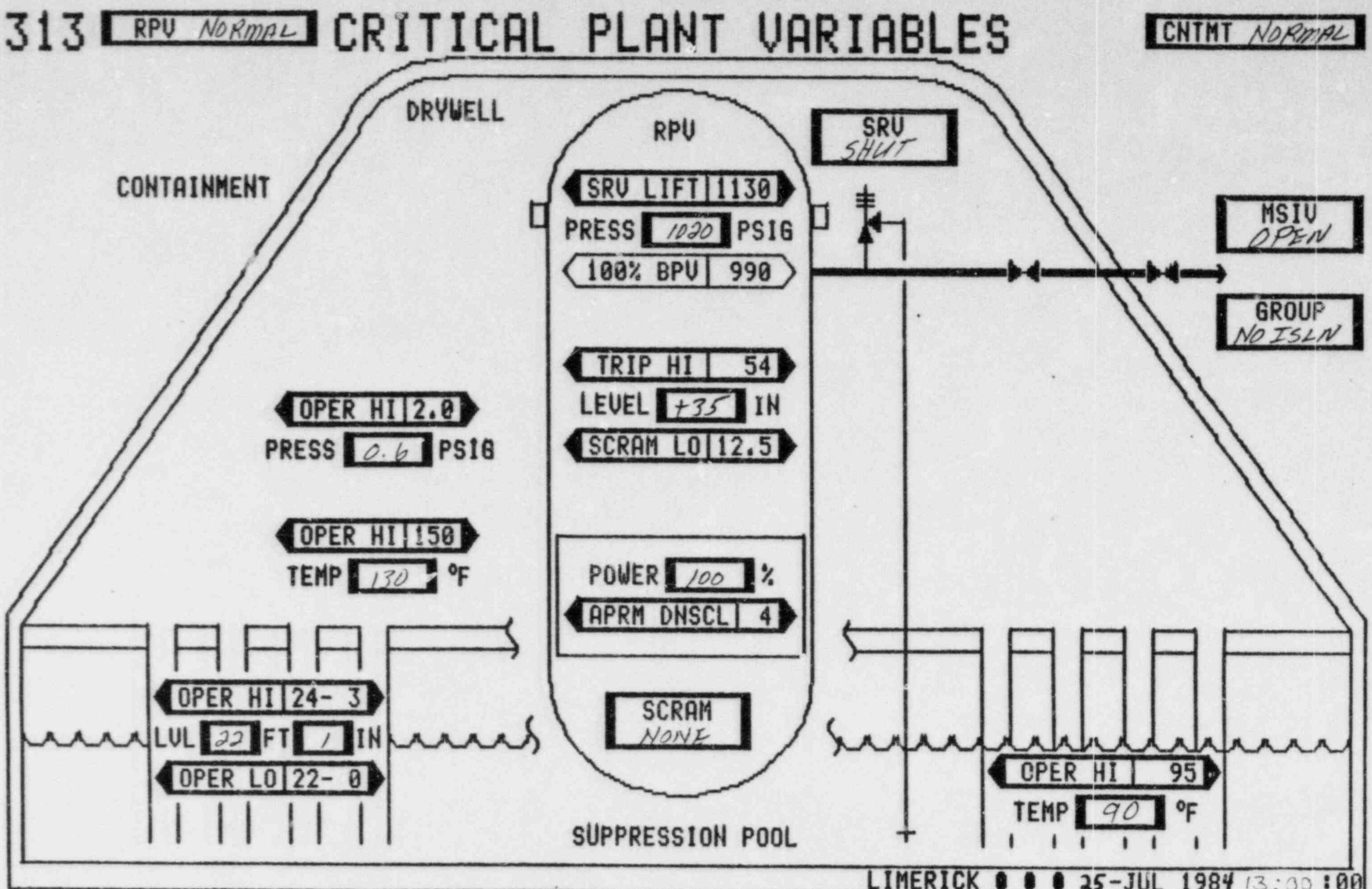
3J-58

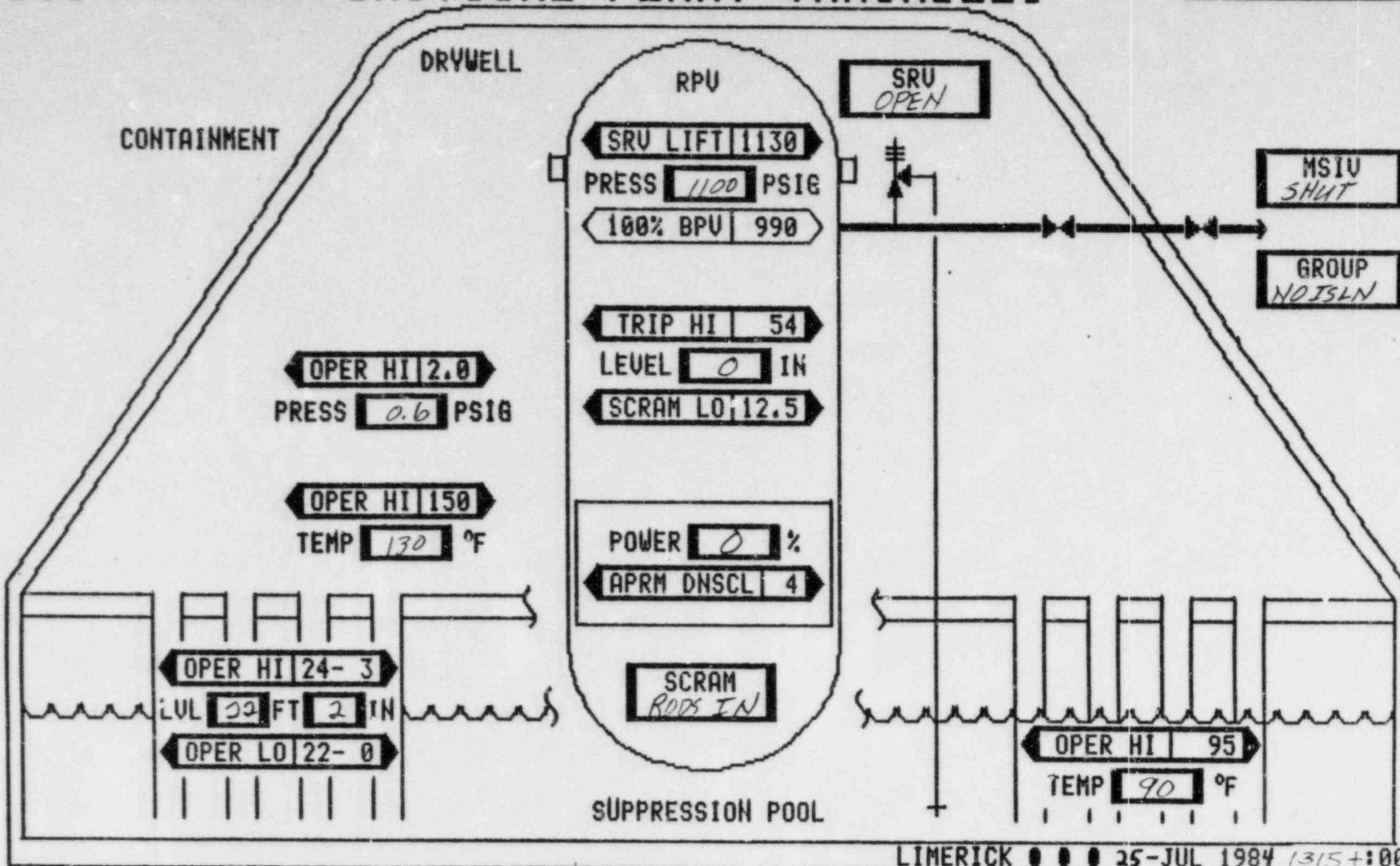

313
RPV NORMAL
CRITICAL PLANT VARIABLES
CNTMT NORMAL
DRYWELL
CONTAINMENT
RPV
SRV SHUT
SRV LIFT 1130
PRESS 1020 PSIG
100% BPV 990
MSIV OPEN
GROUP NO ISLN
TRIP HI 54
LEVEL +35 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 0.6 PSIG
TEMP 130 °F
POWER 100 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 1 IN
OPER LO 22- 0
SCRAM NONE
OPER HI 95
TEMP 90 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 12:30:00
FORMAT NO.: ( )

3J-59


313
RPV NORMAL
CRITICAL PLANT VARIABLES
CNTMT NORMAL
DRYWELL
CONTAINMENT
RPV
SRV SHUT
SRV LIFT 1130
PRESS 1020 PSIG
100% BPV 990
MSIV OPEN
GROUP NO ISLN
TRIP HI 54
LEVEL +35 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 0.6 PSIG
OPER HI 150
TEMP 130 °F
POWER 100 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 1 IN
OPER LO 22- 0
SCRAM NONE
OPER HI 95
TEMP 90 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 13:00:00

FORMAT NO.: (   )

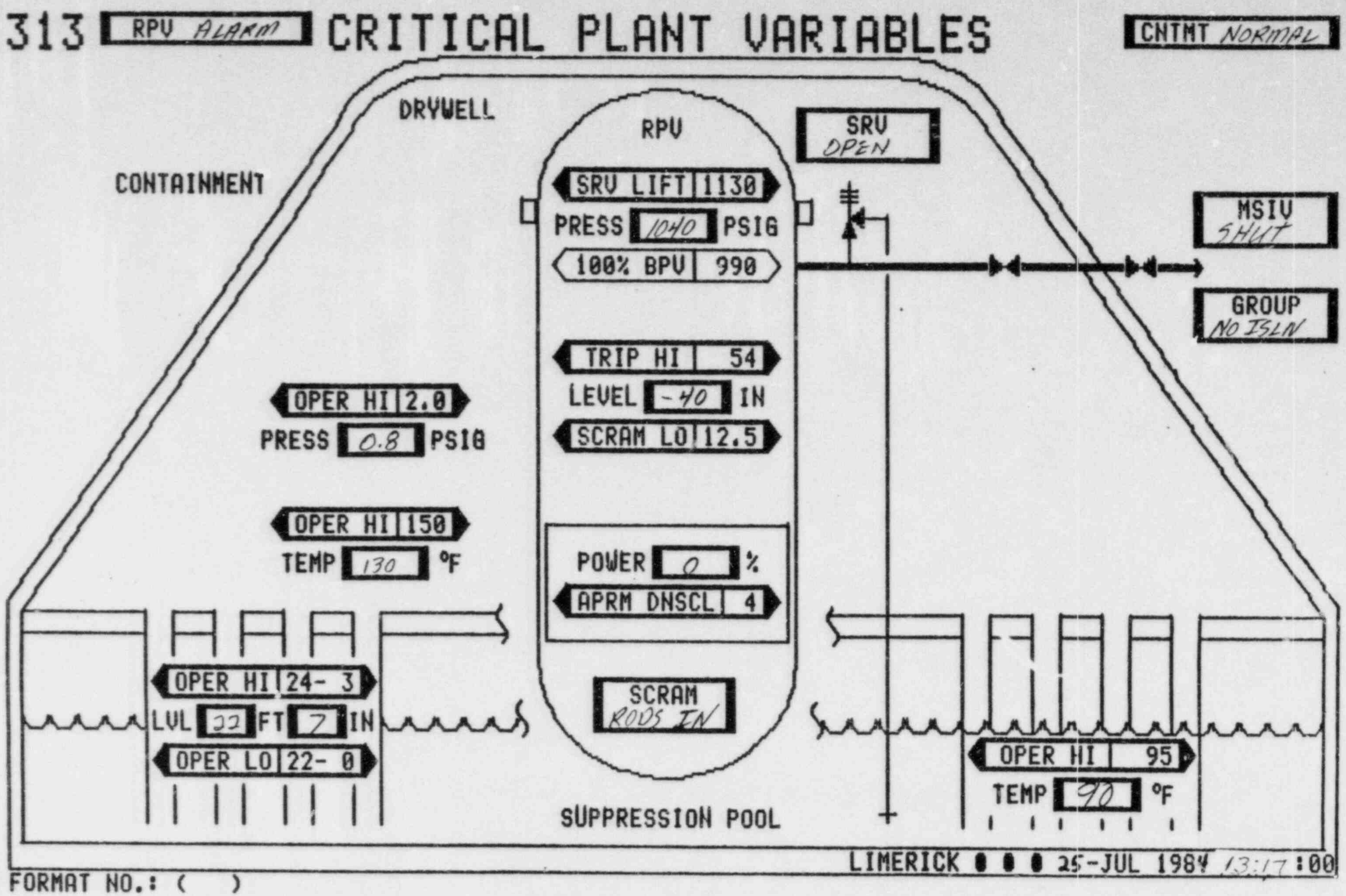
313 RPV ALARM CRITICAL PLANT VARIABLES



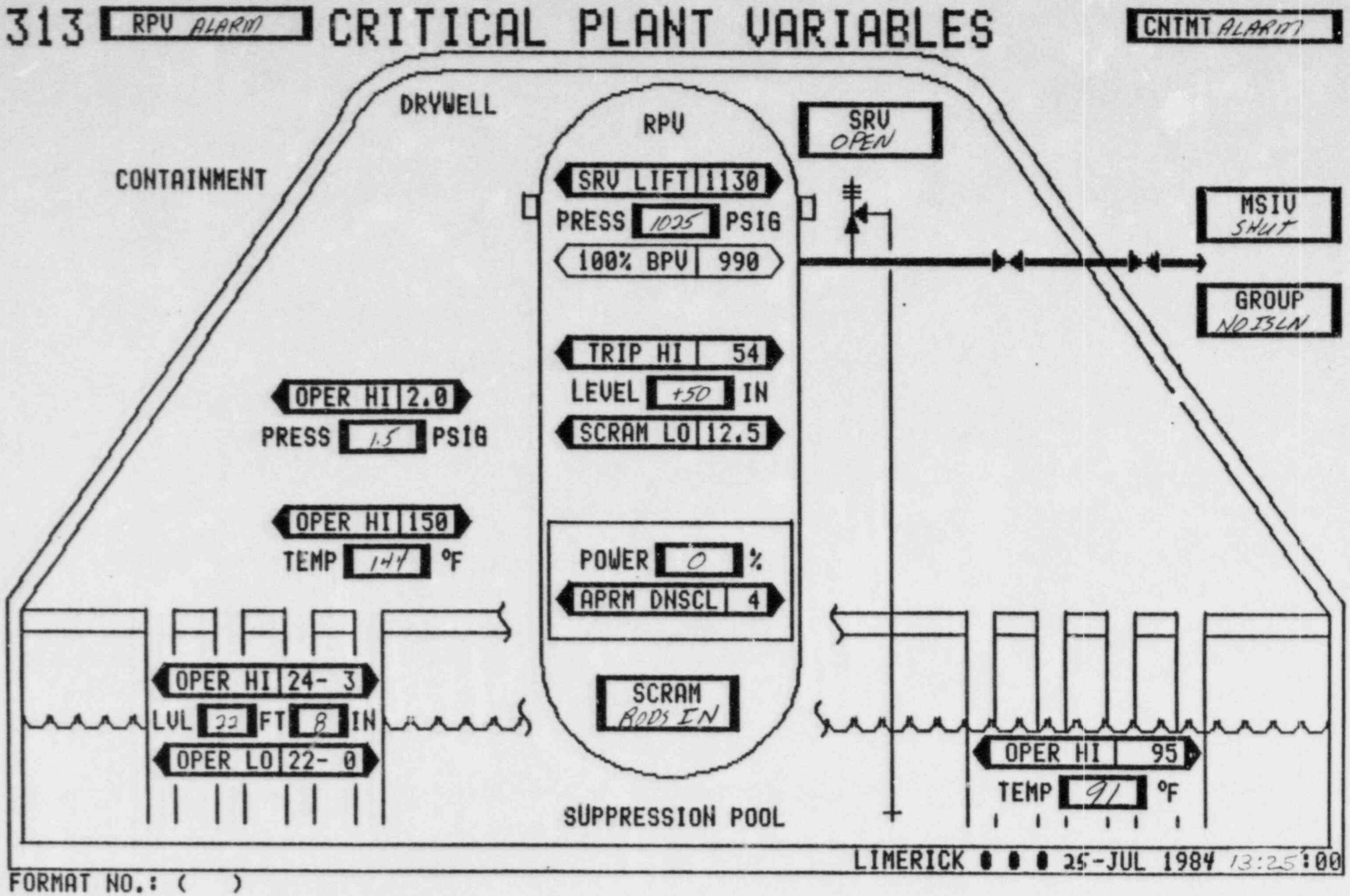
LIMERICK ● ● ● 25-JUL 1984 1315+:00

FORMAT NO.: (   )

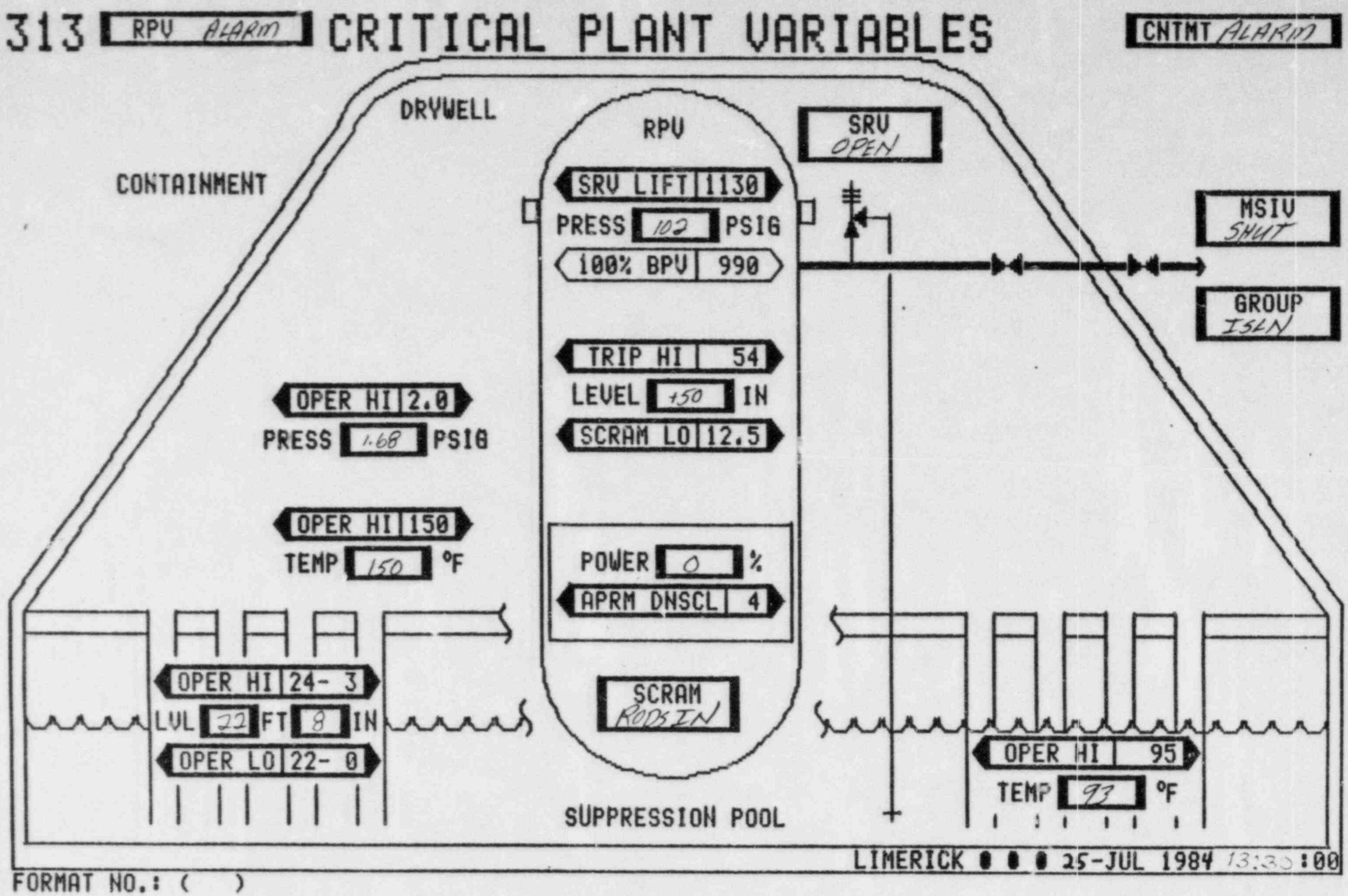
3J-61


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT NORMAL
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 1040 PSIG
100% BPV 990
MSIV SHUT
GROUP NO ISLN
TRIP HI 54
LEVEL -40 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 0.8 PSIG
OPER HI 150
TEMP 130 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 7 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 90 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 13:17:00
FORMAT NO.: ( )

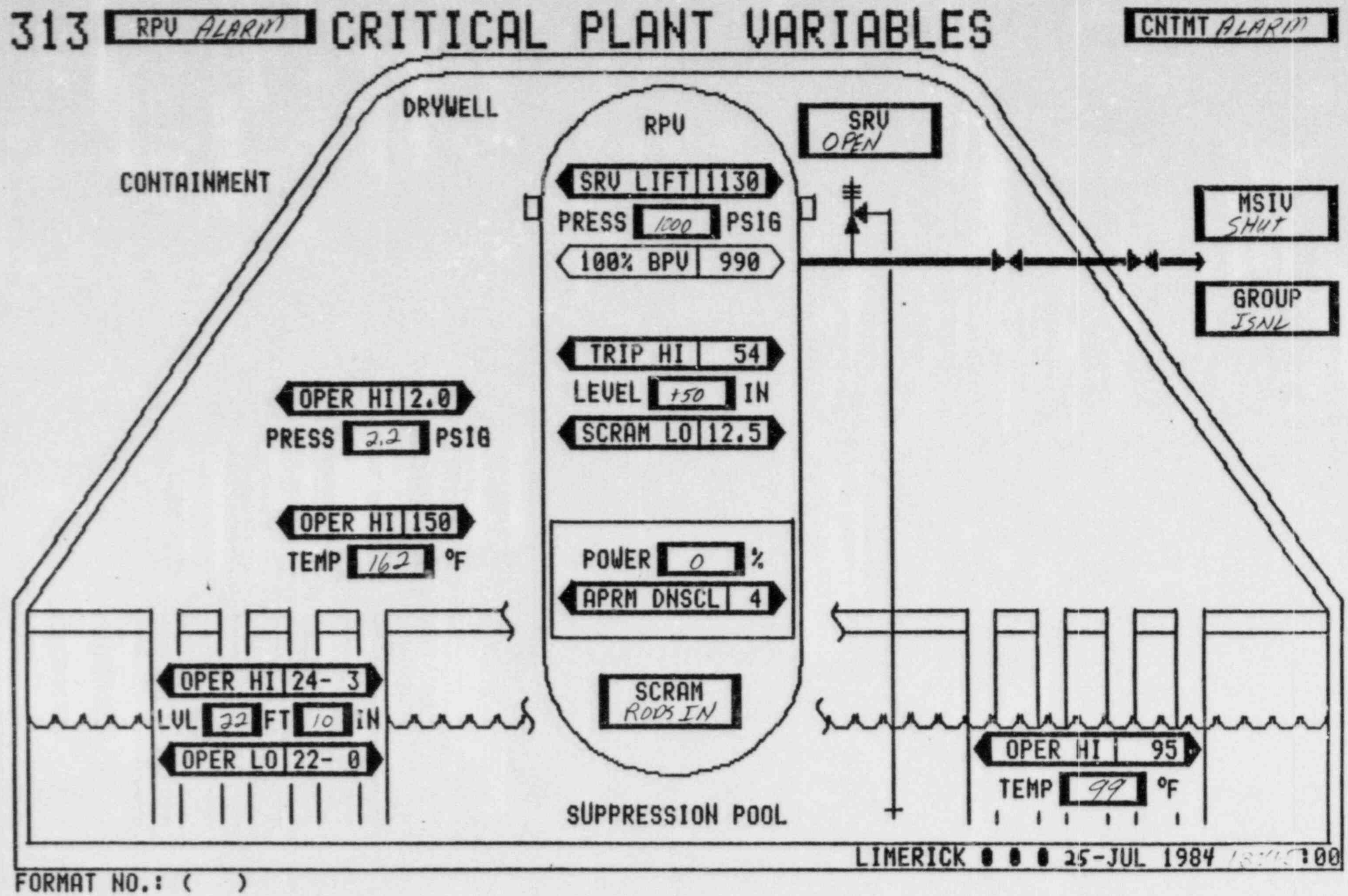
3J-62

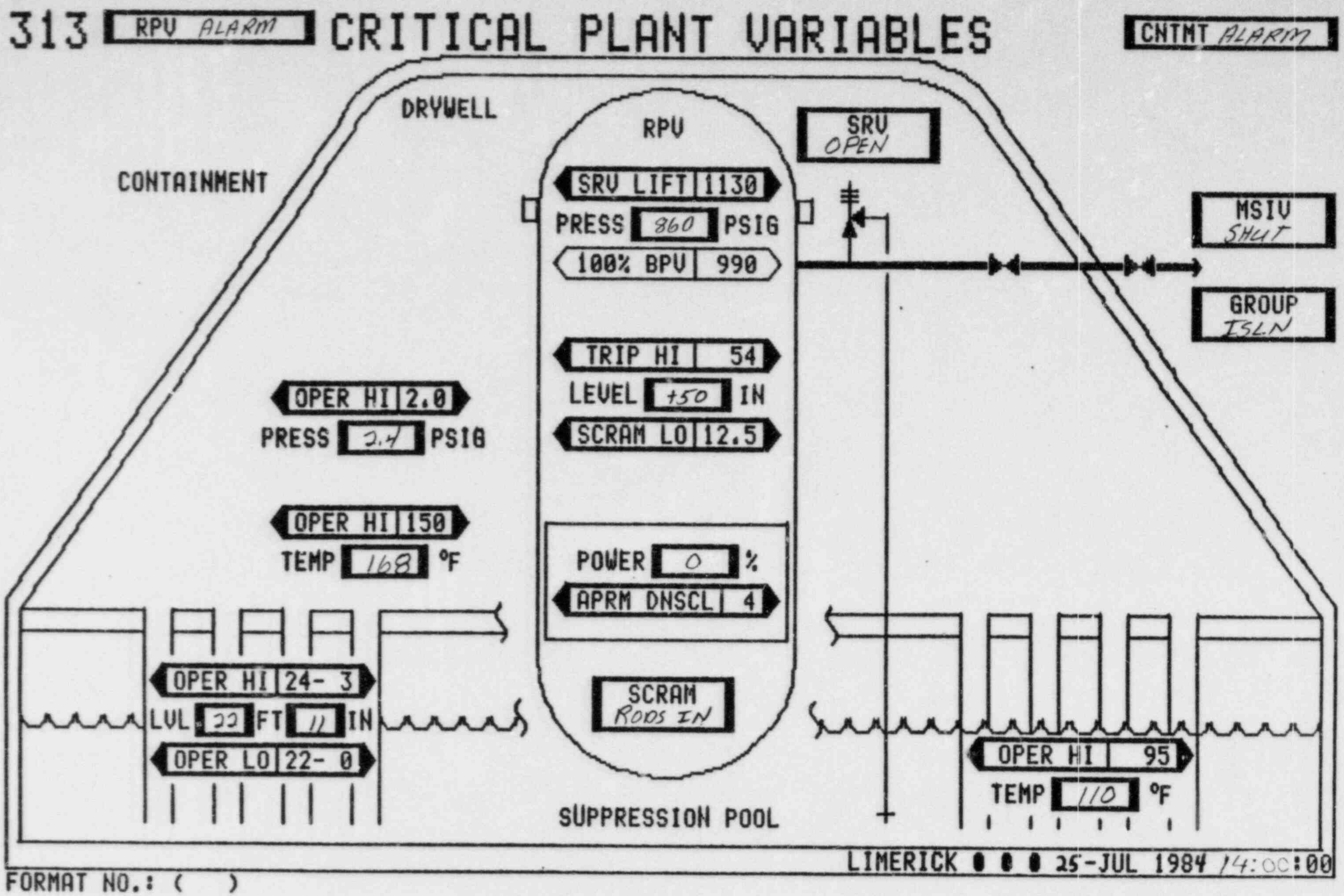

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 1025 PSIG
100% BPV 990
MSIV SHUT
GROUP NO ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.5 PSIG
OPER HI 150
TEMP 144 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 8 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 91 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 13:25:00
FORMAT NO.: ( )

3J-63

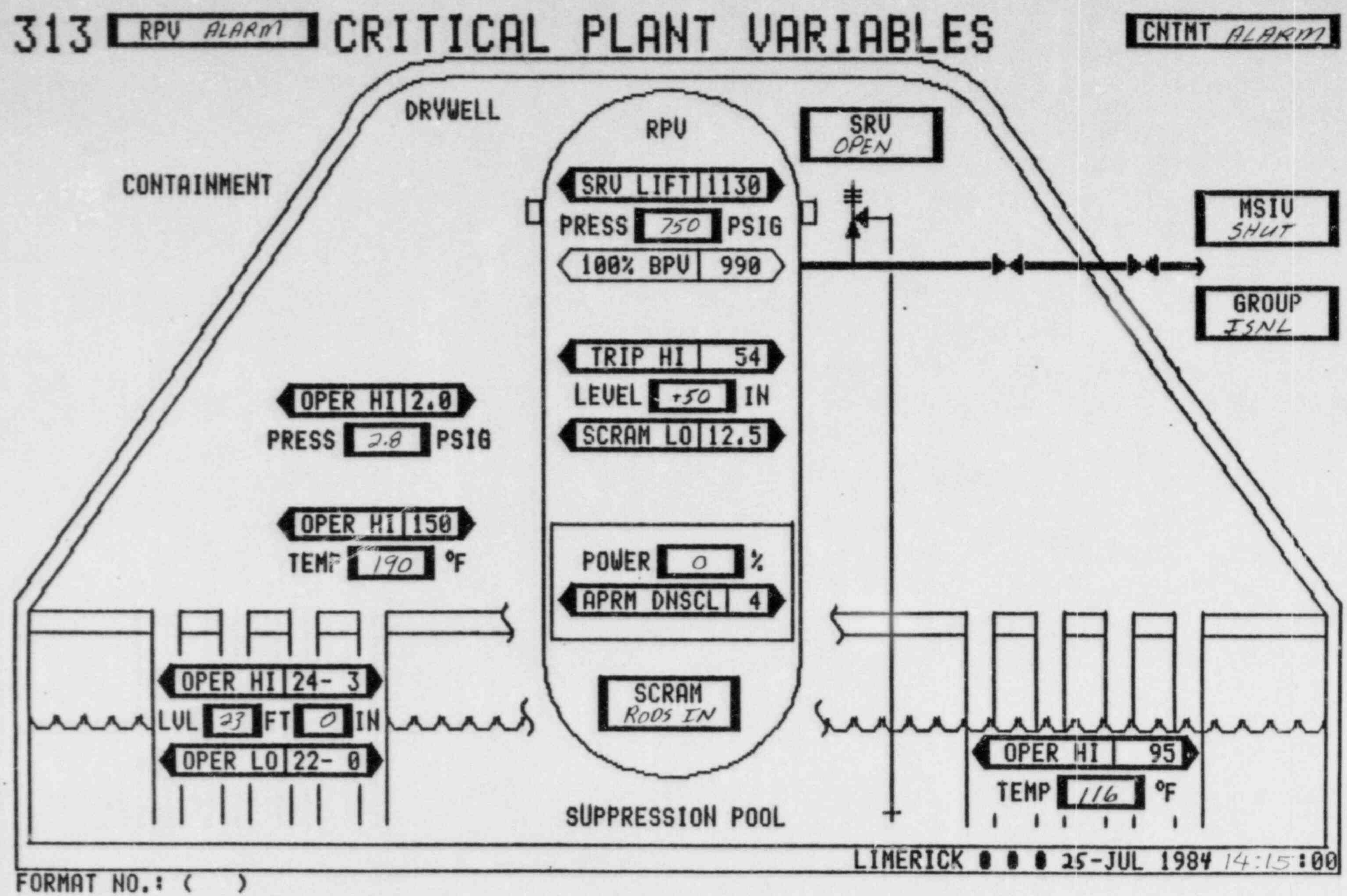

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 102 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.68 PSIG
OPER HI 150
TEMP 150 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 8 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 93 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 13:30 :00
FORMAT NO.: ( )

3J-64

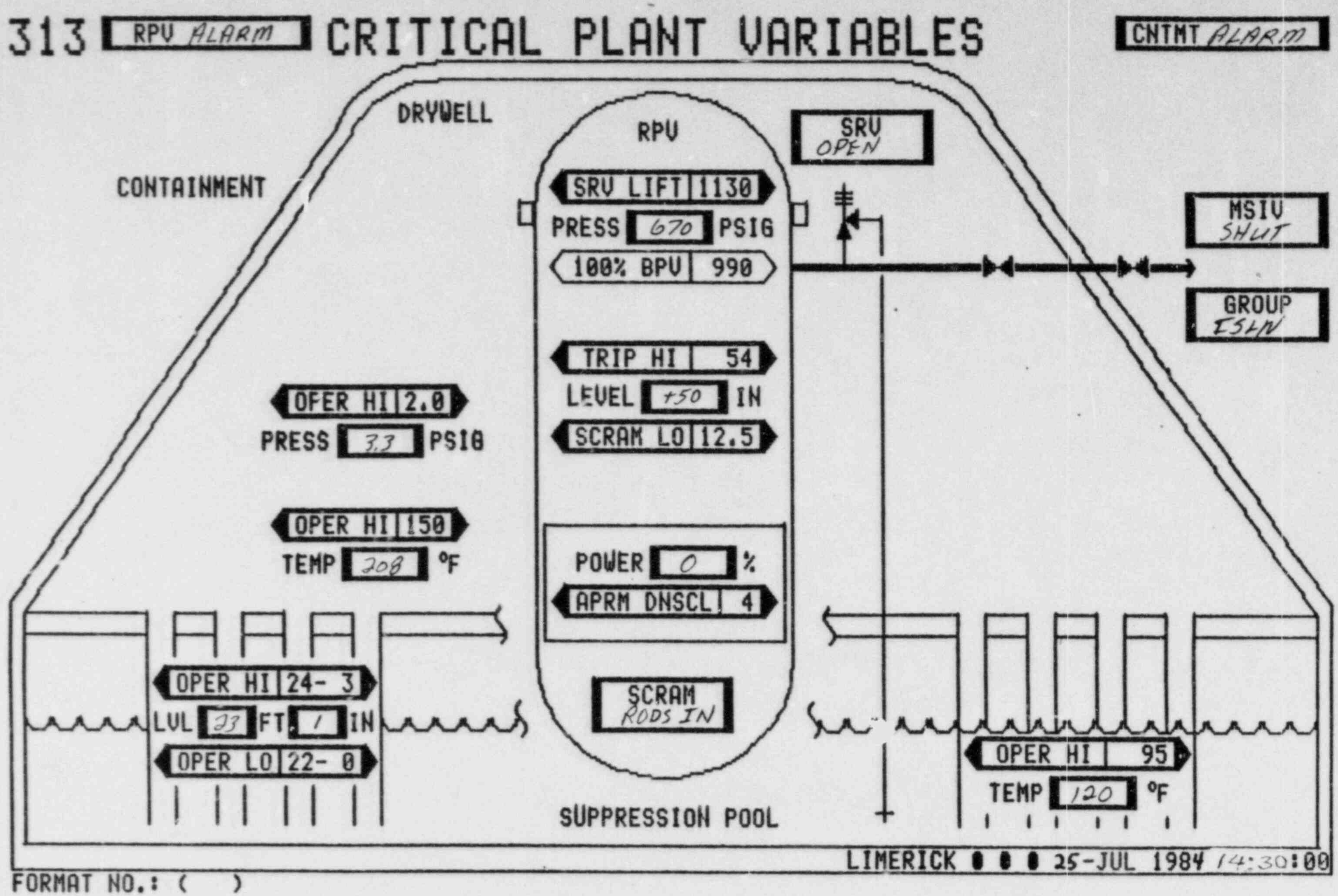

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV
OPEN
SRV LIFT 1130
PRESS 1000 PSIG
100% BPV 990
MSIV
SHUT
GROUP
ISNL
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 2.2 PSIG
OPER HI 150
TEMP 162 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM
RODS IN
OPER HI 95
TEMP 99 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 860 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 2.4 PSIG
OPER HI 150
TEMP 168 °F
POWER 0 %
APRM DNSCL 4
SCRAM RODS IN
OPER HI 24- 3
LVL 22 FT 11 IN
OPER LO 22- 0
OPER HI 95
TEMP 110 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 14:00:00
FORMAT NO.: ( )

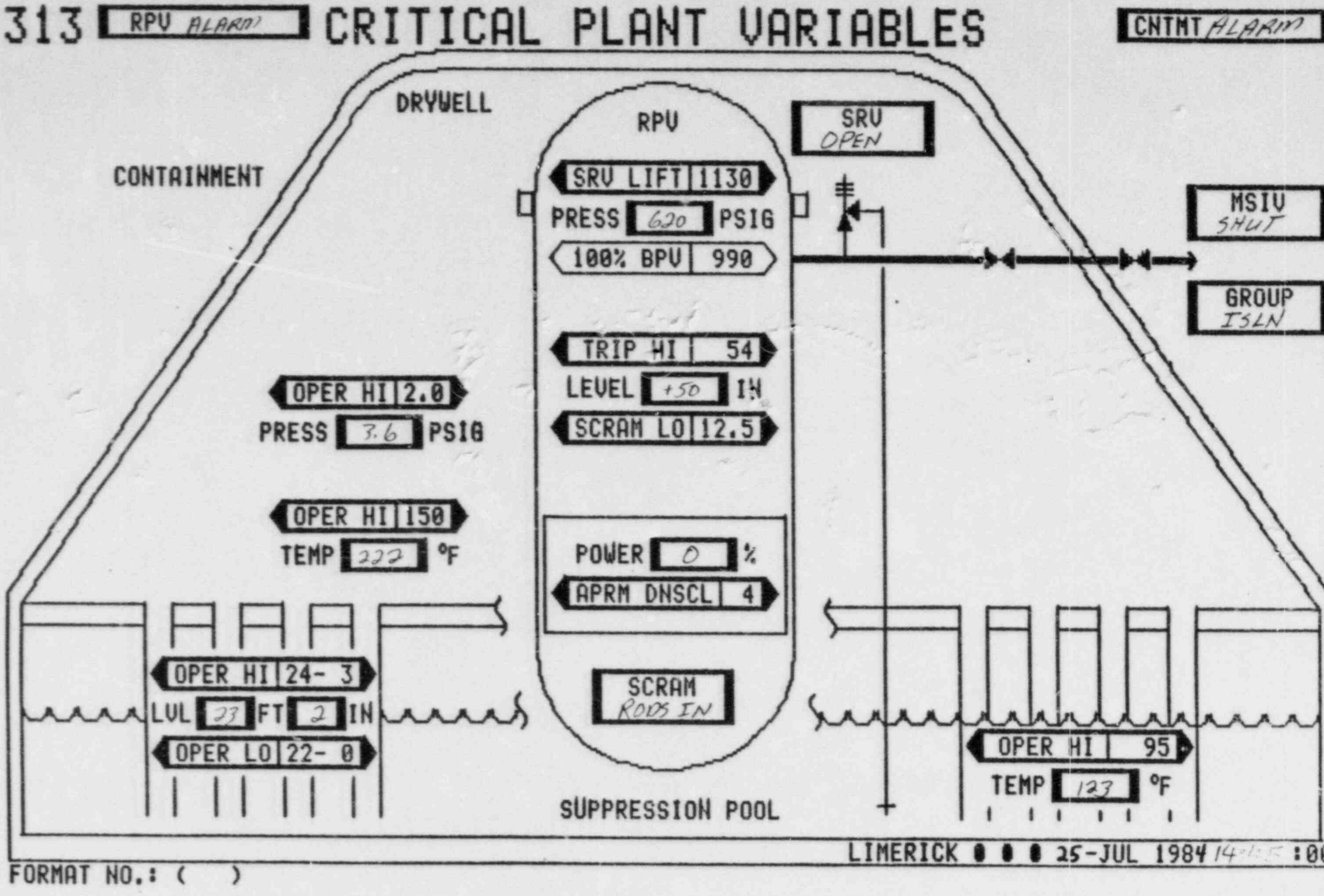
3J-66


313 RPV ALARM CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 750 PSIG
100% BPV 990
MSIV SHUT
GROUP ISNL
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 2.8 PSIG
OPER HI 150
TEMP 190 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 0 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 116 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 14:15:00
FORMAT NO.: (   )

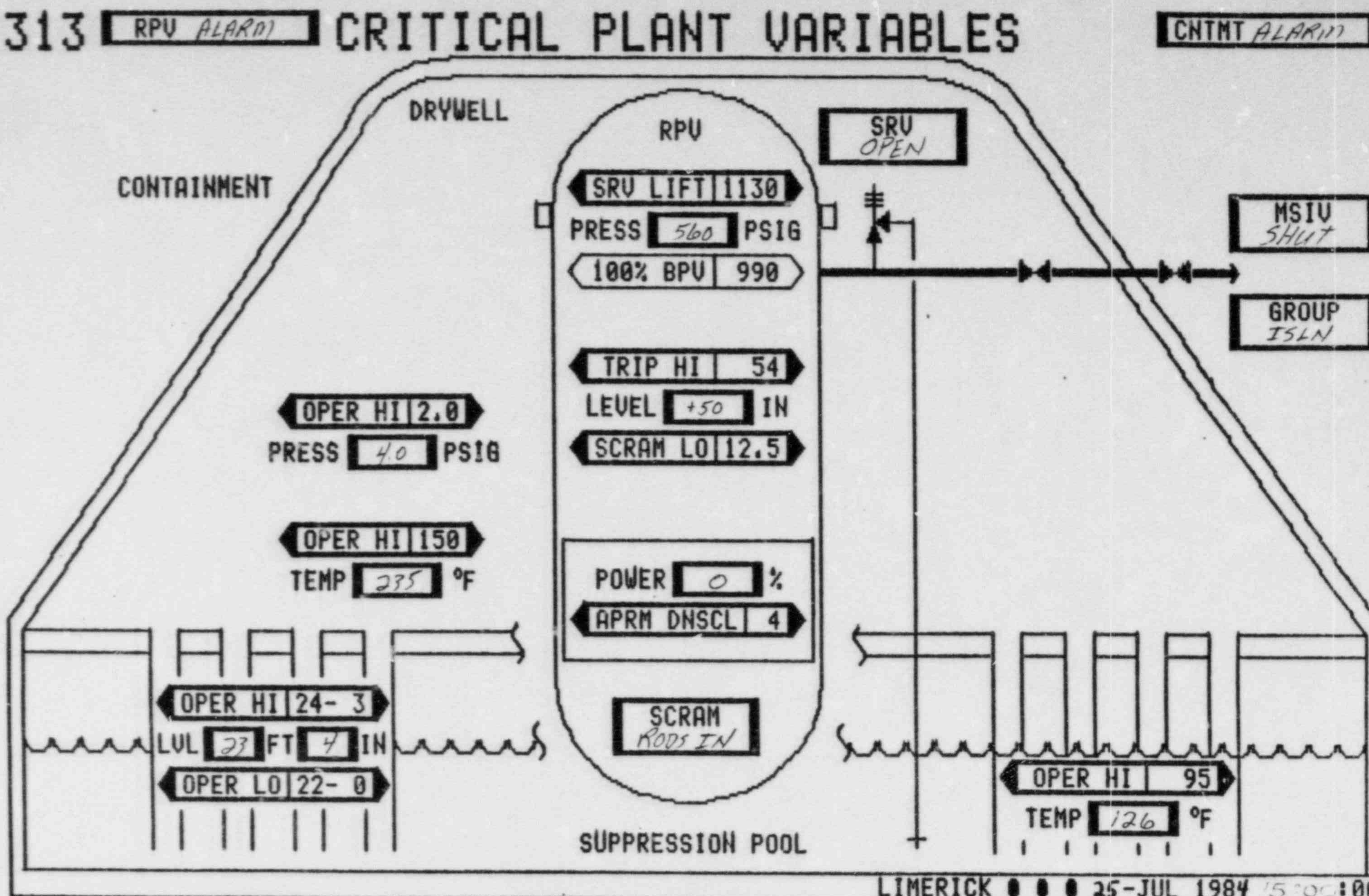
3J-67


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 670 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.3 PSIG
OPER HI 150
TEMP 208 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 1 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 120 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 14:30:00
FORMAT NO.: ( )

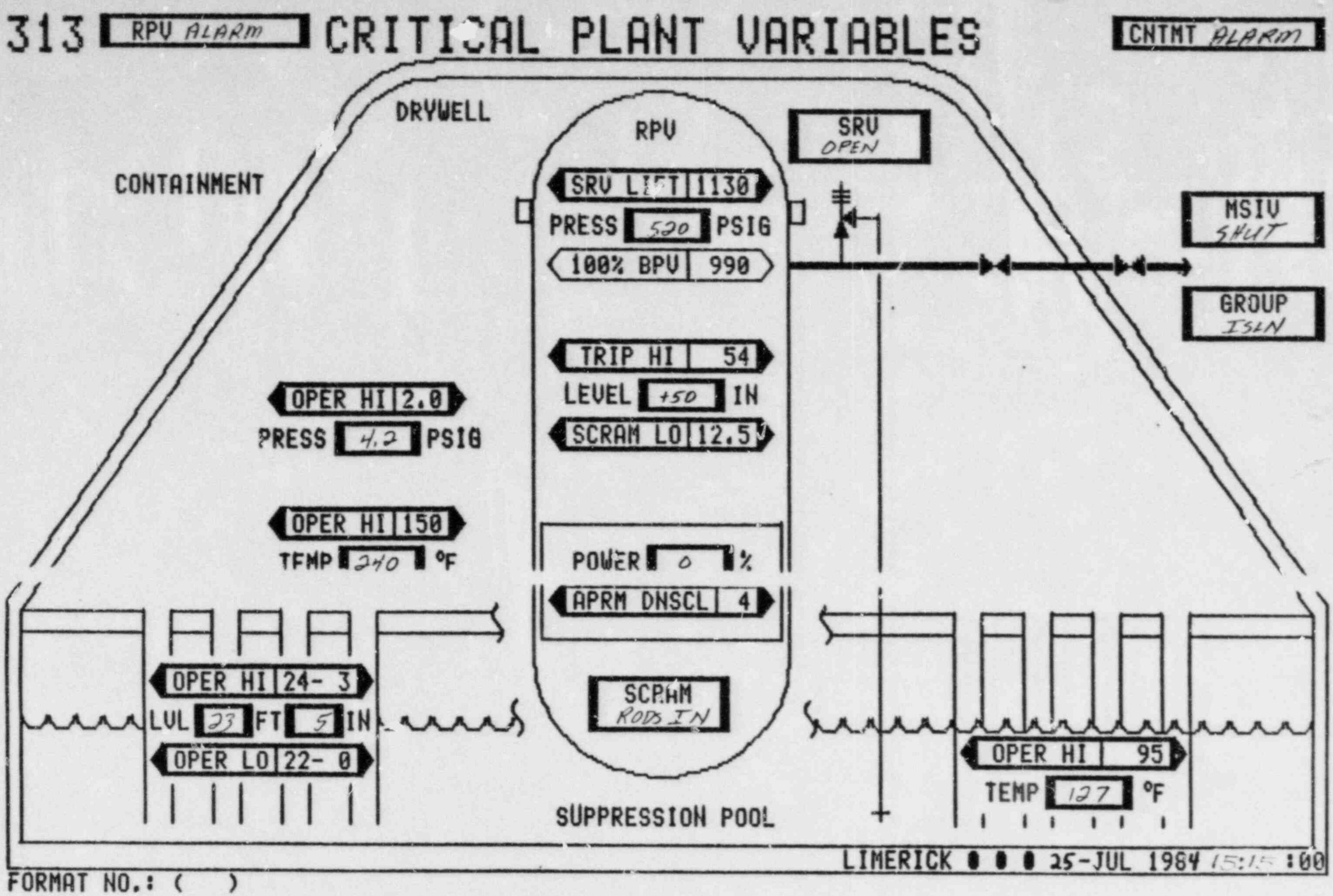
3J-68


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 620 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.6 PSIG
OPER HI 150
TEMP 222 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 2 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 123 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 14:15:00
FORMAT NO.: ( )

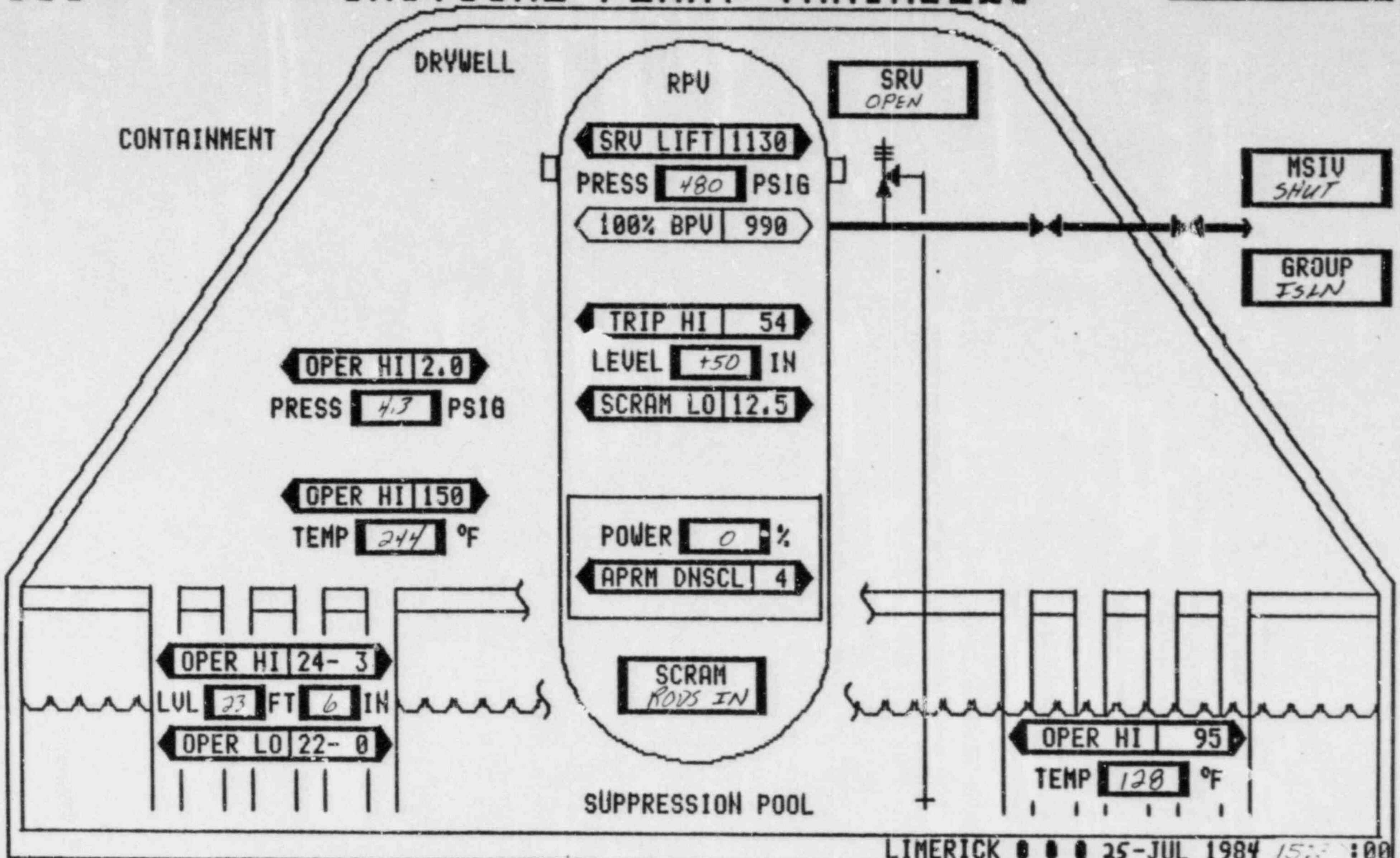
313 CRITICAL PLANT VARIABLES



FORMAT NO.: (   )

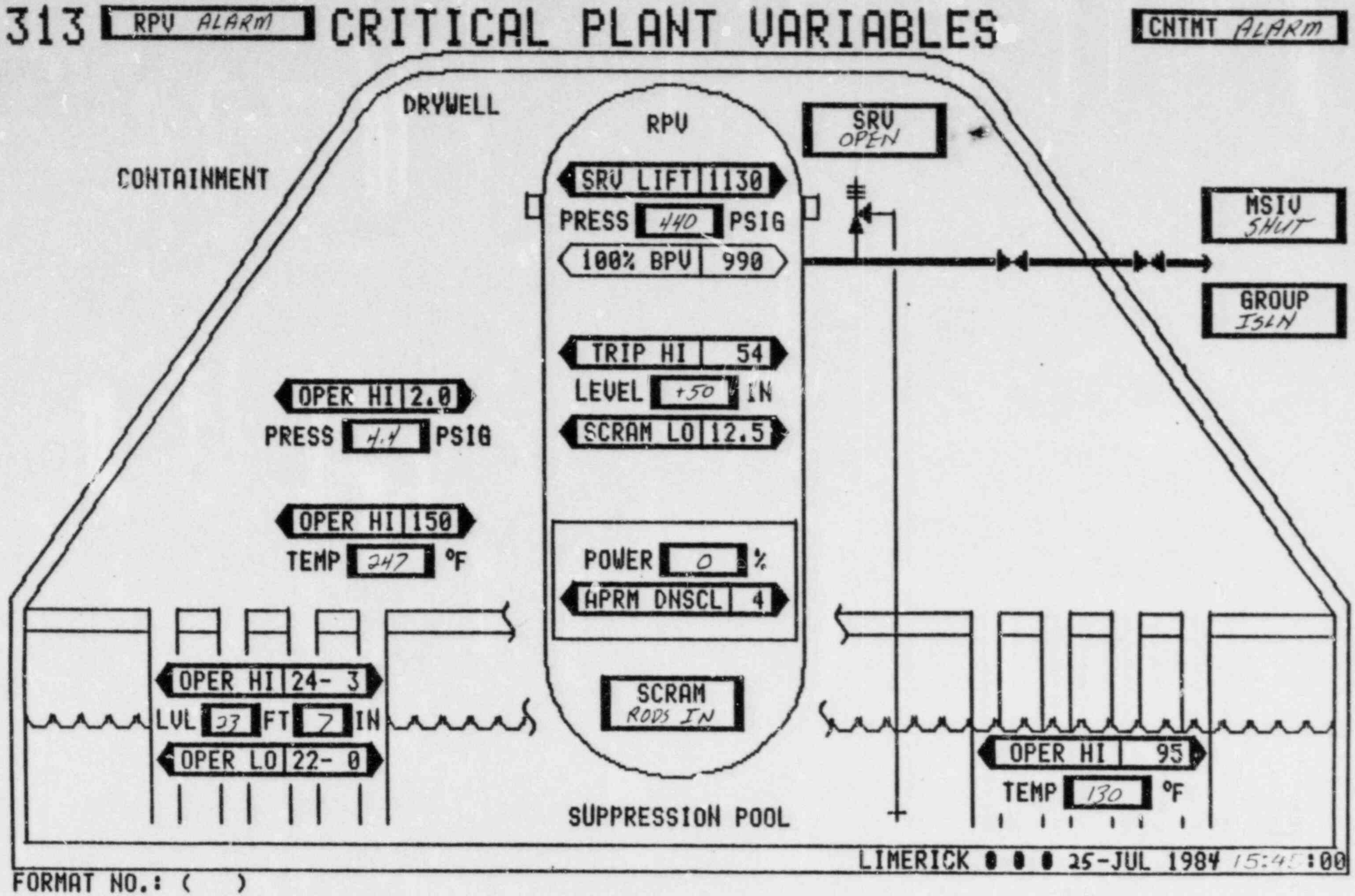

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 520 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.2 PSIG
OPER HI 150
TEMP 240 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 5 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 127 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 15:15 :00
FORMAT NO.: ( )

313 RPV ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

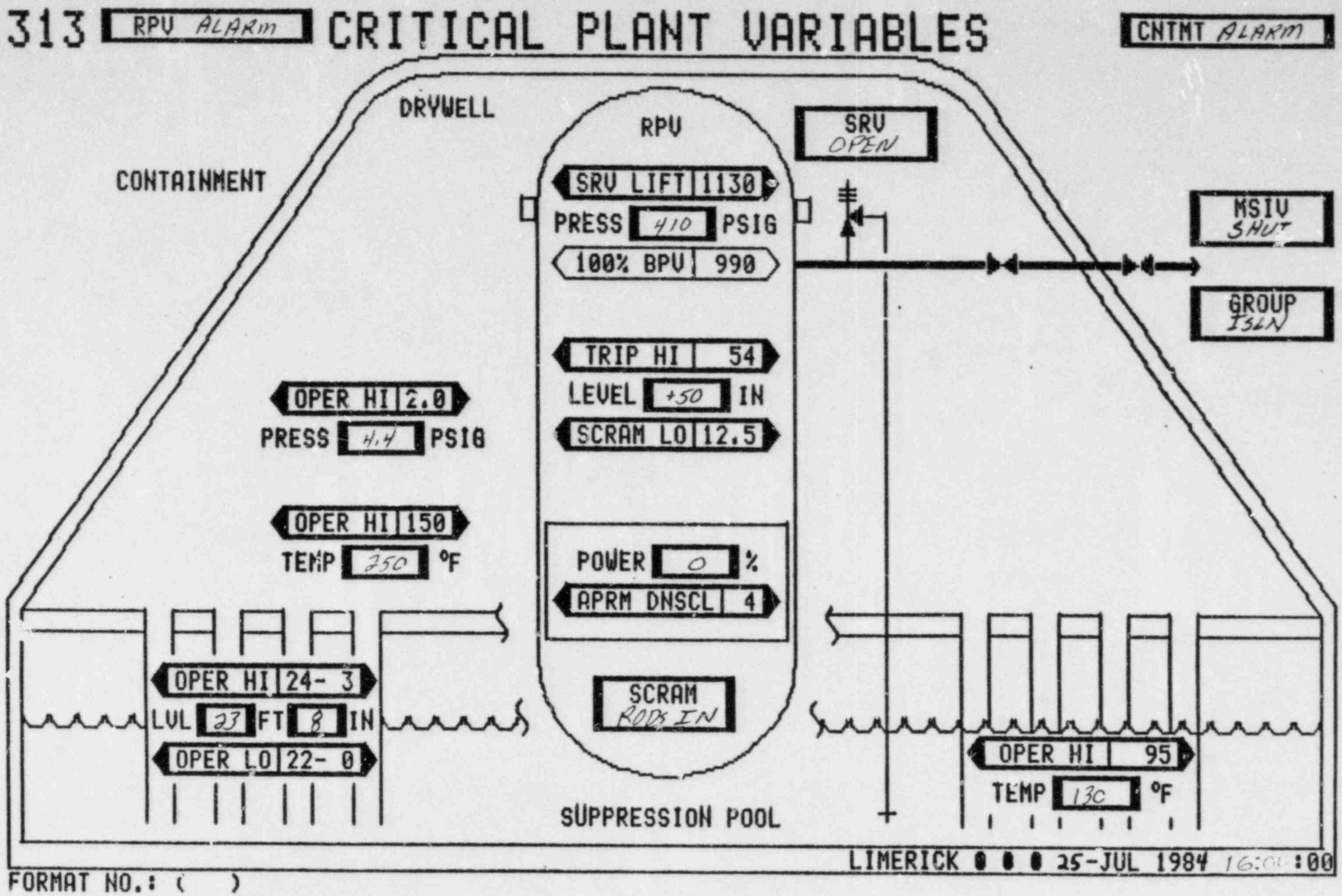


FORMAT NO.: (   )

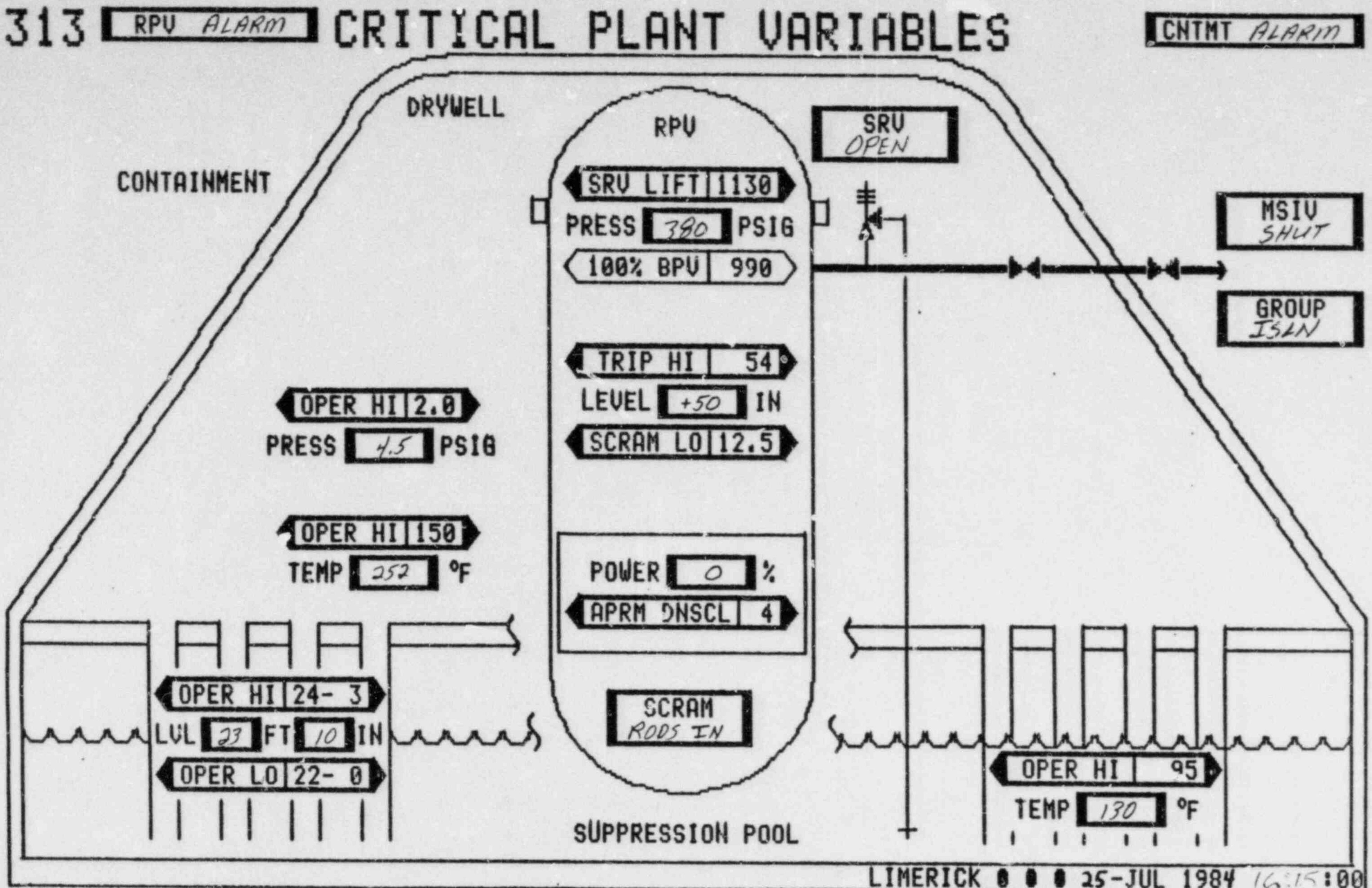
3J-72


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 440 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.4 PSIG
OPER HI 150
TEMP 247 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 7 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 130 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 15:45:00
FORMAT NO.: ( )

3J-73

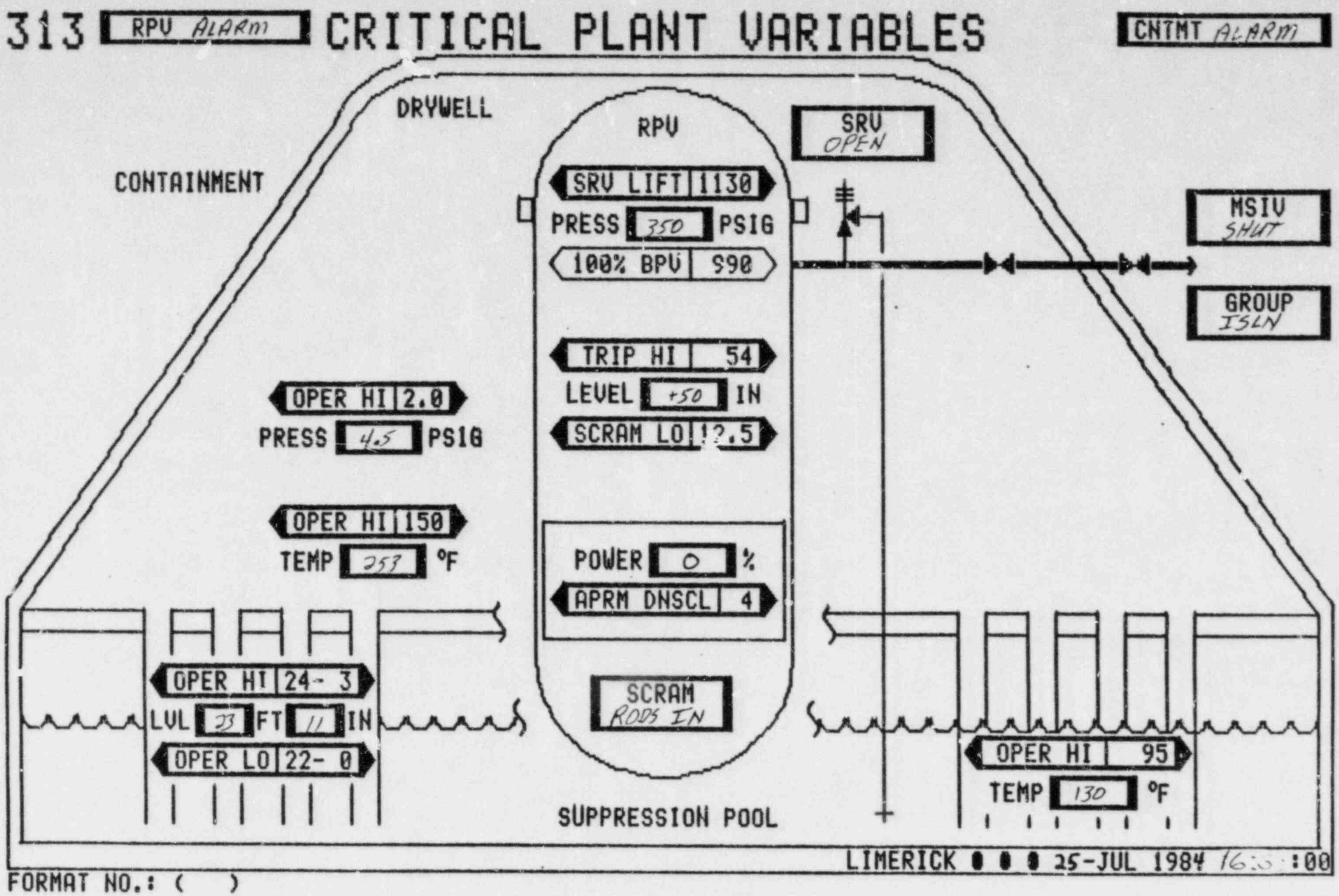

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 410 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.4 PSIG
OPER HI 150
TEMP 250 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 8 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 130 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

3J-74

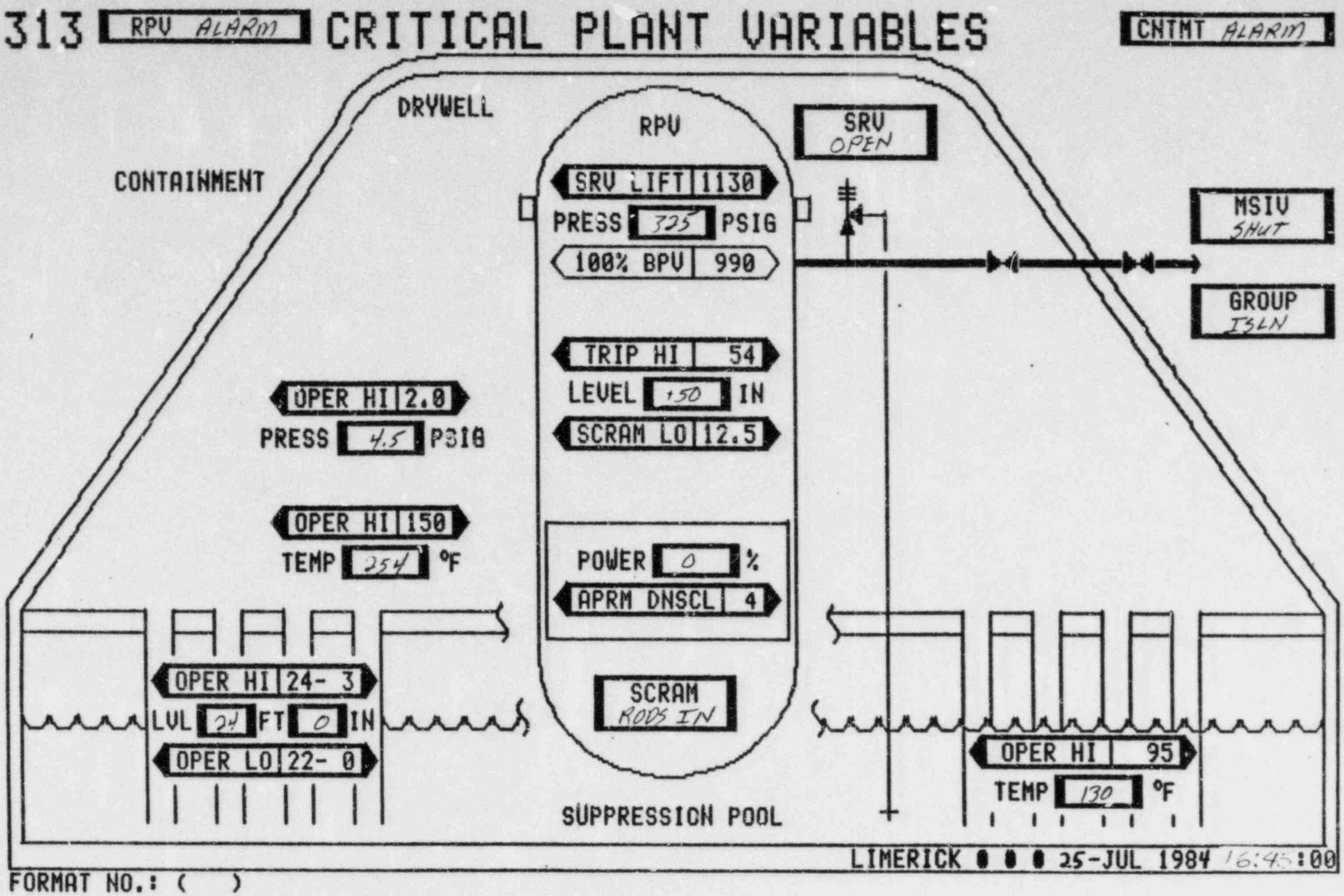


FORMAT NO. ( )

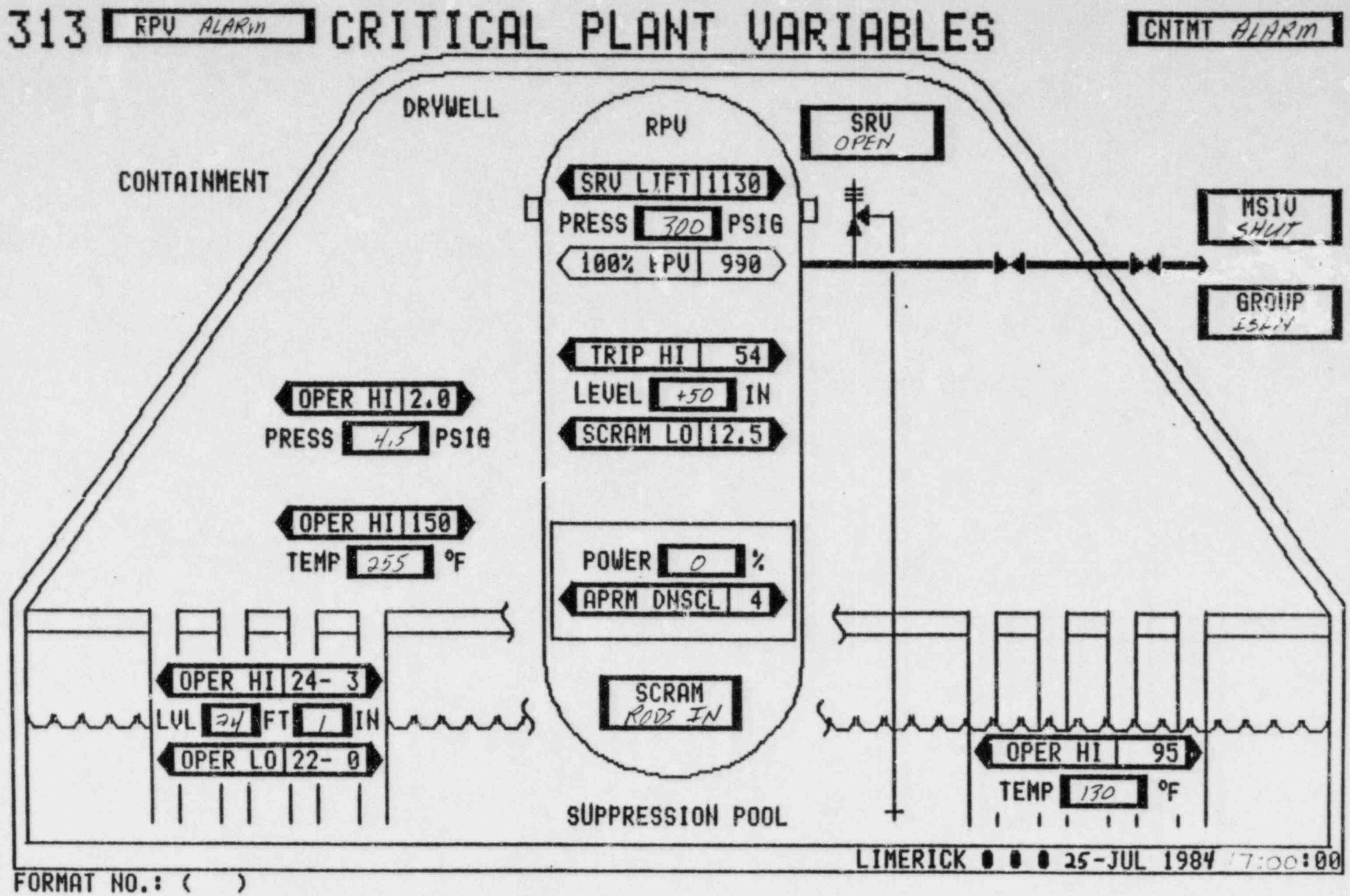
3J-75

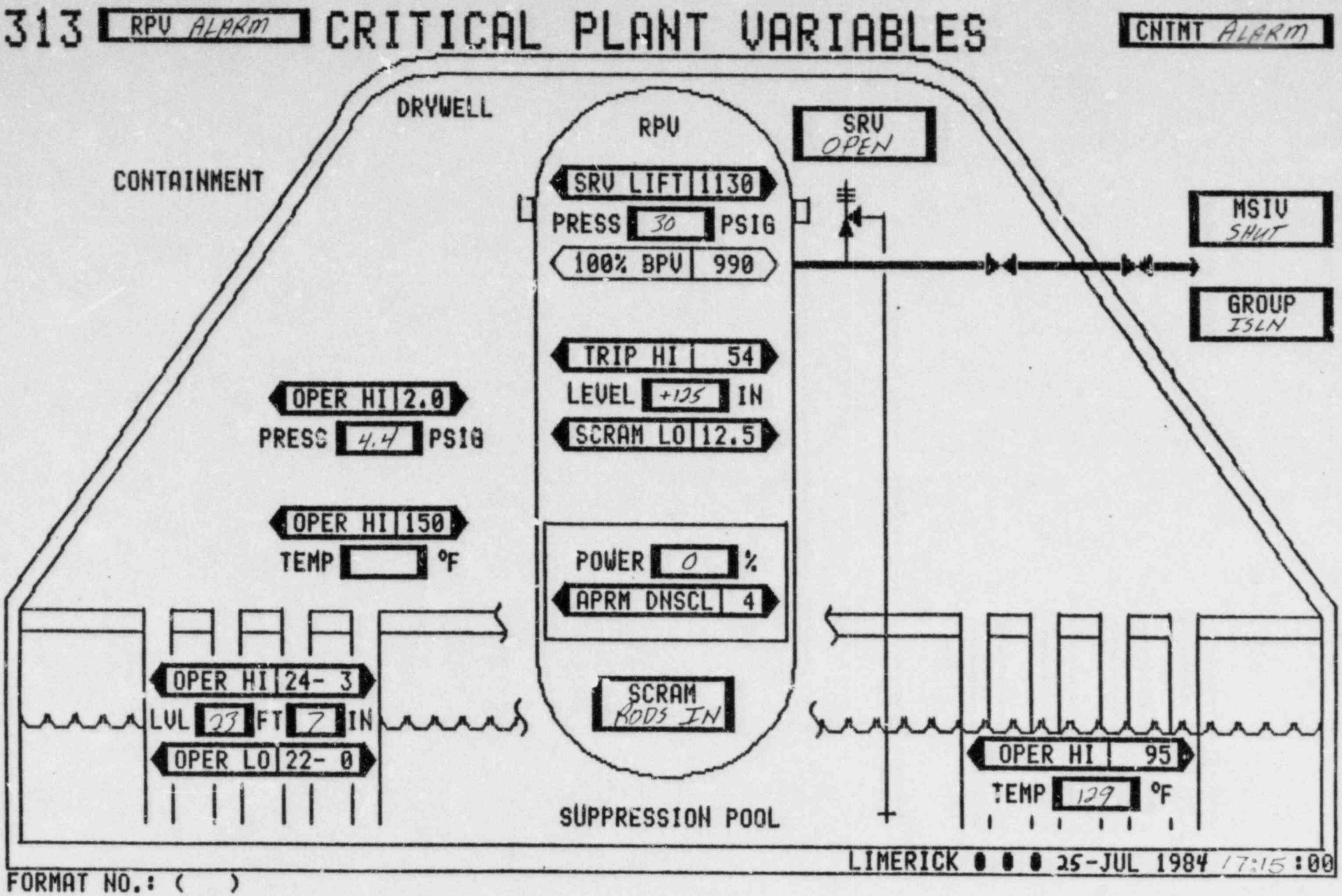

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 350 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.5 PSIG
OPER HI 150
TEMP 253 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 11 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 130 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 16: :00
FORMAT NO.: ( )

3J-76

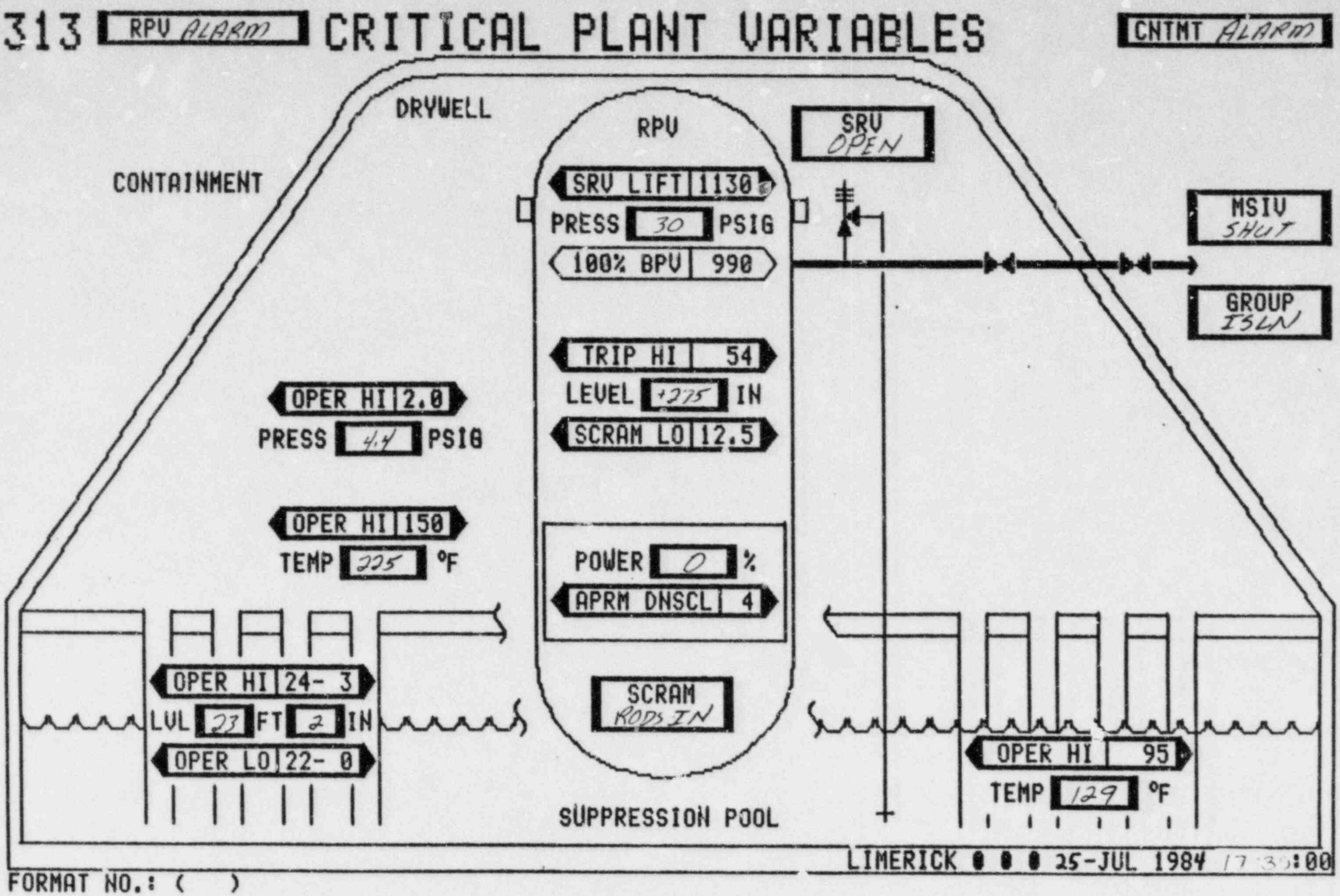

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 325 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.5 PSIG
OPER HI 150
TEMP 254 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 24 FT 0 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 130 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 16:45:00
FORMAT NO.: (   )

3J-77

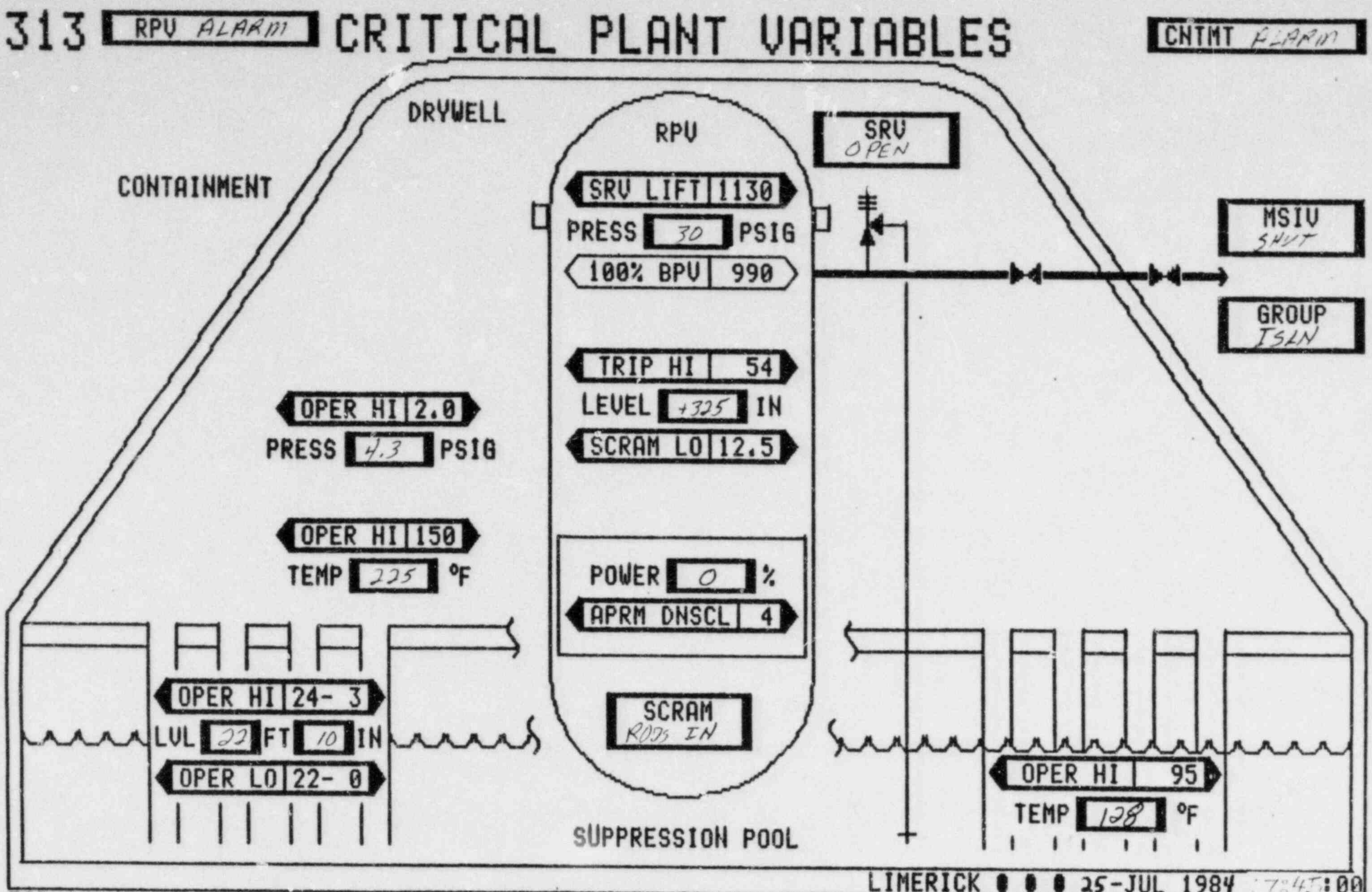

313
RPV ALARm
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 300 PSIG
100% RPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +50 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.5 PSIG
OPER HI 150
TEMP 255 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 24 FT 1 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 130 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 17:00:00
FORMAT NO.: ( )


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +125 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.4 PSIG
OPER HI 150
TEMP °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 7 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 129 °F
SUPPRESSION POOL
LIMERICK ● ● ● 25-JUL 1984 17:15:00
FORMAT NO.: (   )

3J-79

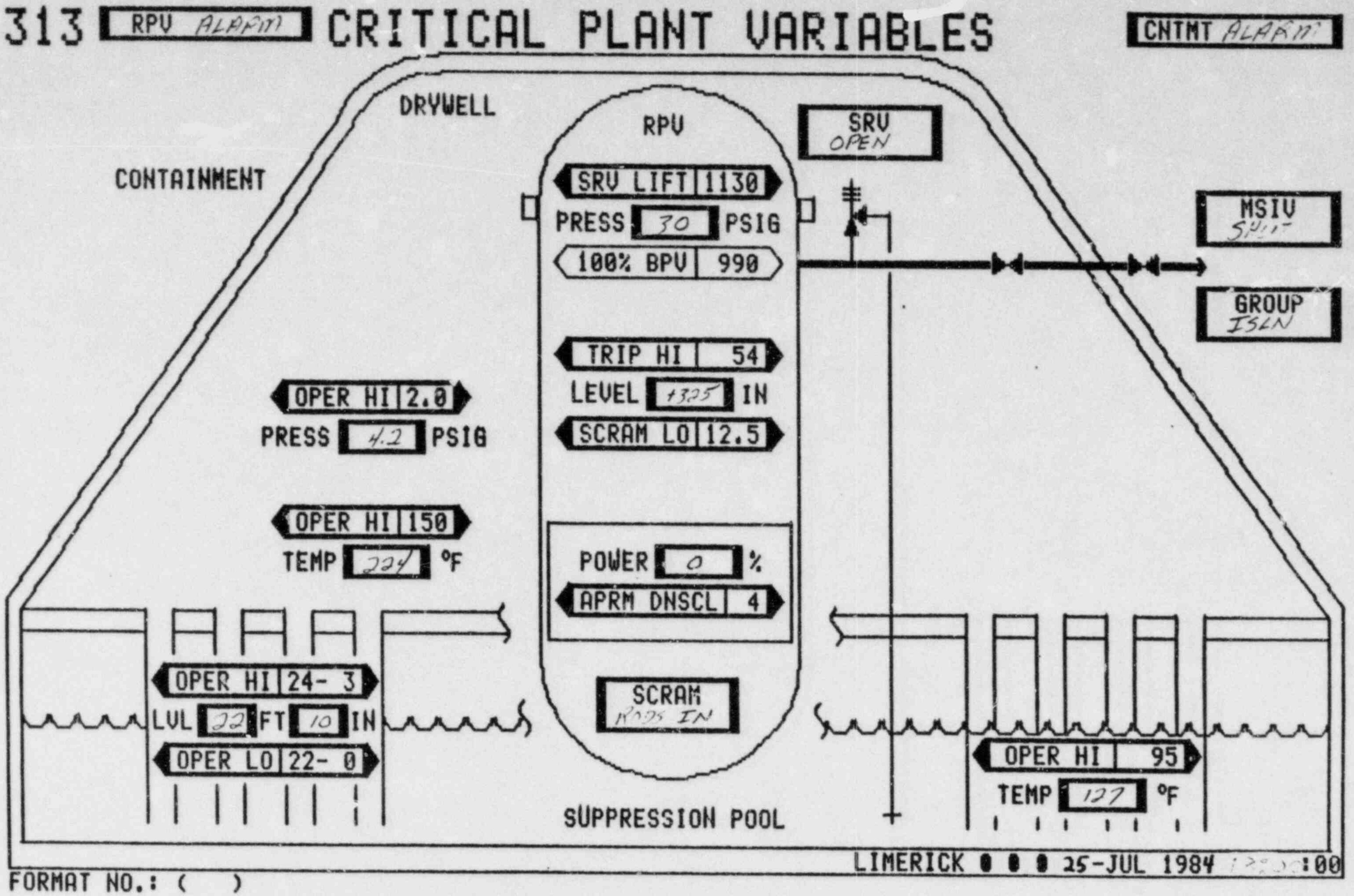

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +275 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.4 PSIG
OPER HI 150
TEMP 225 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 23 FT 2 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 129 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

3J-80

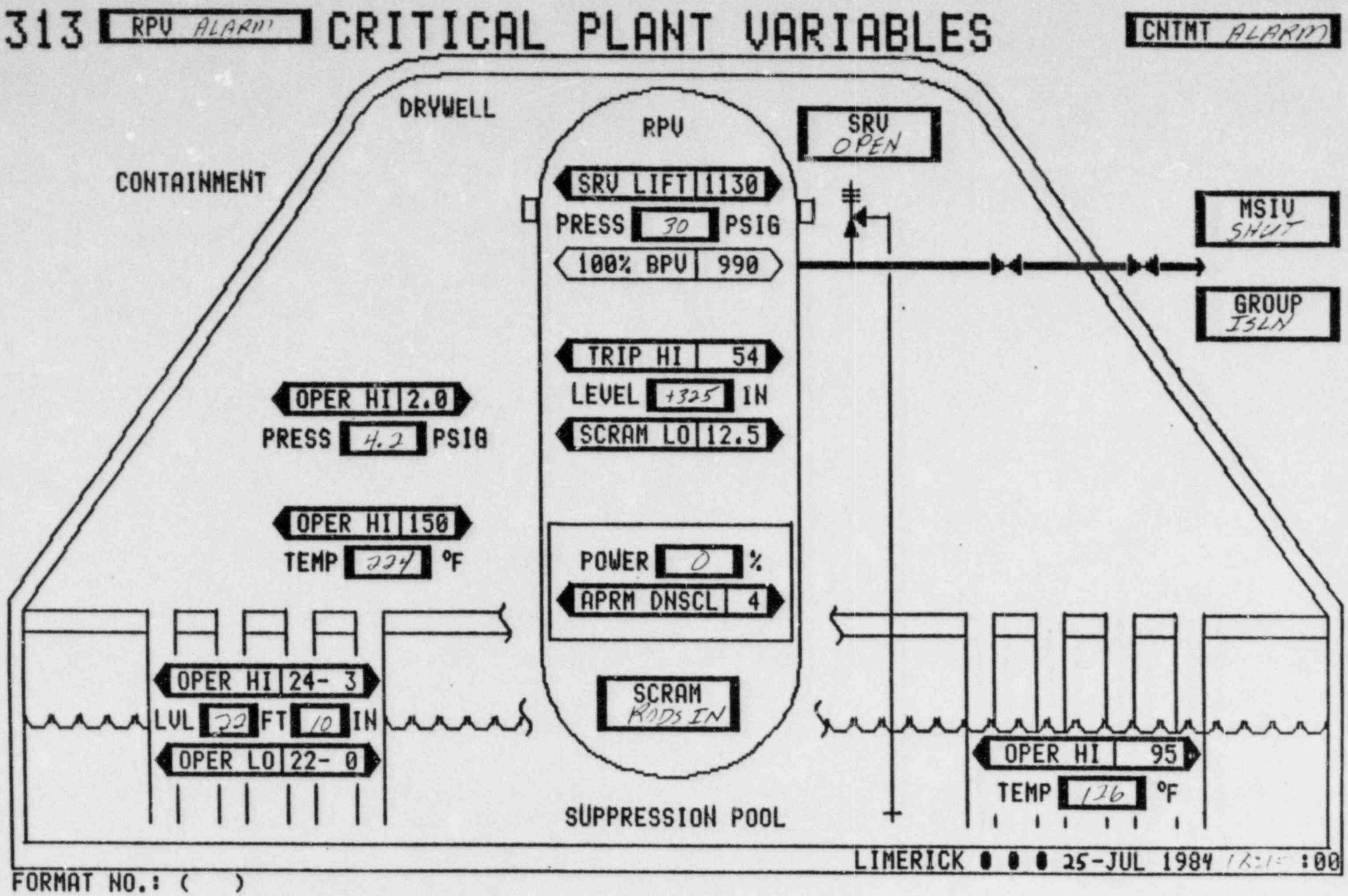


FORMAT NO.: (   )

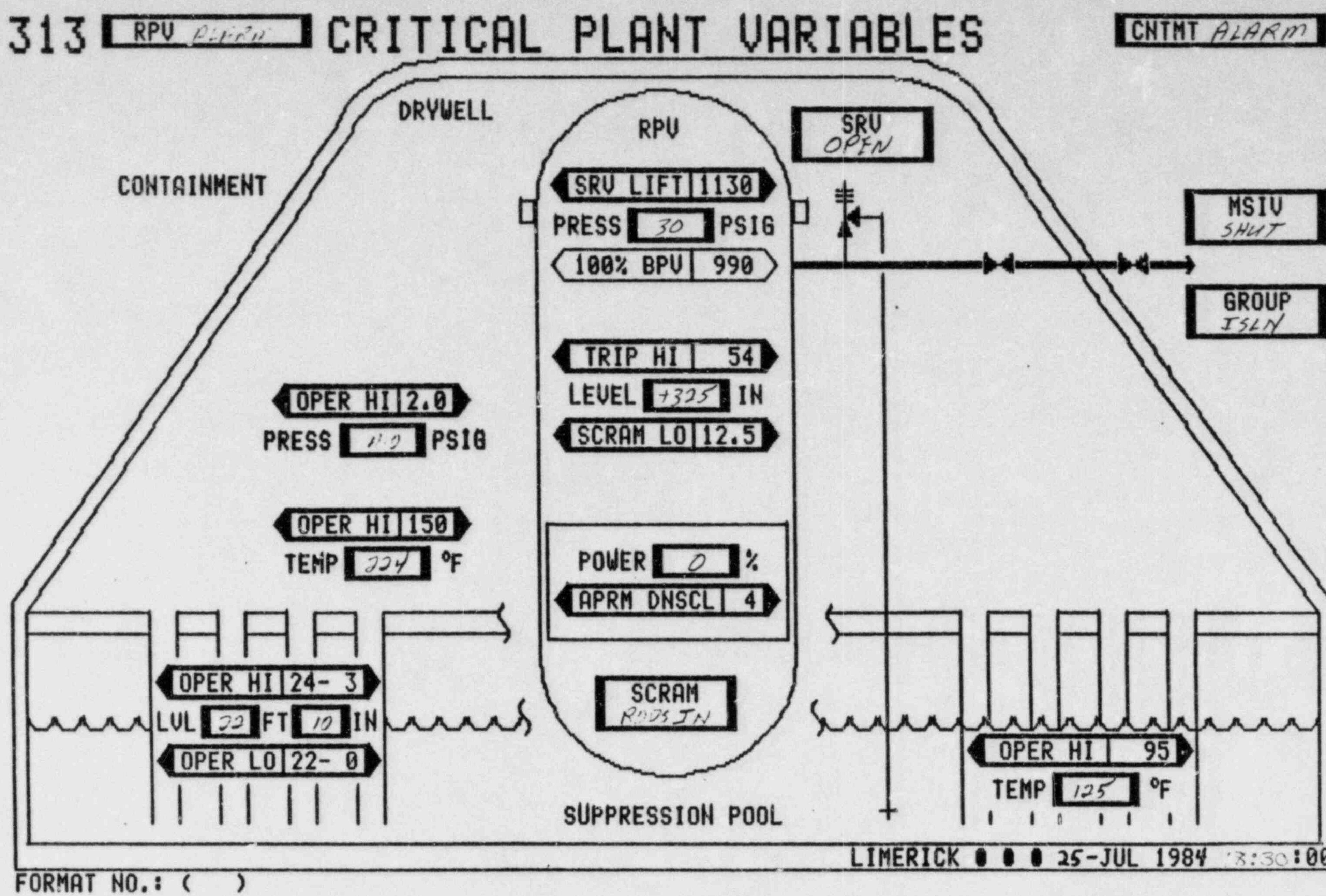
3J-81


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +32.5 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.2 PSIG
OPER HI 150
TEMP 224 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 127 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

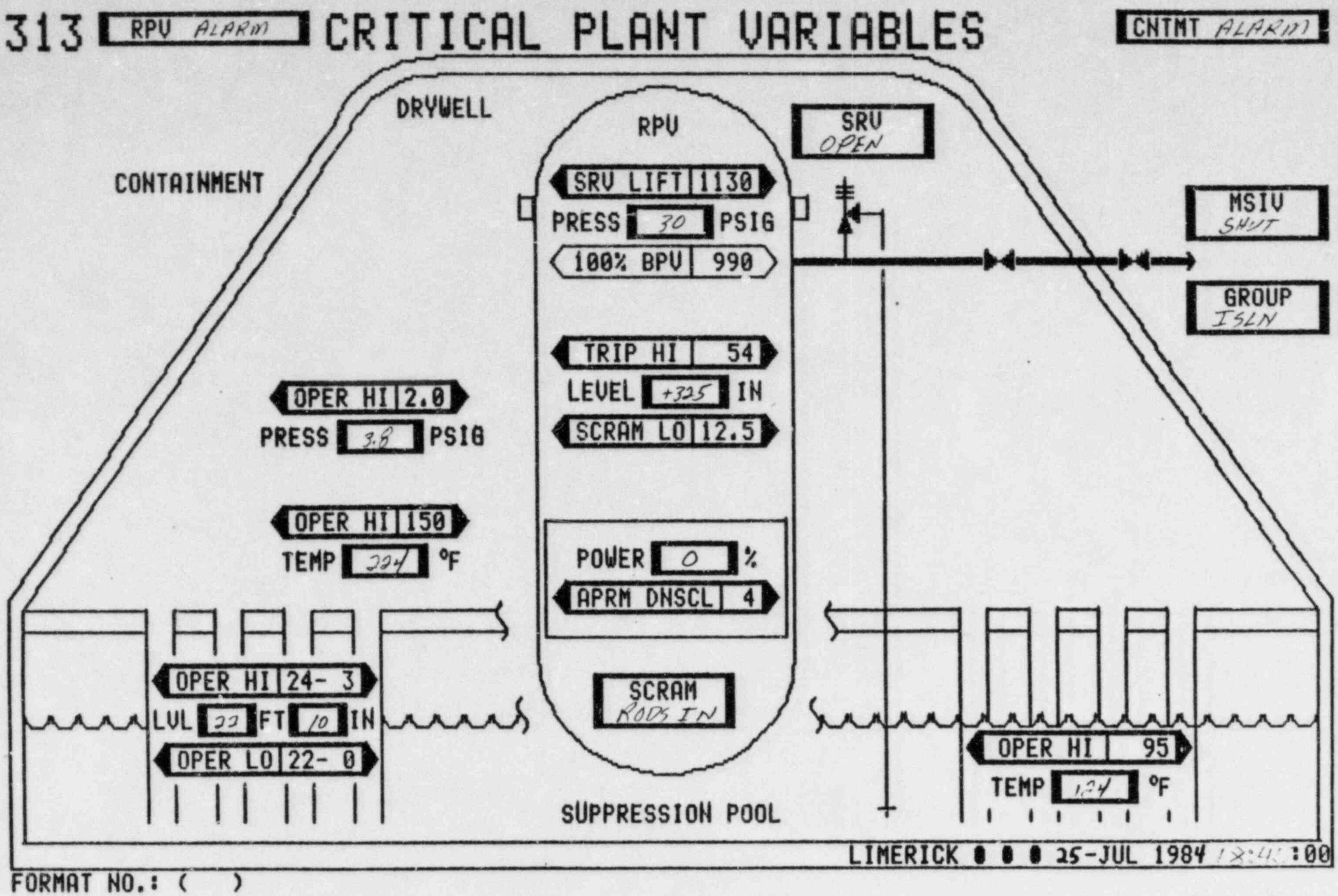
3J-82


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 4.2 PSIG
OPER HI 150
TEMP 224 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 126 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 :00
FORMAT NO.: ( )

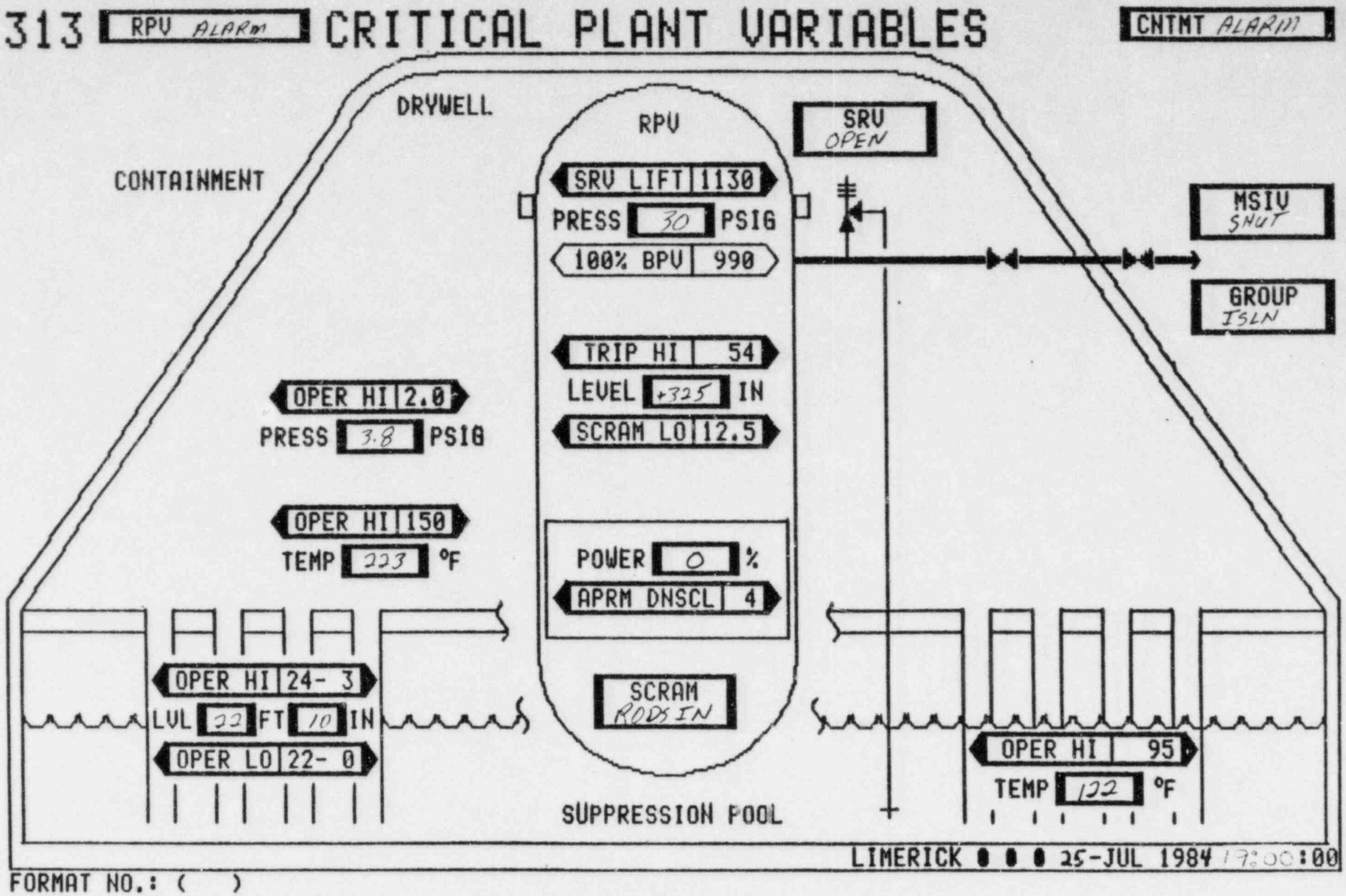
3J-83

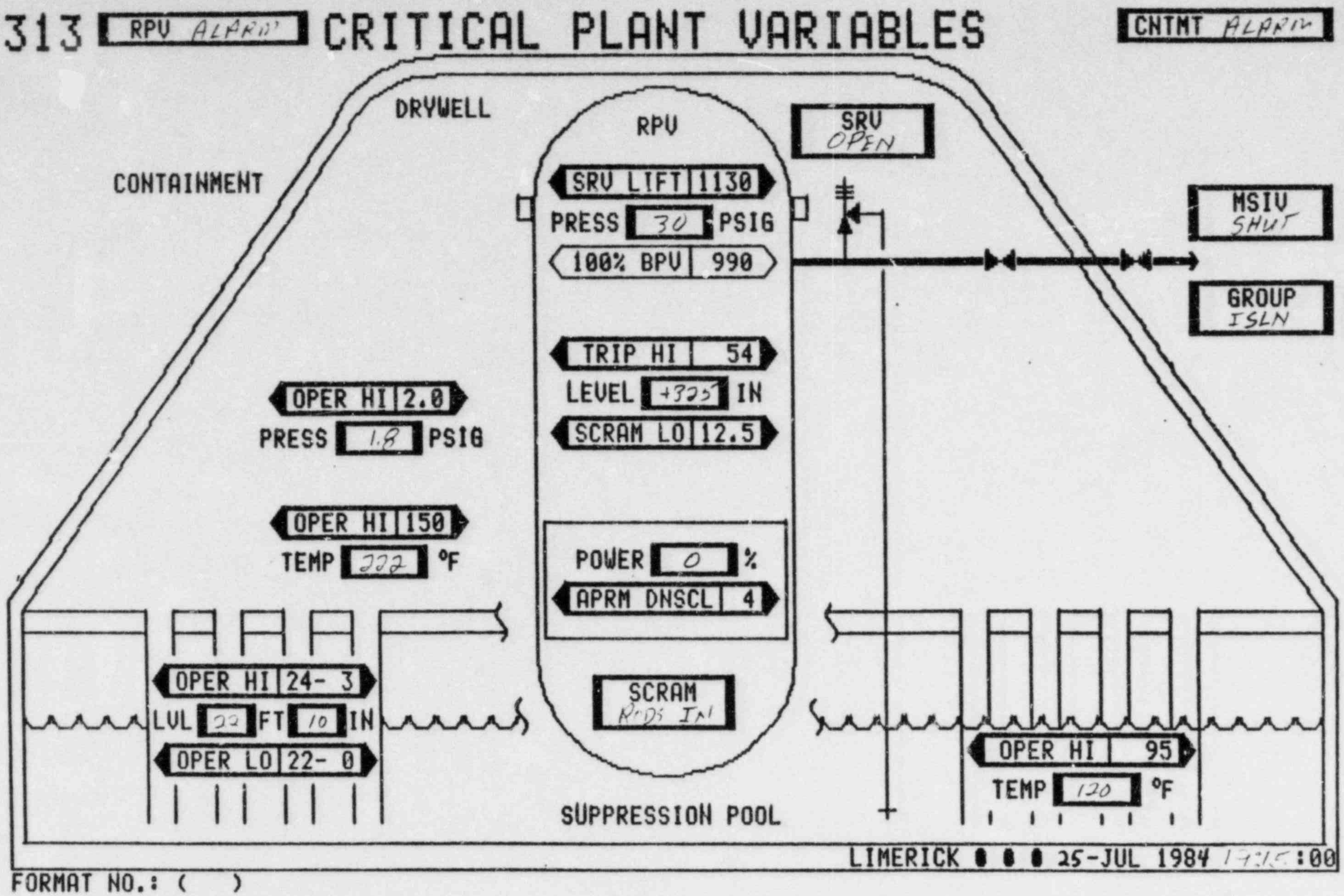

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS PSIG
OPER HI 150
TEMP 224 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 125 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 :00
FORMAT NO.: ( )

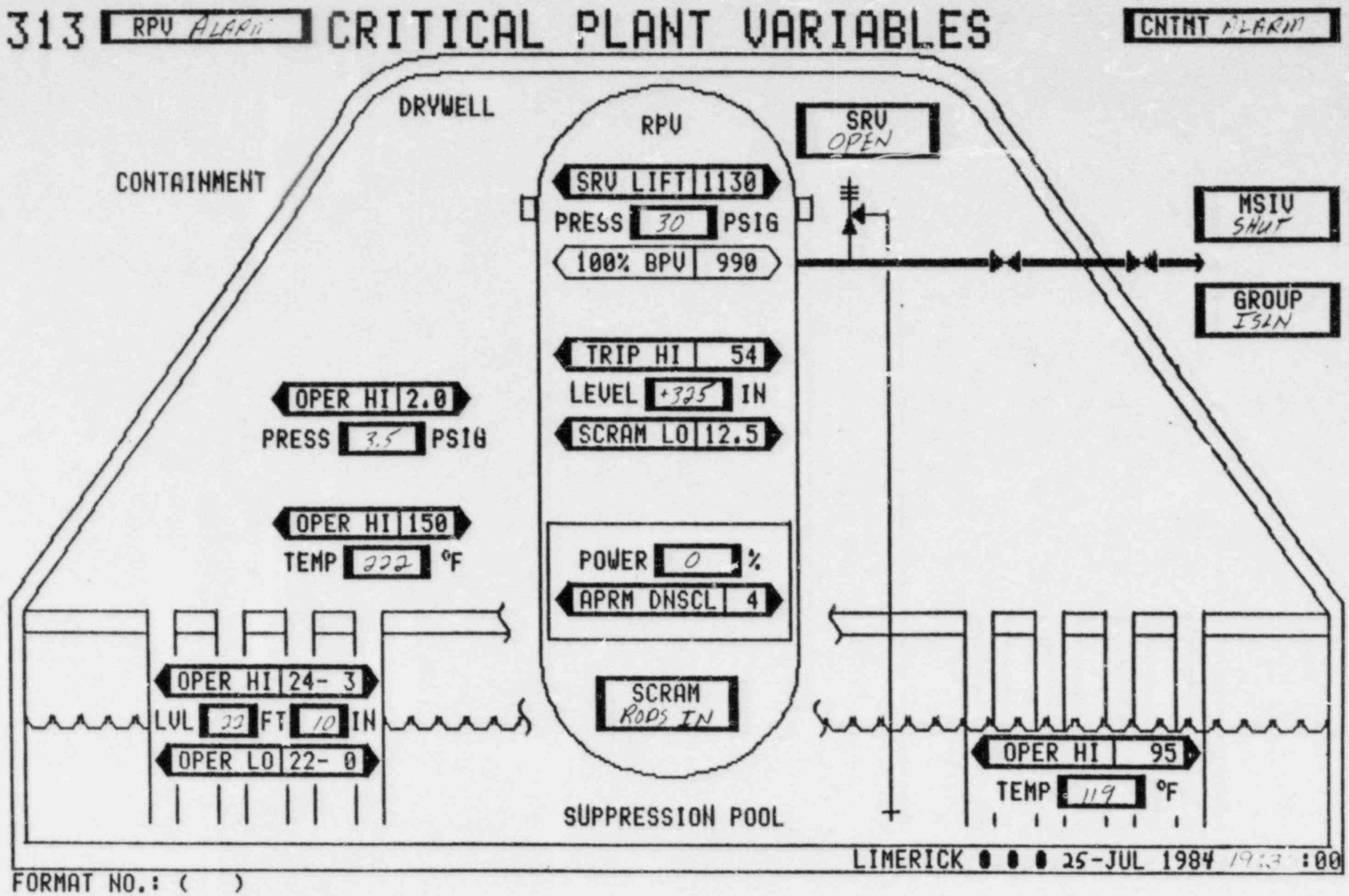
3J-84


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.8 PSIG
OPER HI 150
TEMP 224 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 124 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 :00
FORMAT NO.: ( )

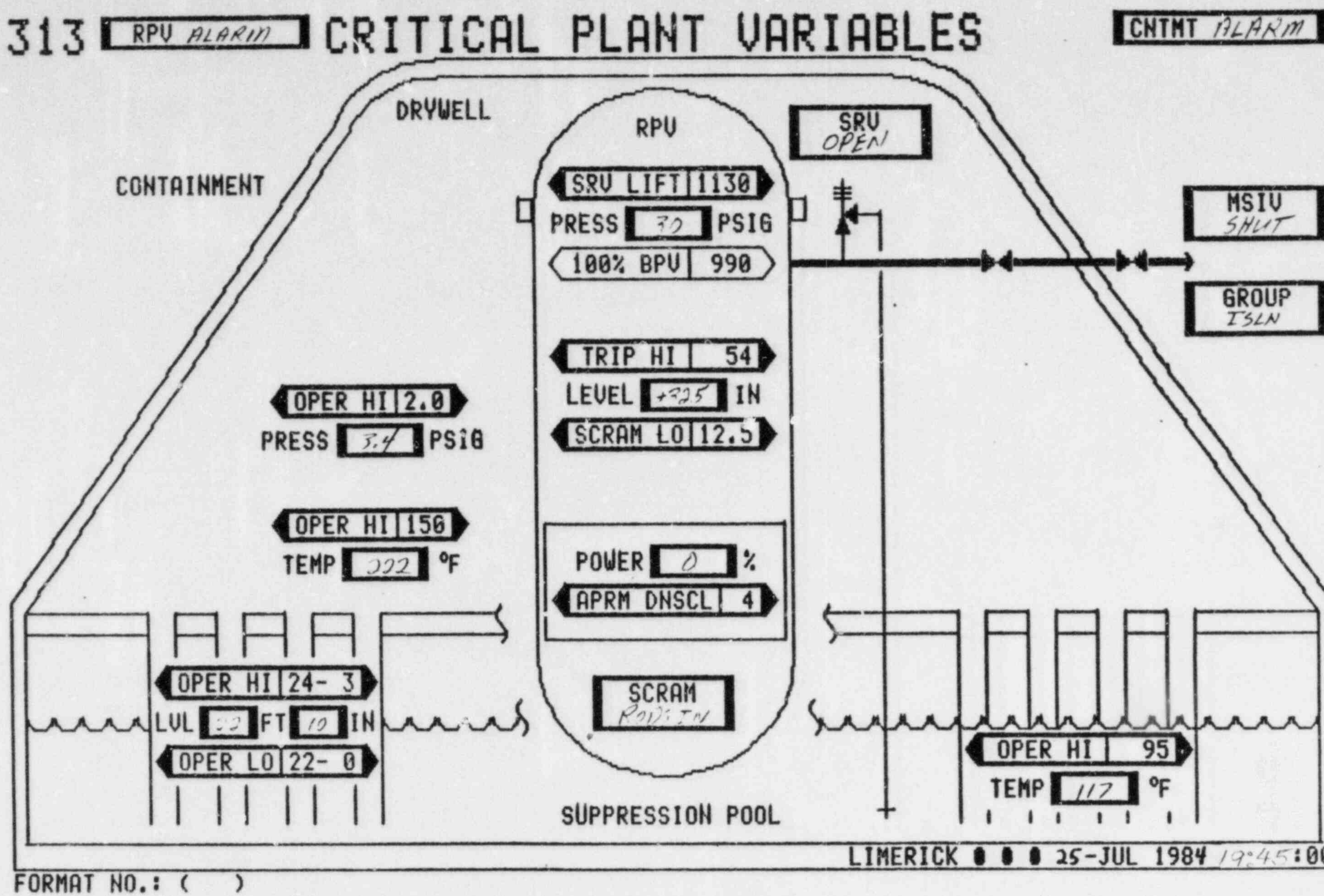
3J-85


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.8 PSIG
OPER HI 150
TEMP 223 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 122 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 19:00:00
FORMAT NO.: (   )


313
RPU ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPU
SRU OPEN
MSIU SHUT
GROUP ISLN
SRU LIFT 1130
PRESS 30 PSIG
100% BPU 990
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.8 PSIG
OPER HI 150
TEMP 222 °F
POWER 0 %
APRM DNSCL 4
SCRAM RODS IN
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
OPER HI 95
TEMP 120 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )


313 RPV ALARM CRITICAL PLANT VARIABLES
CNTNT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.5 PSIG
OPER HI 150
TEMP 222 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 119 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 19:3 :00
FORMAT NO.: ( )

3J-88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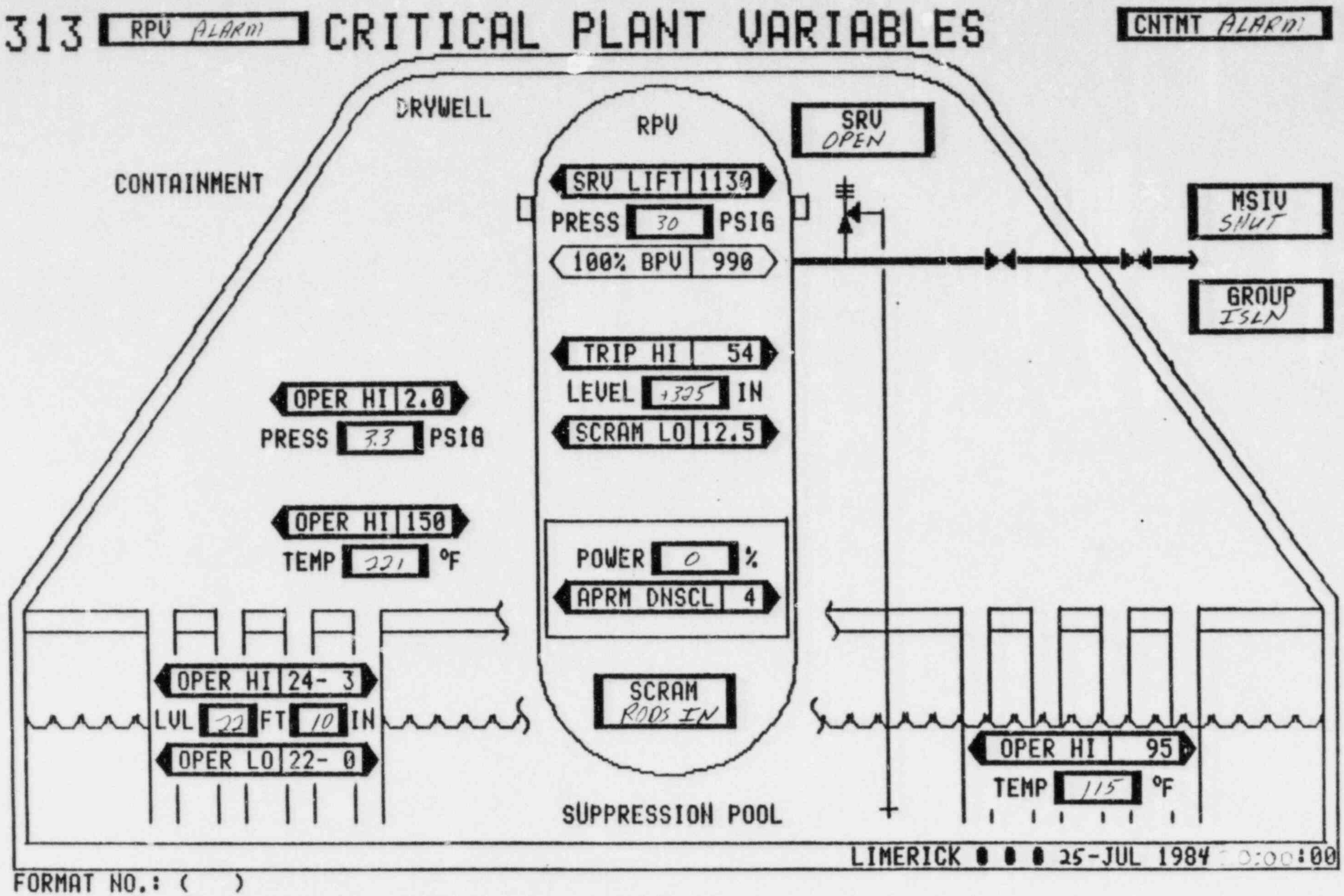
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.4 PSIG
OPER HI 156
TEMP 222 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 117 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 19:45:00
FORMAT NO.: ( )

3J-89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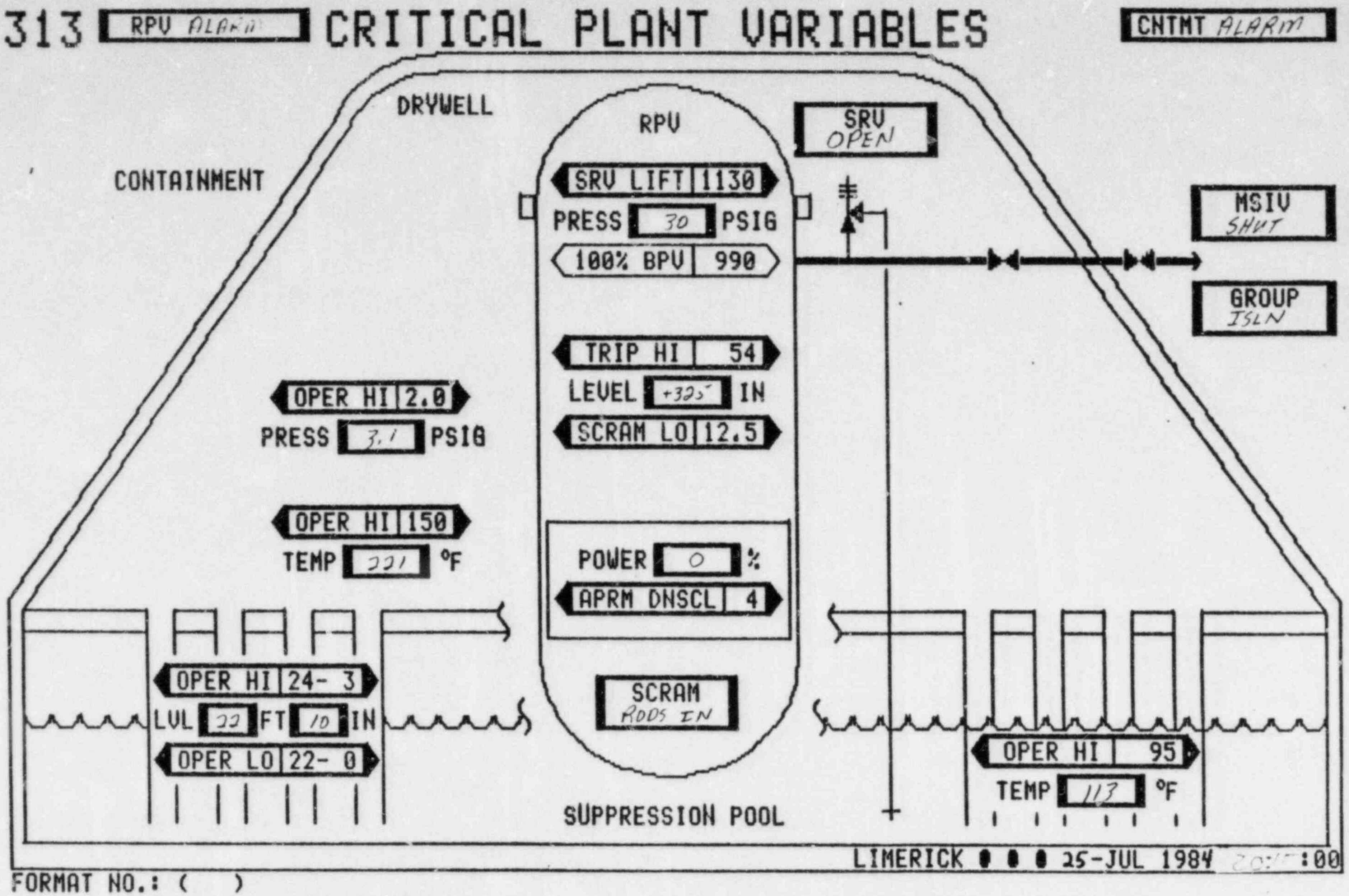
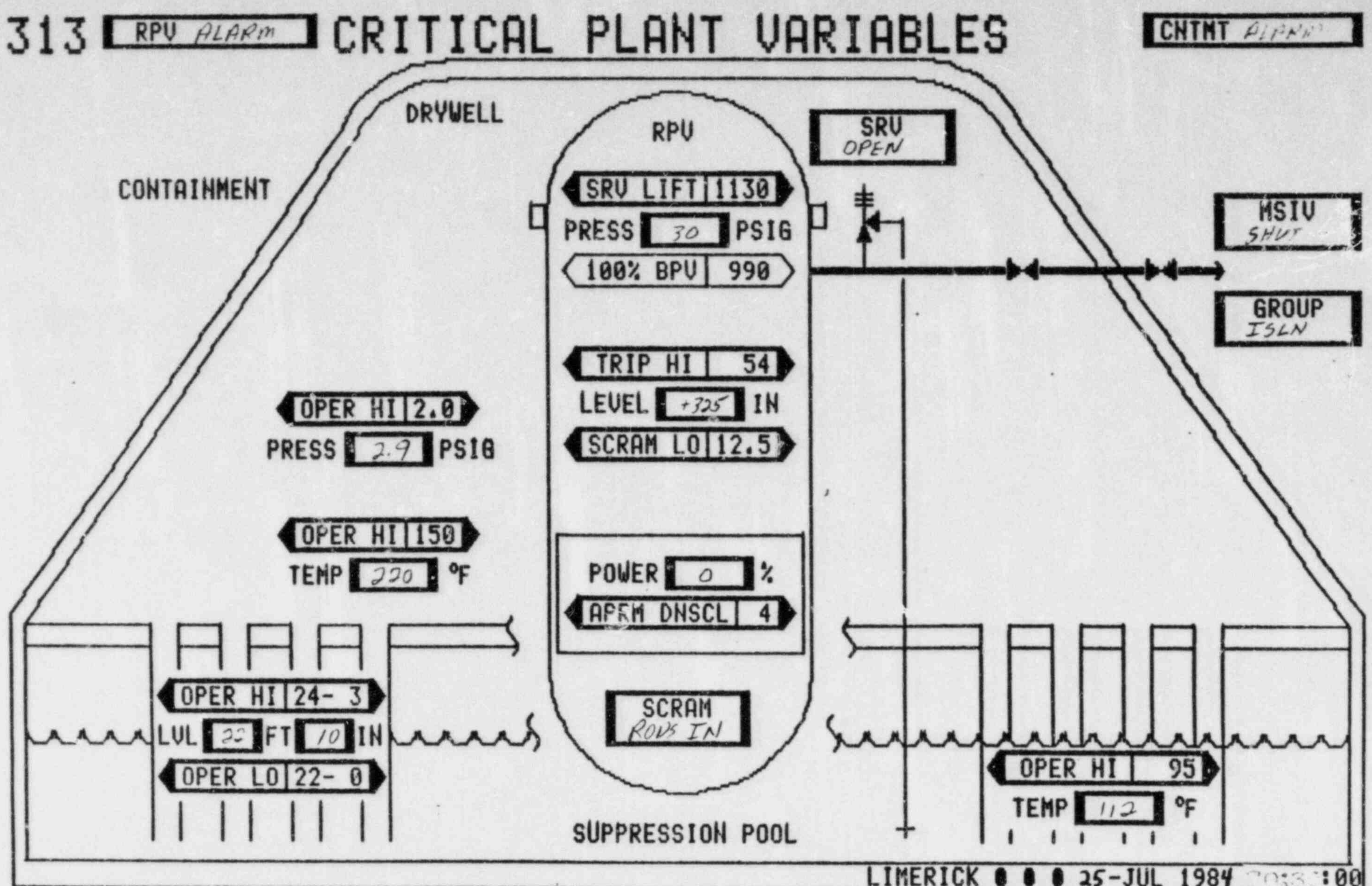
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.3 PSIG
OPER HI 150
TEMP 221 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 115 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

3J-90

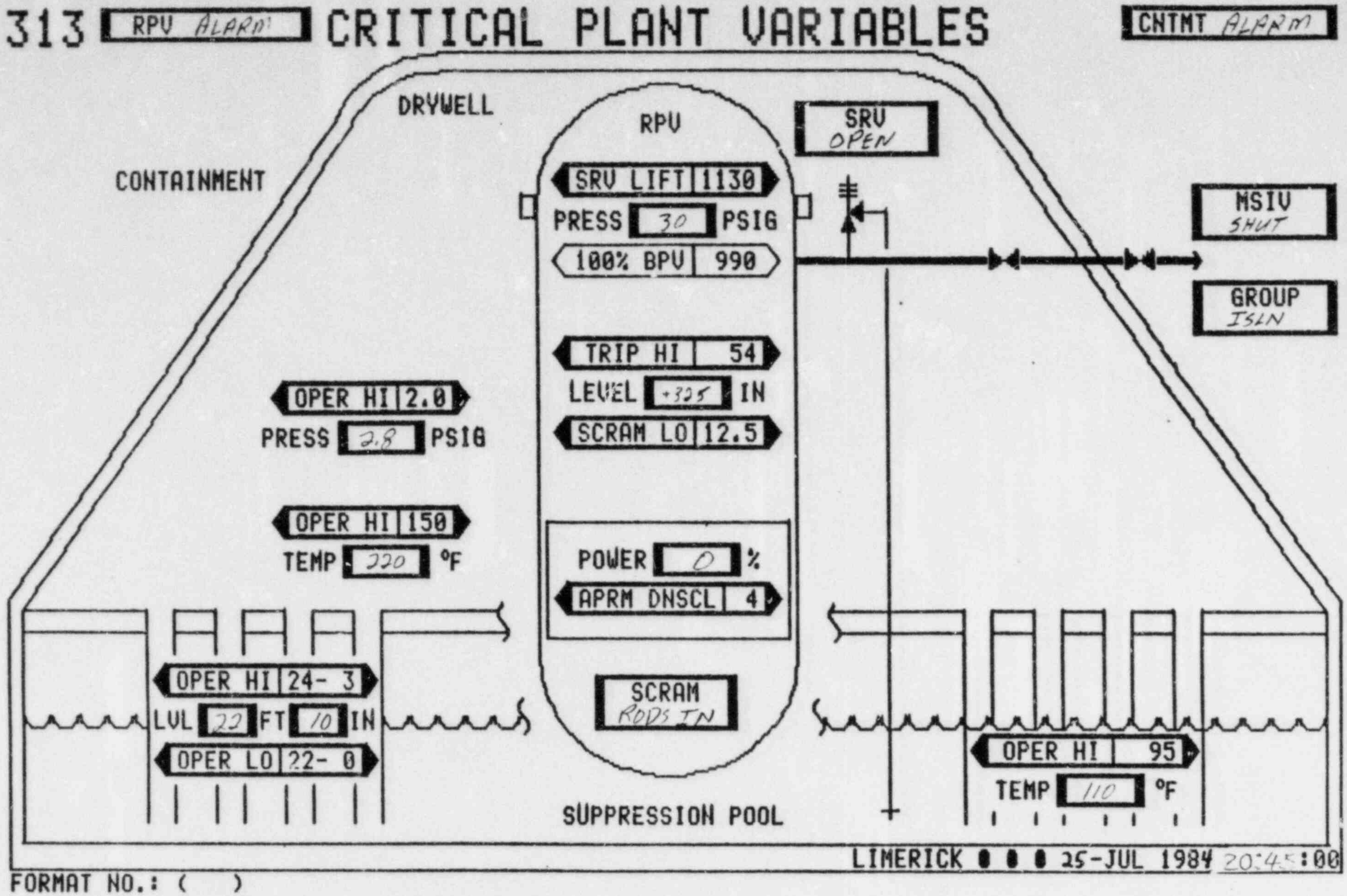

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +32.5 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 3.1 PSIG
OPER HI 150
TEMP 221 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 113 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

3J-91

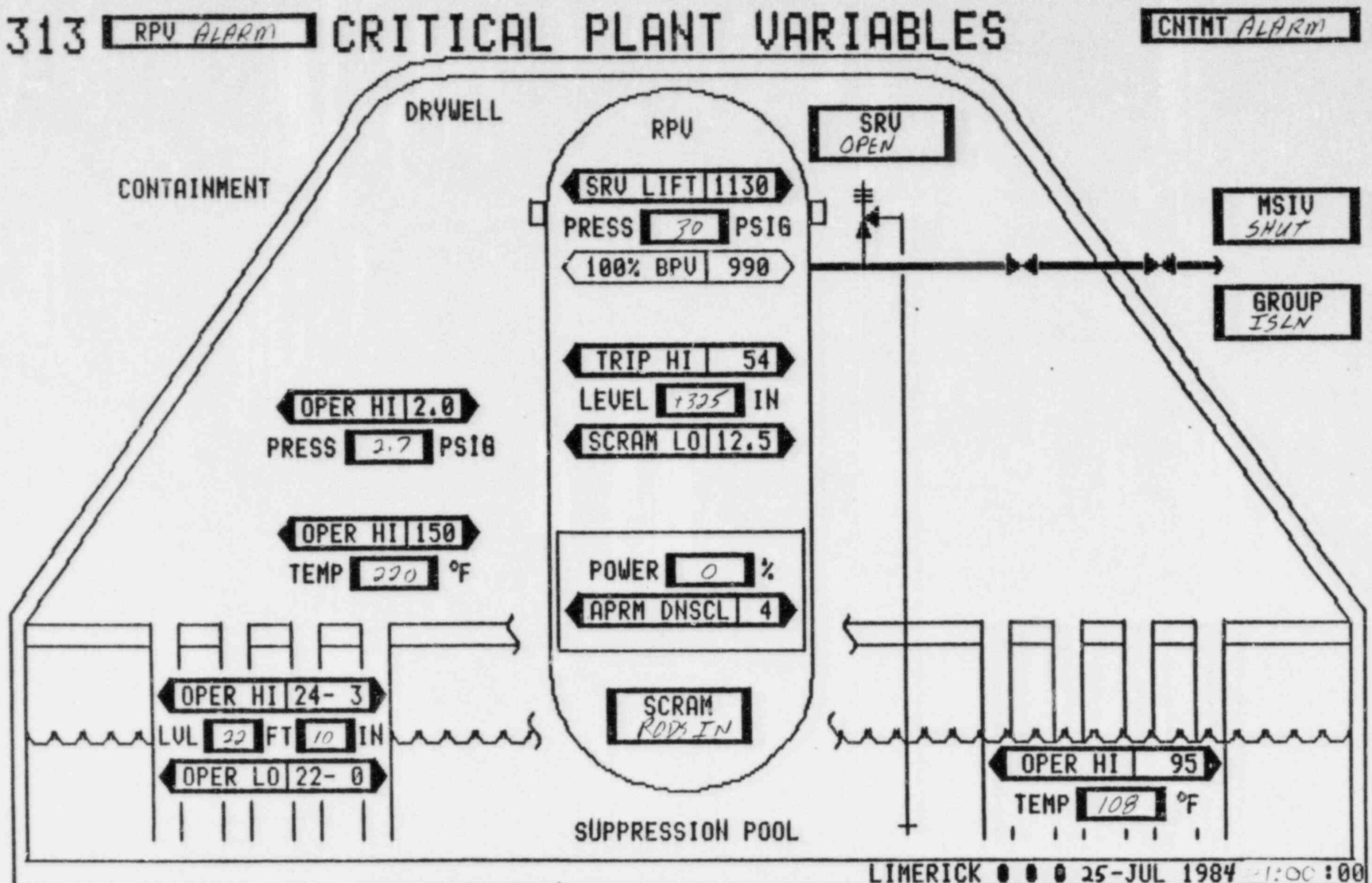


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 2.9 PSIG
OPER HI 150
TEMP 220 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 112 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984

FORMAT NO.: ( )


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 2.8 PSIG
OPER HI 150
TEMP 220 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 110 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 20:45:00
FORMAT NO.: ( )

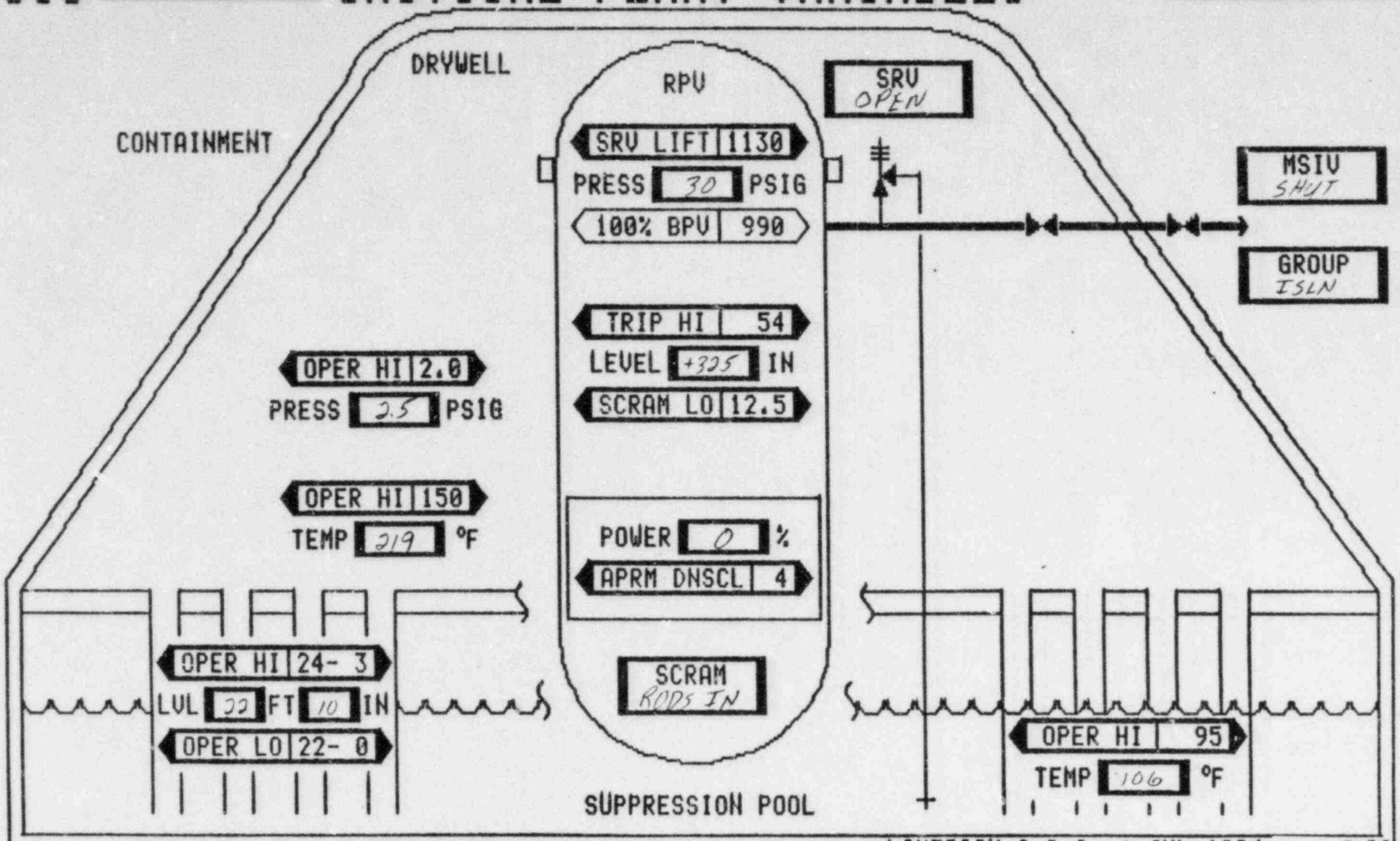
3J-93



FORMAT NO.: (   )

3J-94

313 RPV ALARM CRITICAL PLANT VARIABLES CNTMT ALARM

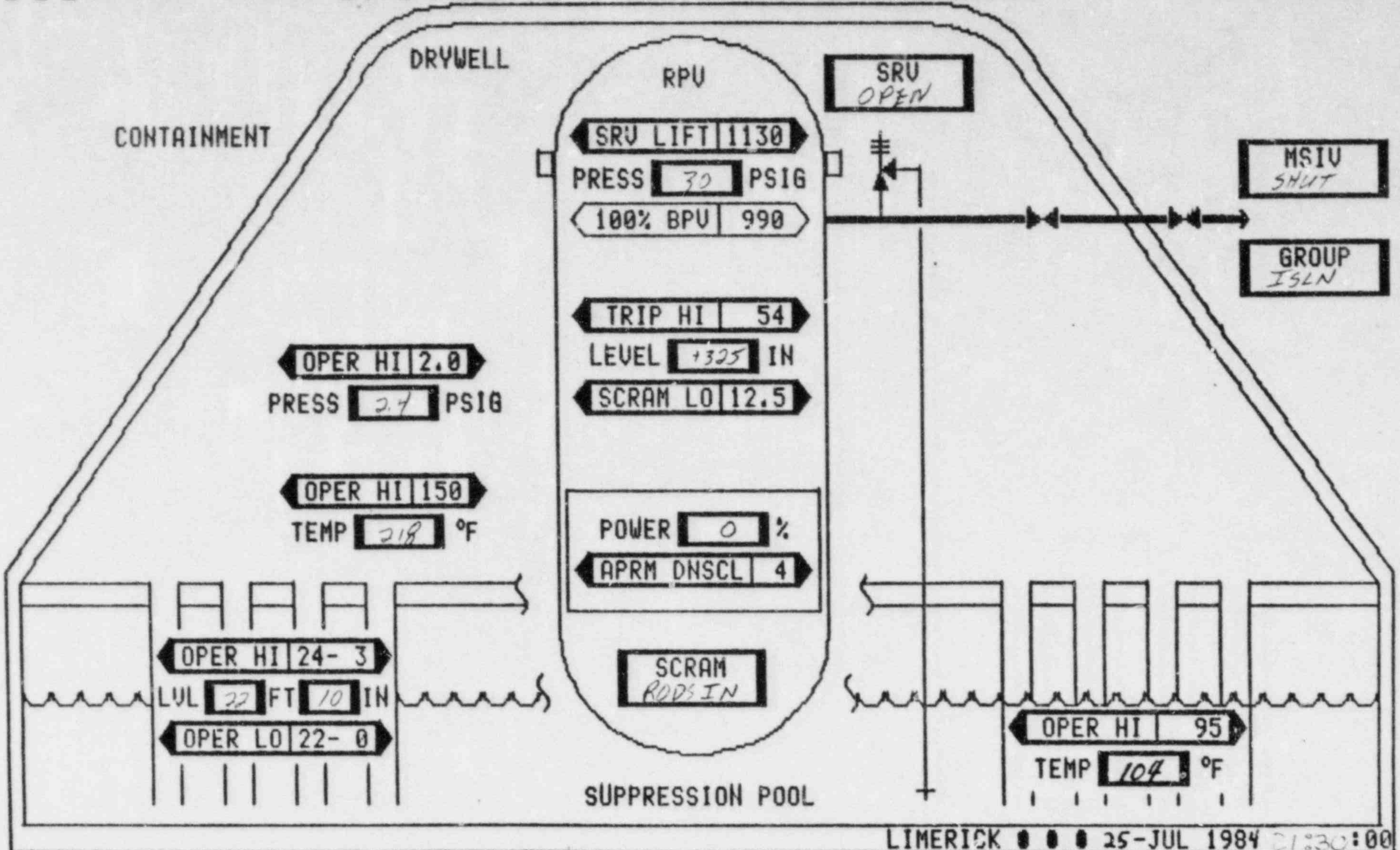


LIMERICK ● ● ● 25-JUL 1984 21:15:00

FORMAT NO.: (   )

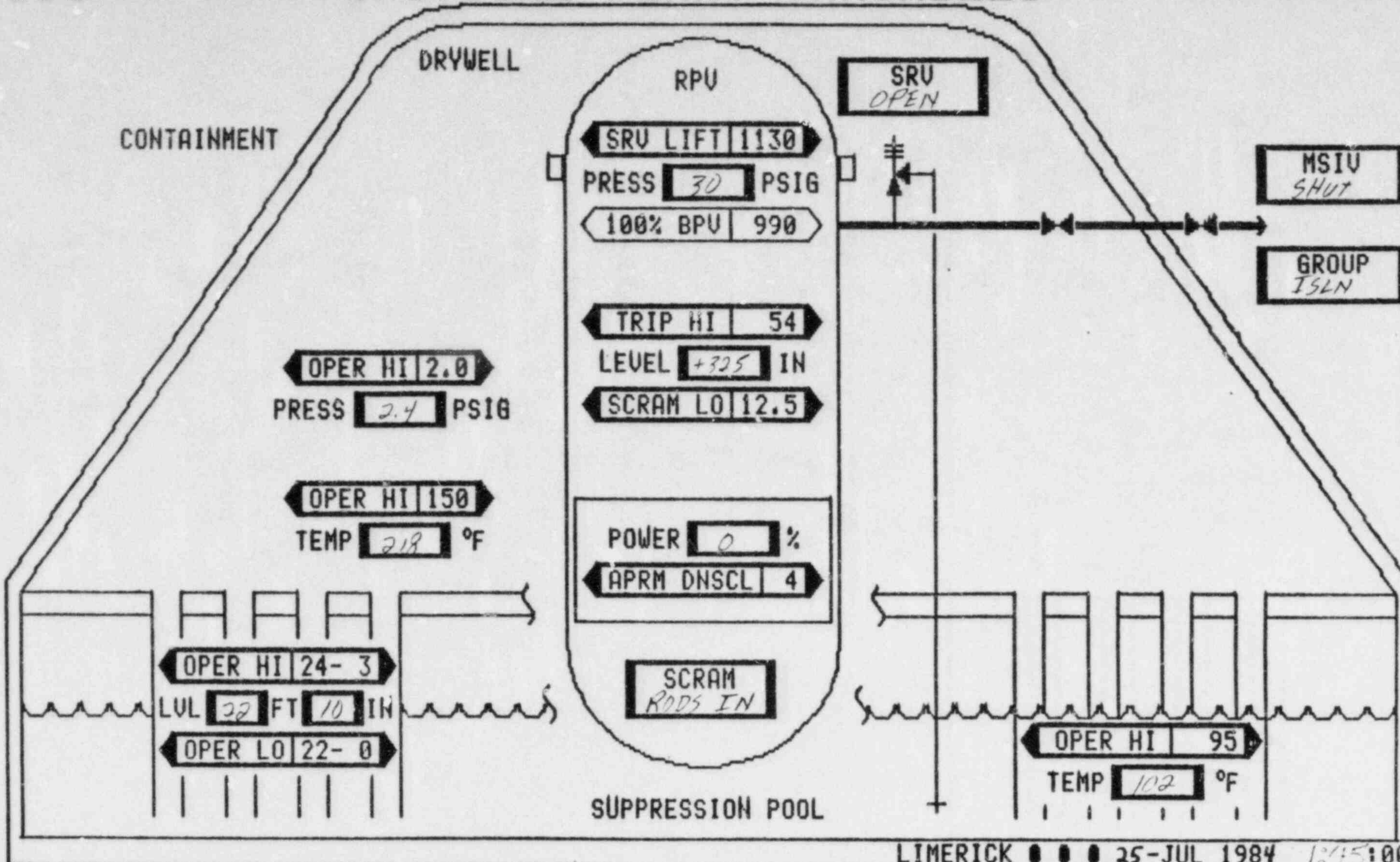
3J-95

313 RPV ALARM CRITICAL PLANT VARIABLES CNTMT ALARM



FORMAT NO.: (   )

313 RPV *ALARM* CRITICAL PLANT VARIABLES CNTMT *ALARM*



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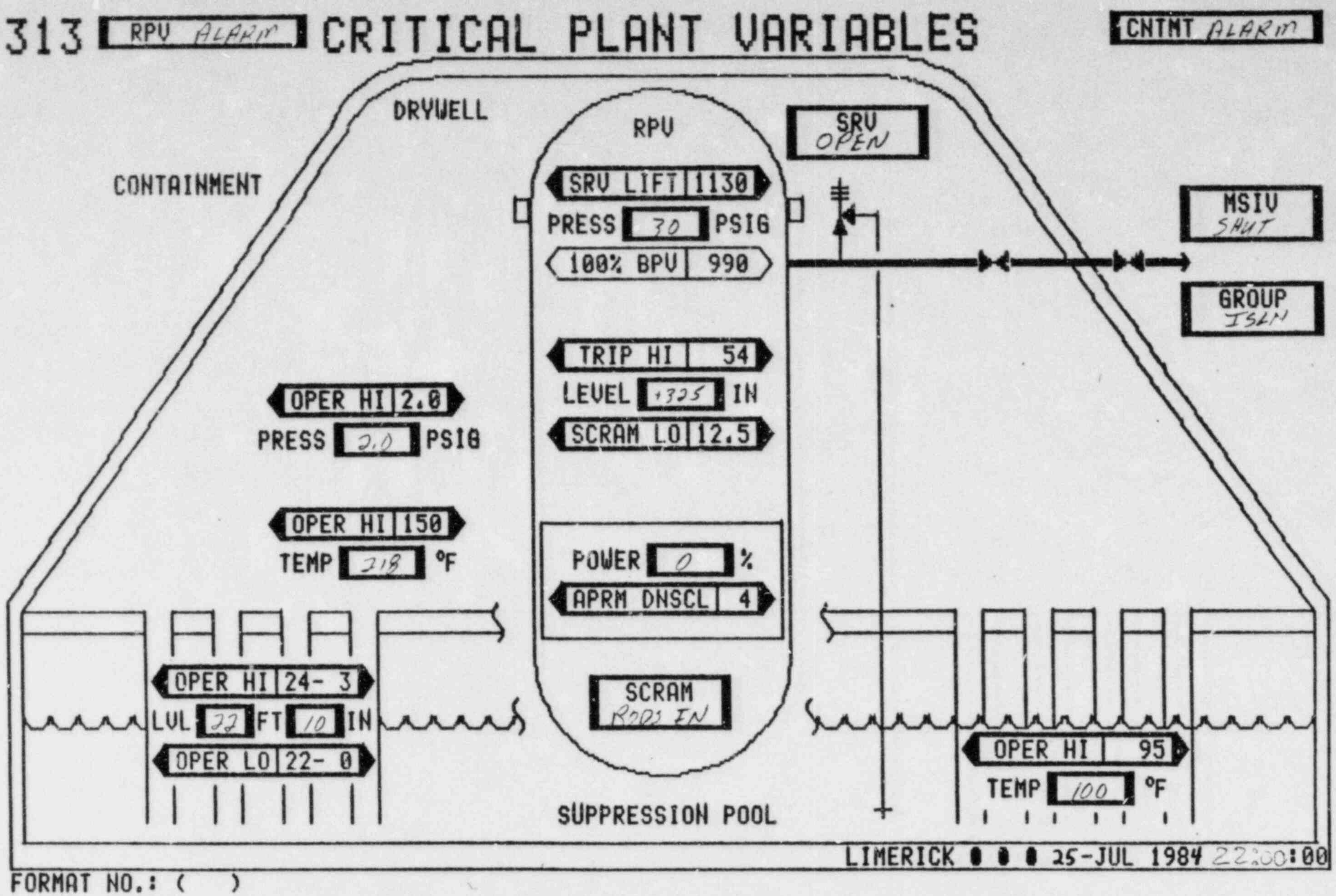
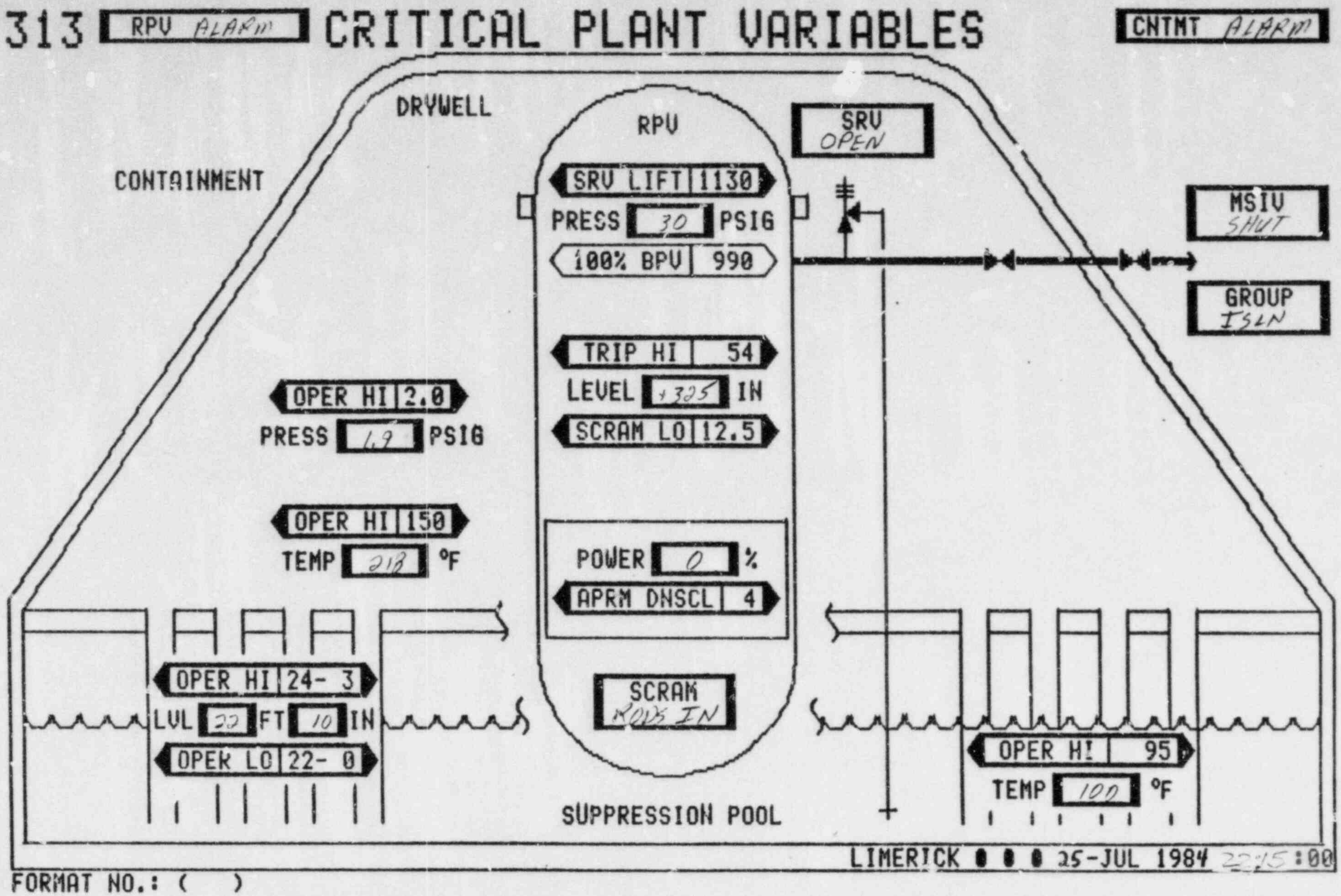
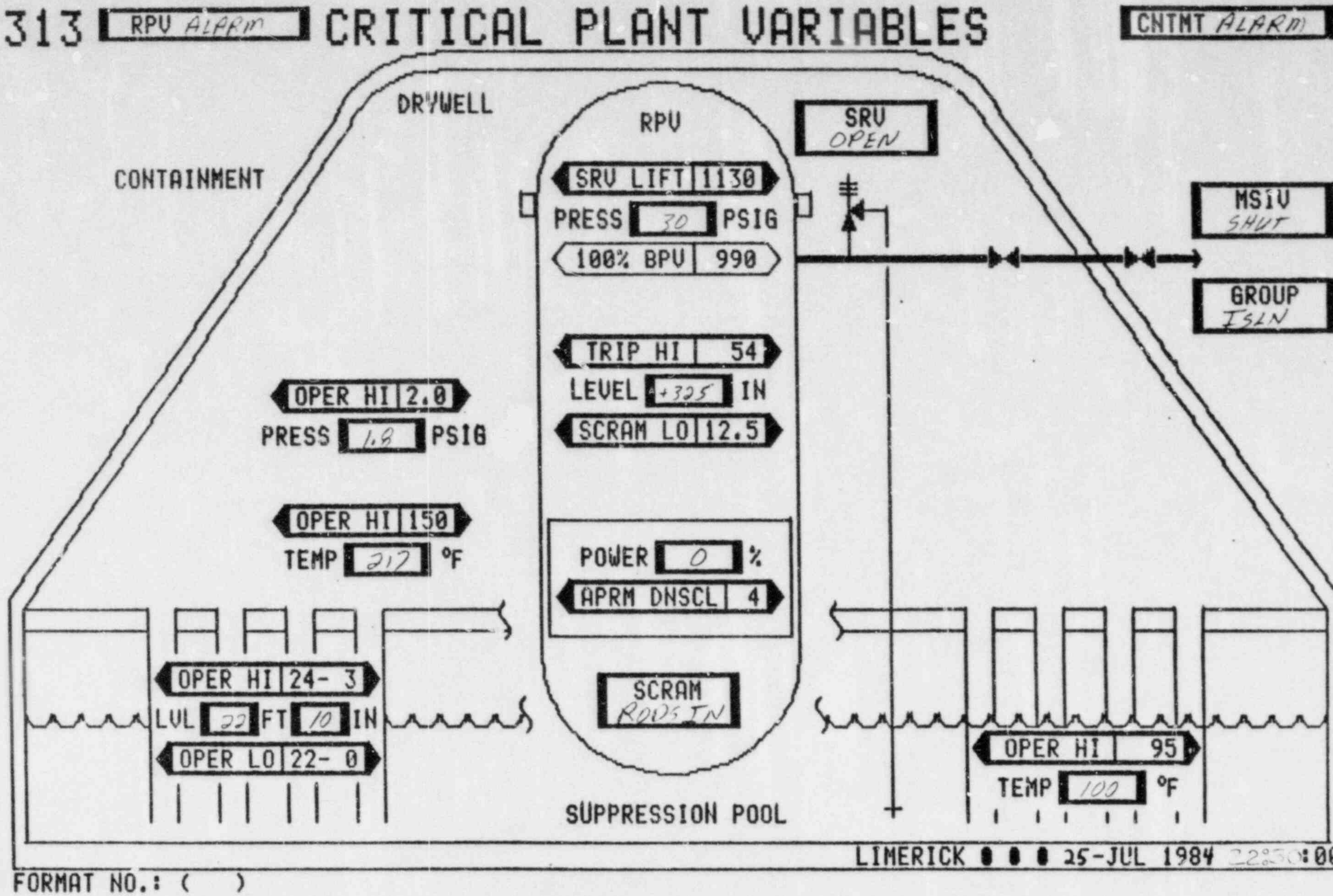
3J-97

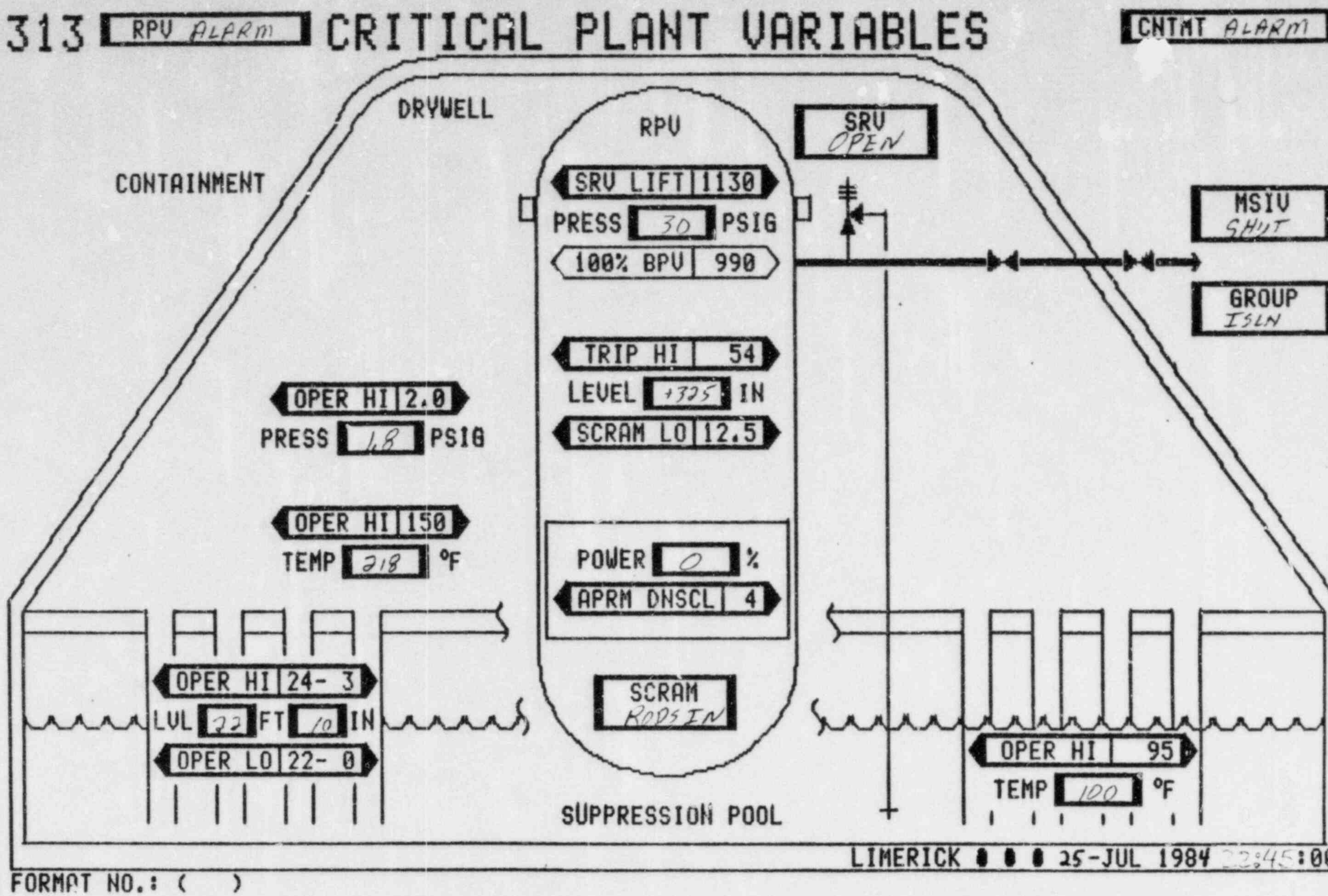

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 2.0 PSIG
OPER HI 150
TEMP 218 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 22:00:00
FORMAT NO.: (   )

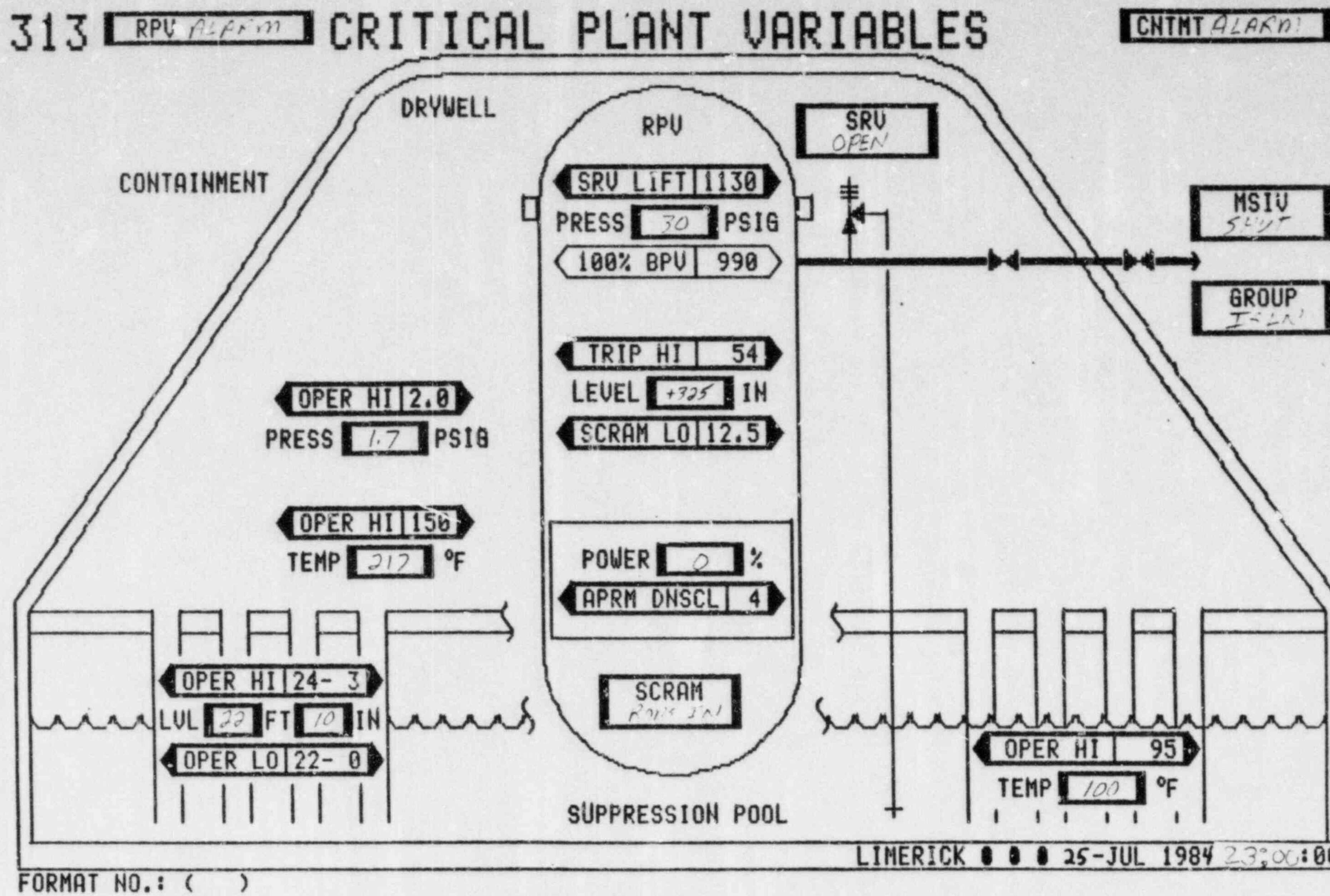

313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.9 PSIG
OPER HI 150
TEMP 218 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 22:15:00
FORMAT NO.: ( )



313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.8 PSIG
OPER HI 150
TEMP 217 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

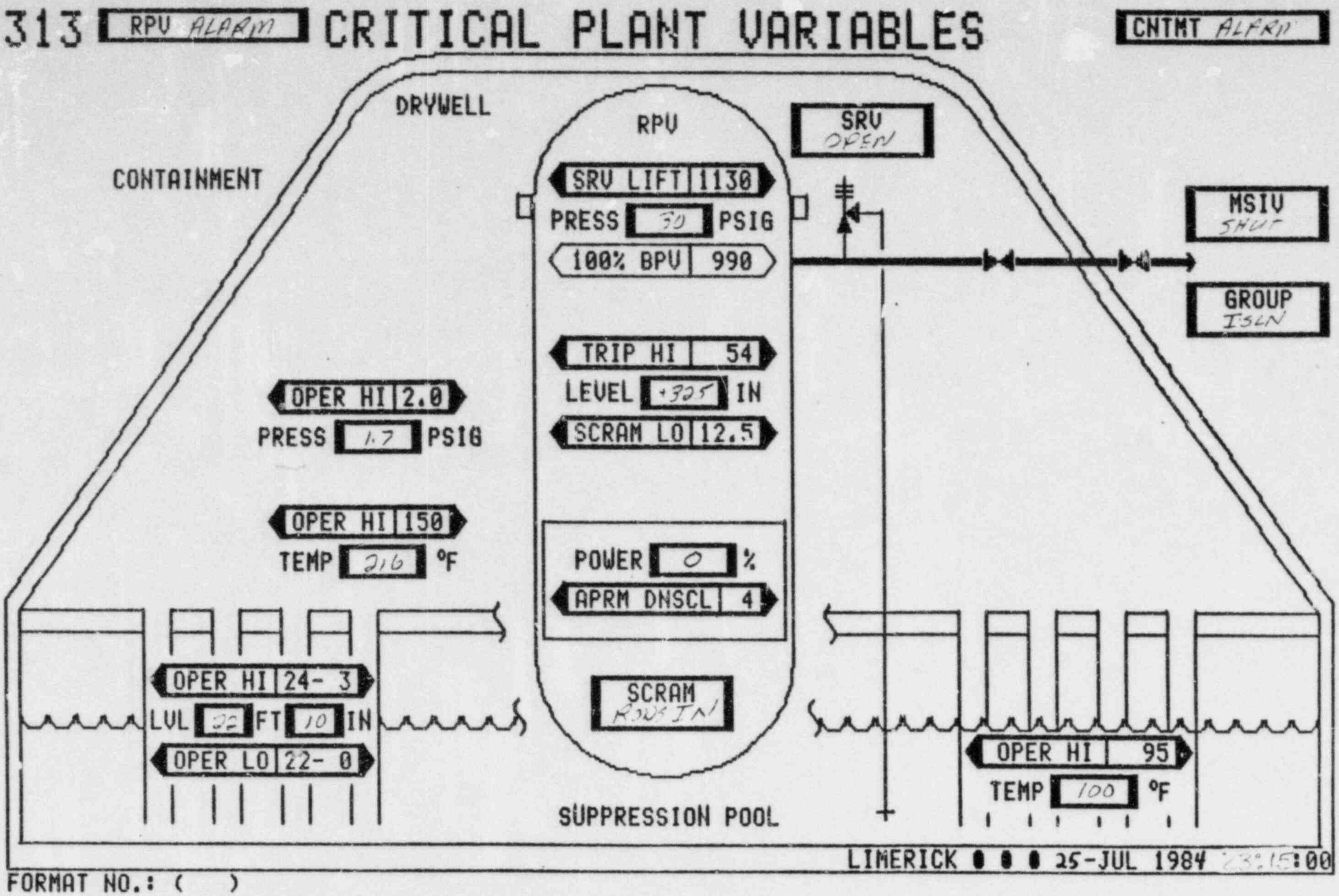
3J-100


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.8 PSIG
OPER HI 150
TEMP 218 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 22:45:00
FORMAT NO.: ( )

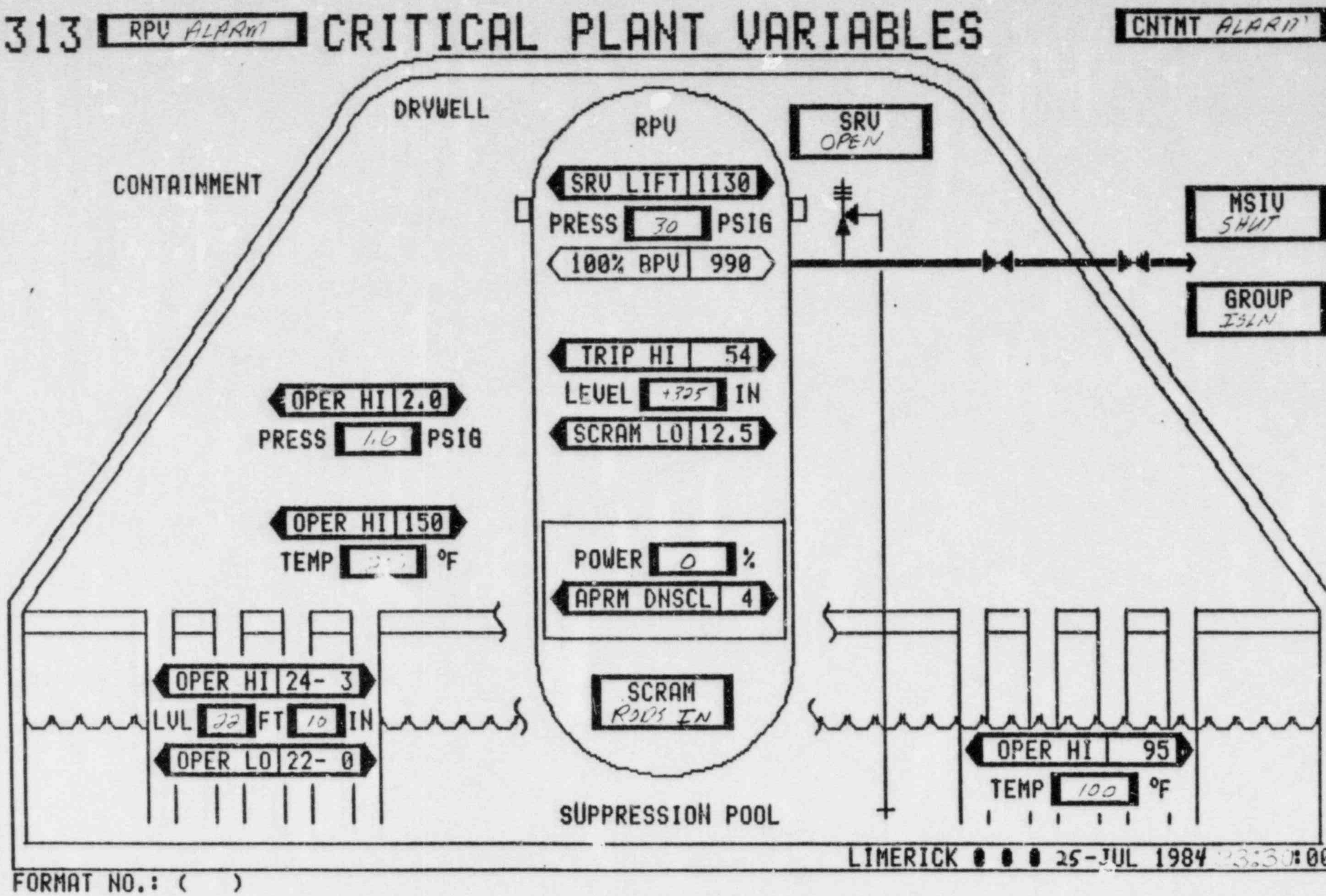


313 RPV ALARM CRITICAL PLANT VARIABLES CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.7 PSIG
OPER HI 150
TEMP 217 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 23:00:00
FORMAT NO.: ( )

3J-102


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.7 PSIG
OPER HI 150
TEMP 216 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK ● ● ● 25-JUL 1984 23:15:00
FORMAT NO.: ( )

3J-103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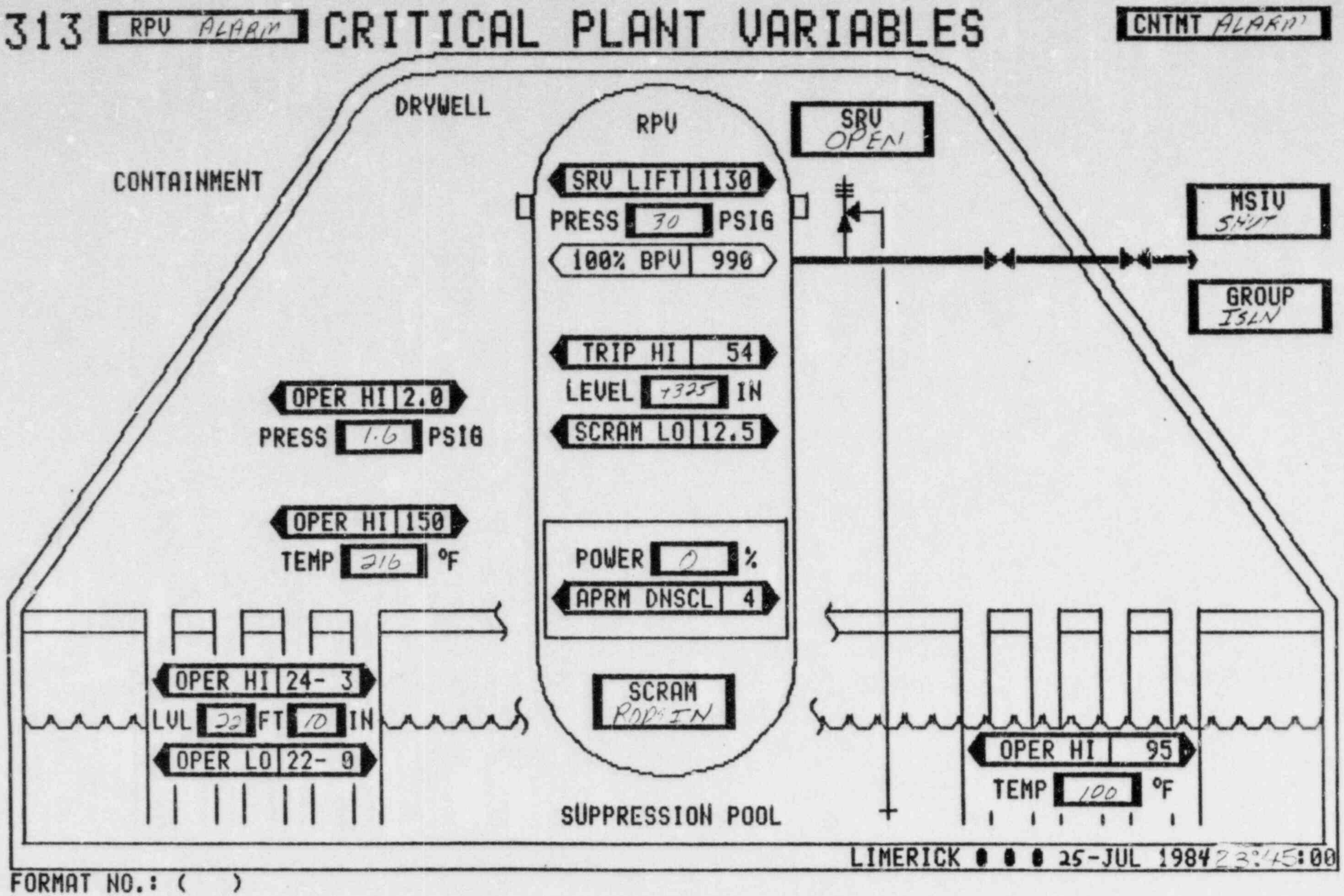
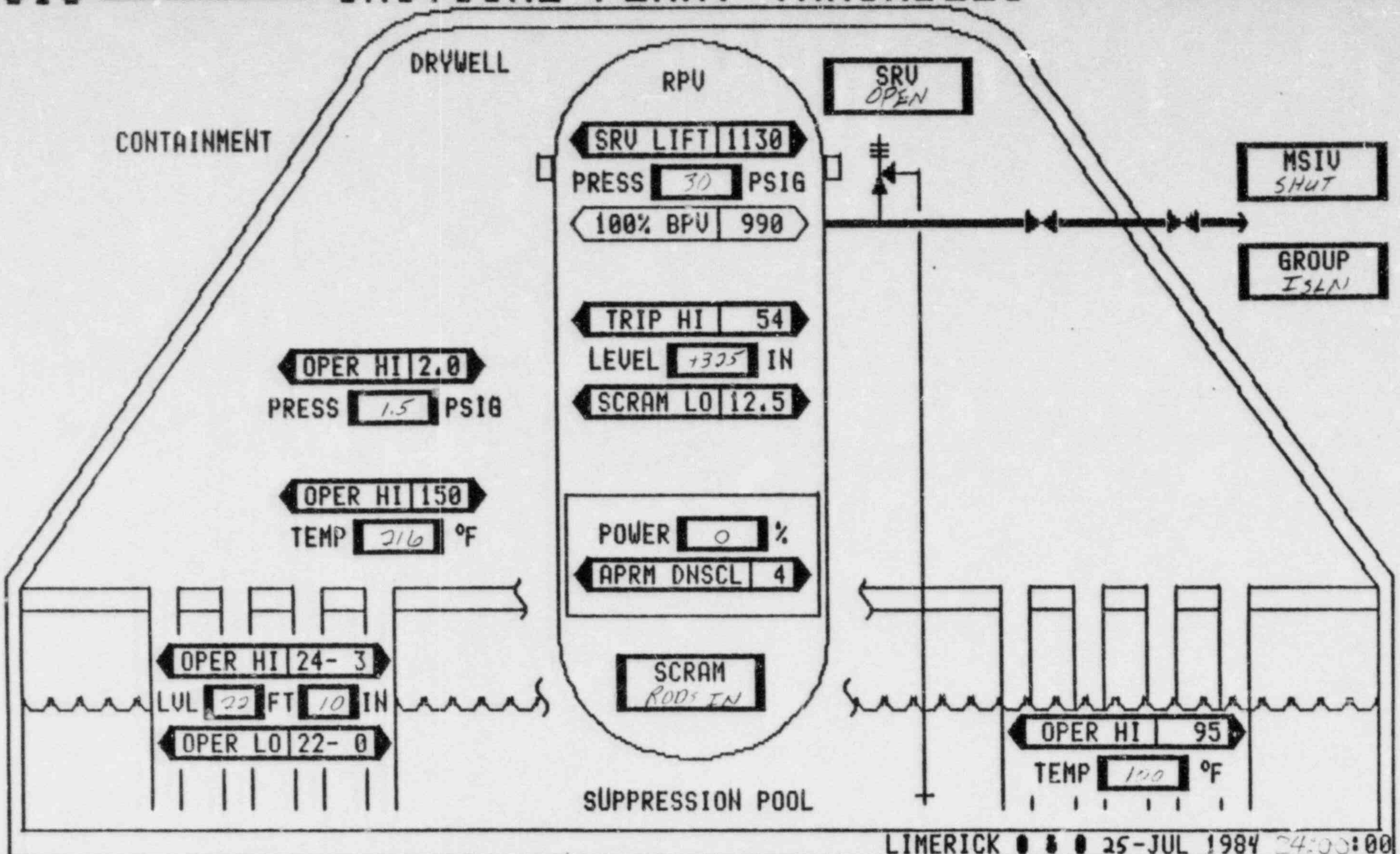
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.6 PSIG
OPER HI 150
TEMP °F
POWER 0 %
APRM DNSCL 4
SCRAM RODS IN
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984
FORMAT NO.: ( )

3J-104


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.6 PSIG
OPER HI 150
TEMP 216 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 9
SCRAM RODS IN
OPER HI 95
TEMP 100 °F
SUPPRESSION POOL
LIMERICK 25-JUL 1984 23:45:00
FORMAT NO.: ( )

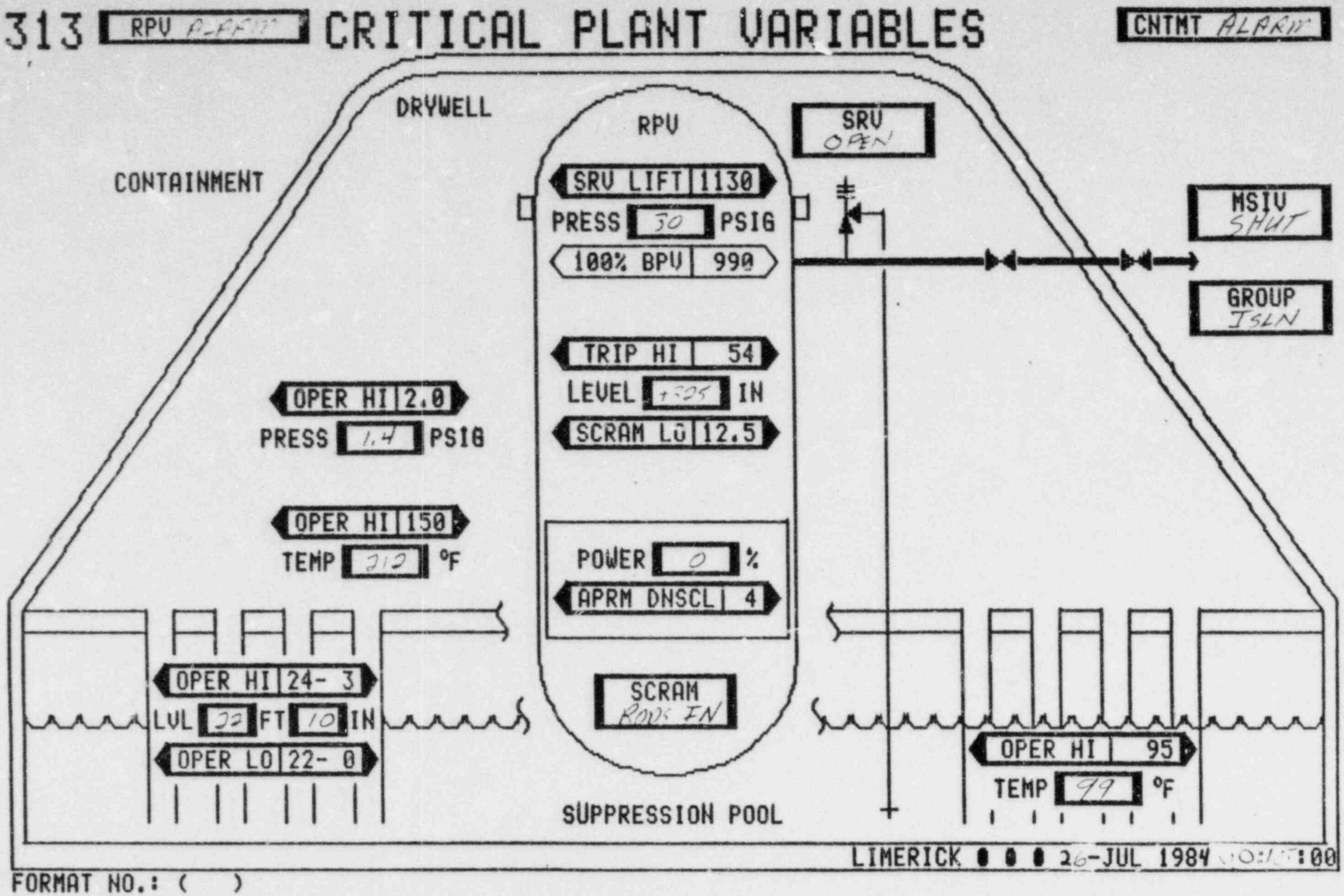
313 RPV *ALARM* CRITICAL PLANT VARIABLES

CNTMT *ALARM*

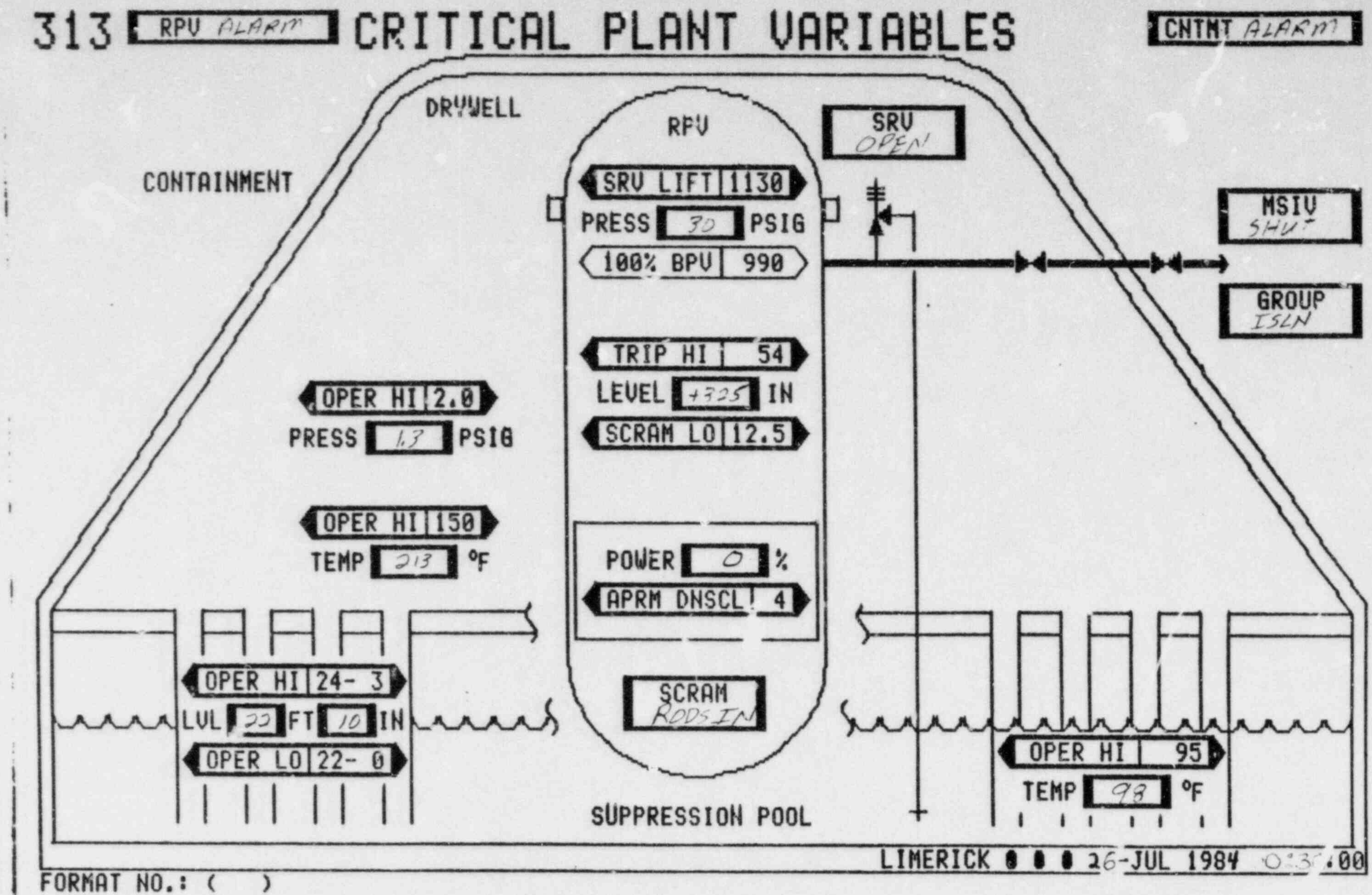


FORMAT NO.: (   )

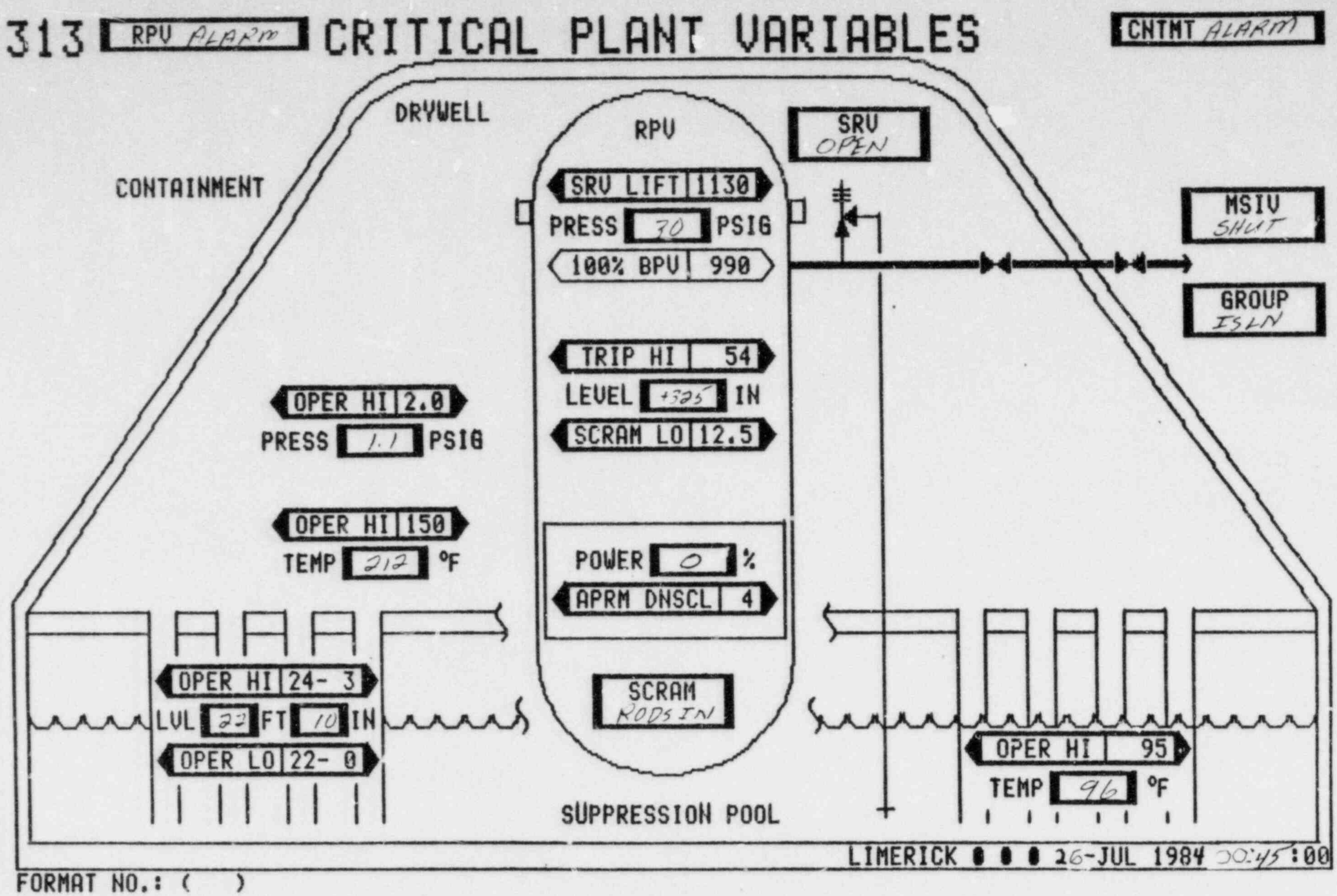
3J-106


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
CONTAINMENT
RPV
SRV OPEN
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.4 PSIG
OPER HI 150
TEMP 212 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 99 °F
SUPPRESSION POOL
LIMERICK 26-JUL 1984
FORMAT NO.: ( )

3J-107


313
RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +32.5 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.3 PSIG
OPER HI 150
TEMP 213 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 98 °F
SUPPRESSION POOL
LIMERICK 26-JUL 1984
FORMAT NO.: ( )

3J-108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RPV ALARM
CRITICAL PLANT VARIABLES
CNTMT ALARM
DRYWELL
RPV
SRV OPEN
CONTAINMENT
SRV LIFT 1130
PRESS 30 PSIG
100% BPV 990
MSIV SHUT
GROUP ISLN
TRIP HI 54
LEVEL +325 IN
SCRAM LO 12.5
OPER HI 2.0
PRESS 1.1 PSIG
OPER HI 150
TEMP 212 °F
POWER 0 %
APRM DNSCL 4
OPER HI 24- 3
LVL 22 FT 10 IN
OPER LO 22- 0
SCRAM RODS IN
OPER HI 95
TEMP 96 °F
SUPPRESSION POOL
LIMERICK 26-JUL 1984 00:45:00
FORMAT NO.: ( )

INDEX FOR PLANT AND REACTOR SYSTEM PARAMETERS VS TIME GRAPHS

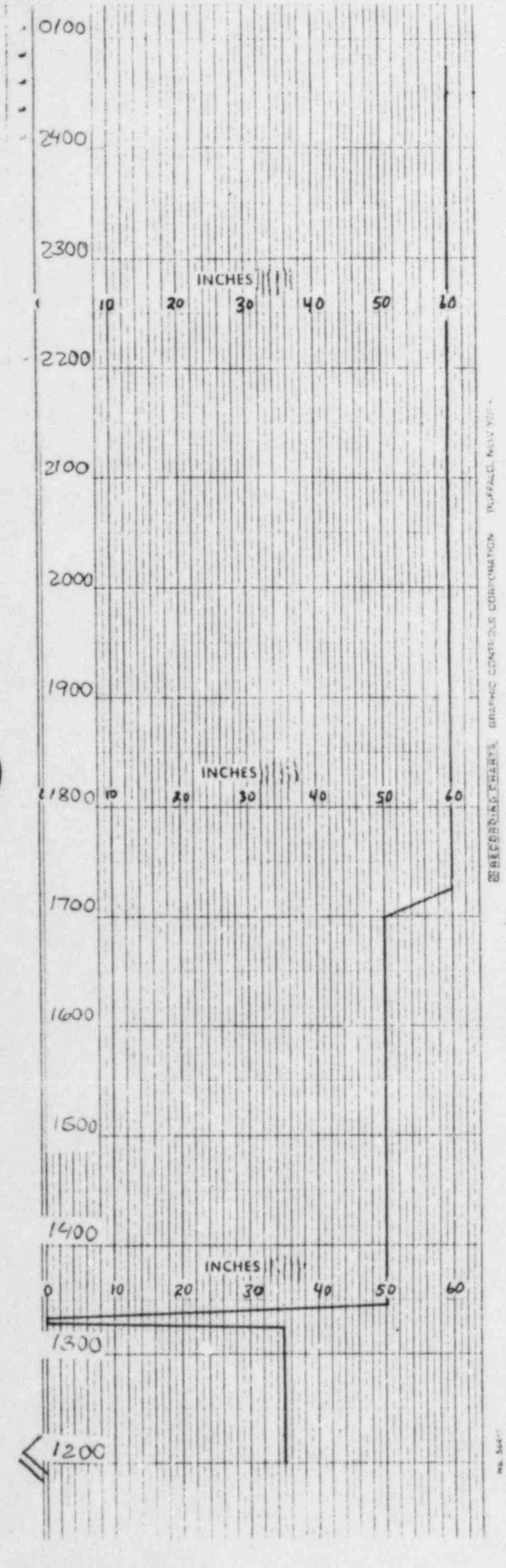
Parameter	Units	Graph No.	Parameter	Units	Graph No.
Reactor Level	inches	1,1A,1B	Drywell Press	psig	20,20A
Reactor Pressure	psig	2,2A	SGTS Flow	cfm	21
Reactor Power	% Full Power	3	Drywell Atmos Temp	°F	22
Core Plate DP	% Full Power	4	Supp Pool Press	psig	23
Core Flow	lb/hr x 10^6	5	Supp Pool Temp	°F	24
Total Steam Flow	lb/hr x 10^6	6	Supp Pool Level	feet	25
Total Feedwater Flow	lb/hr x 10^6	7	Main Stm Line Rad Mon	mR/hr	26
Condenser Vacuum	inches Hg	8	Containment Rad Level	R/hr	27
Hotwell Level	inches	9	Cond Stor Tank Level	feet	28
CRD Charging Pressure	psig	10	RCIC Flow	gpm	29
Inst. Gas to ADS Pressure	psig	11	HPCI Flow	gpm	30
Equip. Drain Coll Tank Level	feet	12	RHR A Flow	gpm	31
Equip. Drain Surge Tank Level	feet	13	RHR B Flow	gpm	32
Floor Drain Coll Tank Level	feet	14	Core Spray A Flow	gpm	33
Floor Drain Surge Tank Level	feet	15	Core Spray B Flow	gpm	34
H_2 Concentration	%	16	RHR Hx Outlet Temp	°F	35
O_2 Concentration	%	17	RHR SW Inlet Temp	°F	36
North Vent Stack Concentration	µCi/cc	18	RHR C Flow	gpm	37
North Vent Stack Release Rate	µCi/sec	19	RHR D Flow	gpm	38

3J-110

GRAPH-1

Reactor Level (NR)

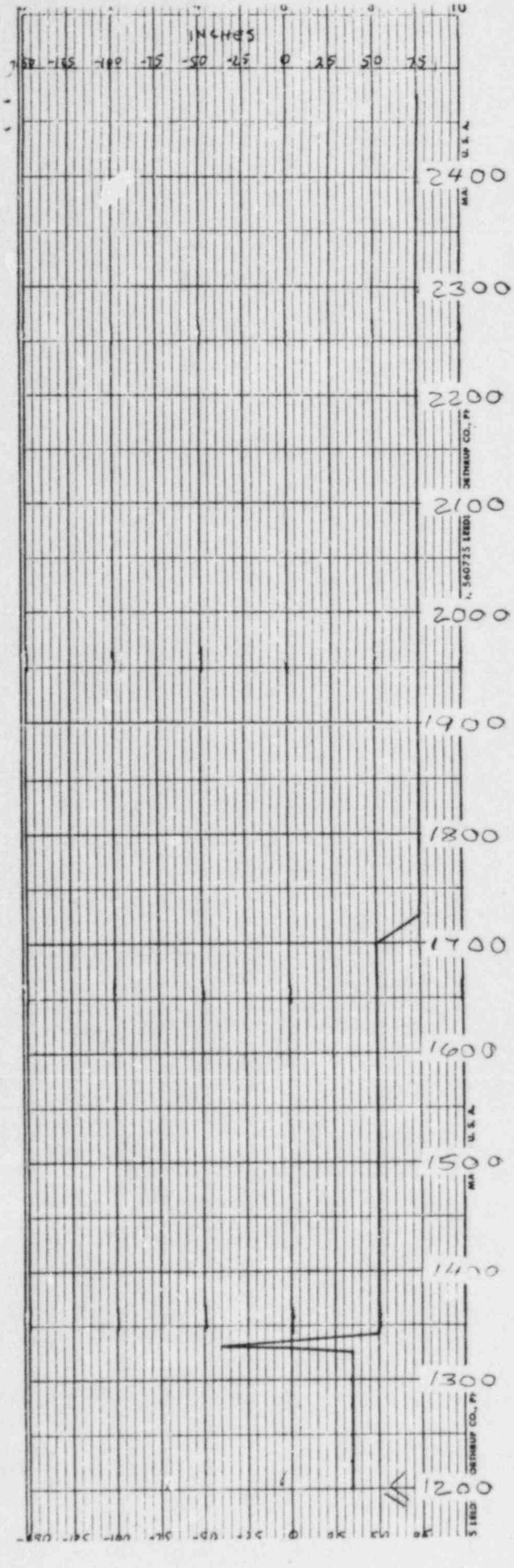
(inches)



GRAPH-1A

Reactor Level(WR)

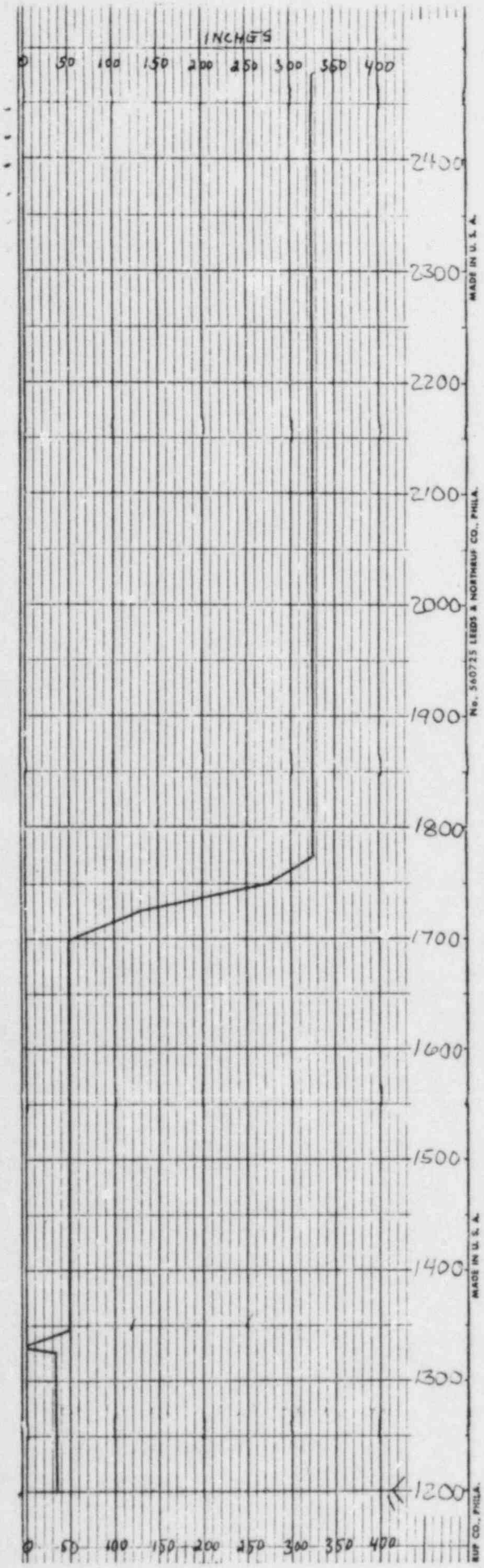
(inches)



3J-112

GRAPH-1B

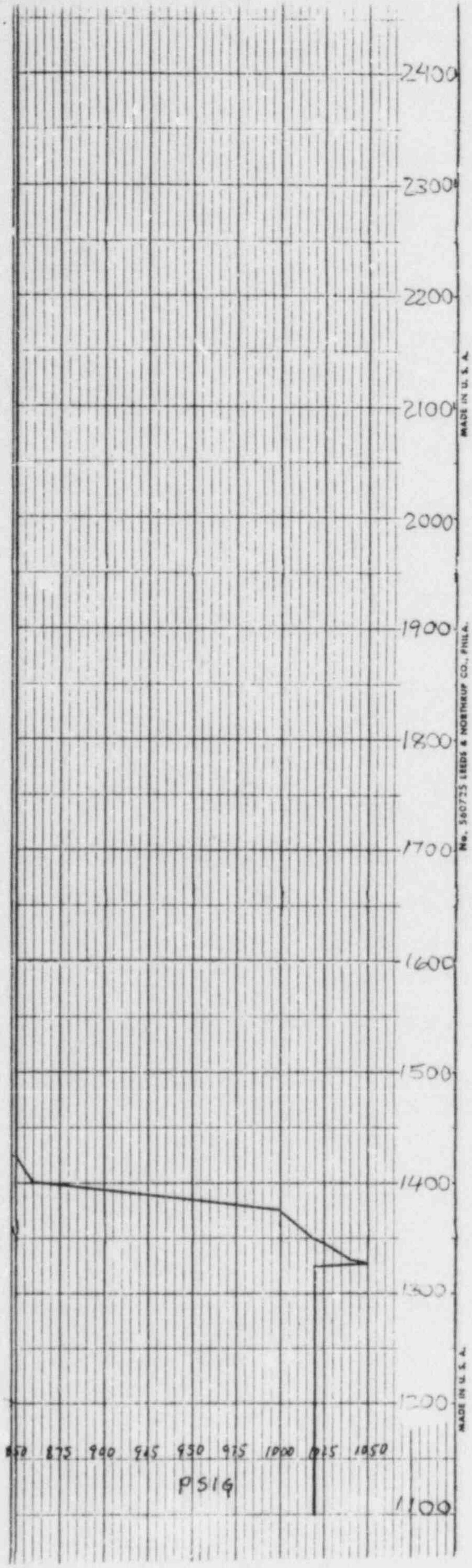
Reactor Level/
Shutdown
(inches)



GRAPH-2

Reactor Pressure (NR)

(psig)

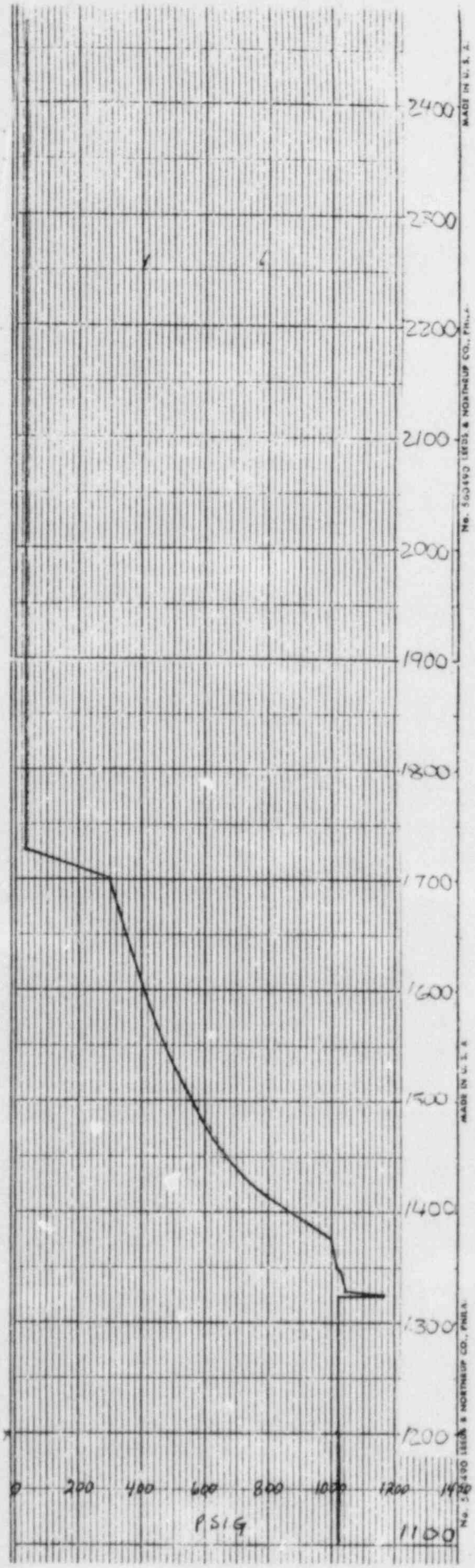


3J-114

GRAPH-2A

Reactor. Pressure (WR)

(psig)

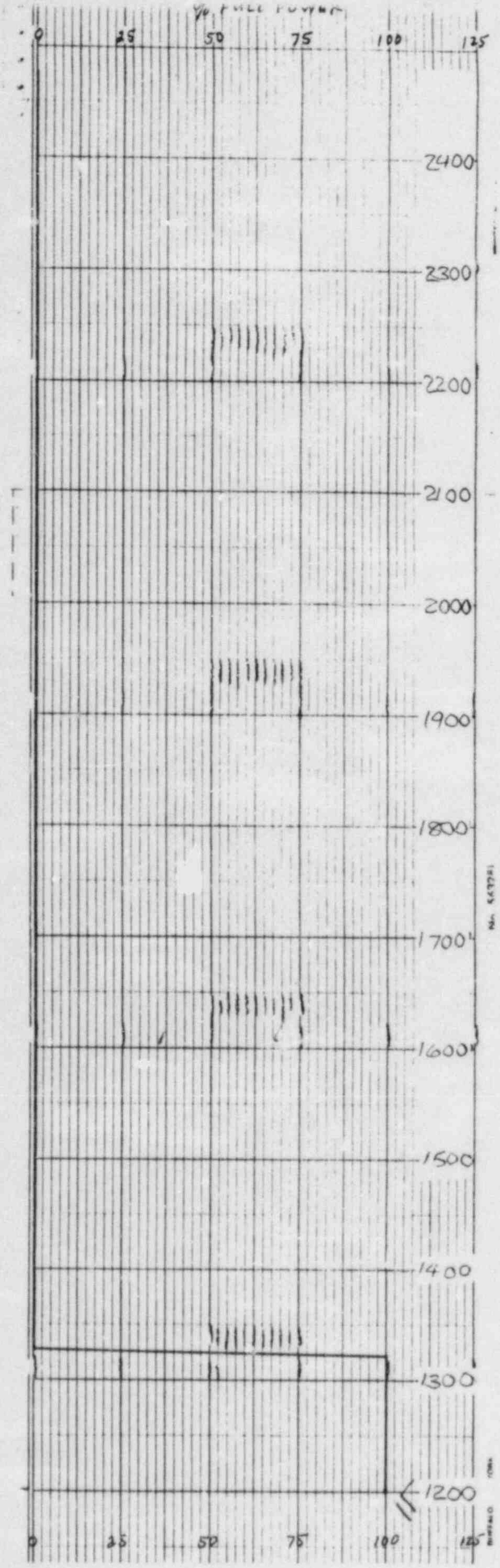


3J-115

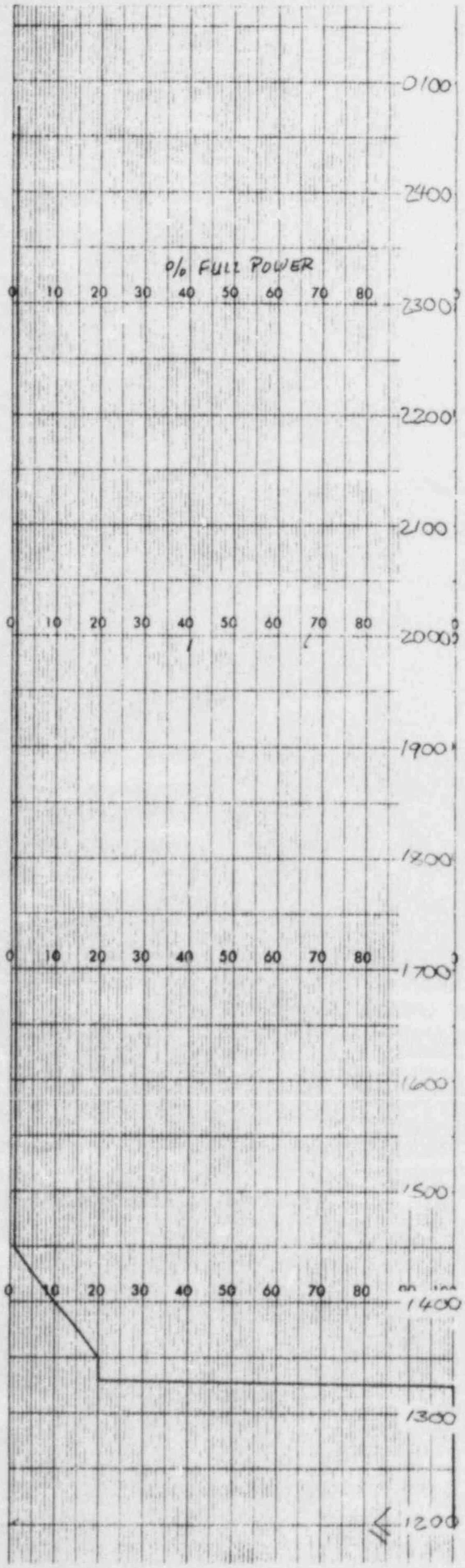
GRAPH-3

Reactor Power

(% Full Power)



GRAPH- 4



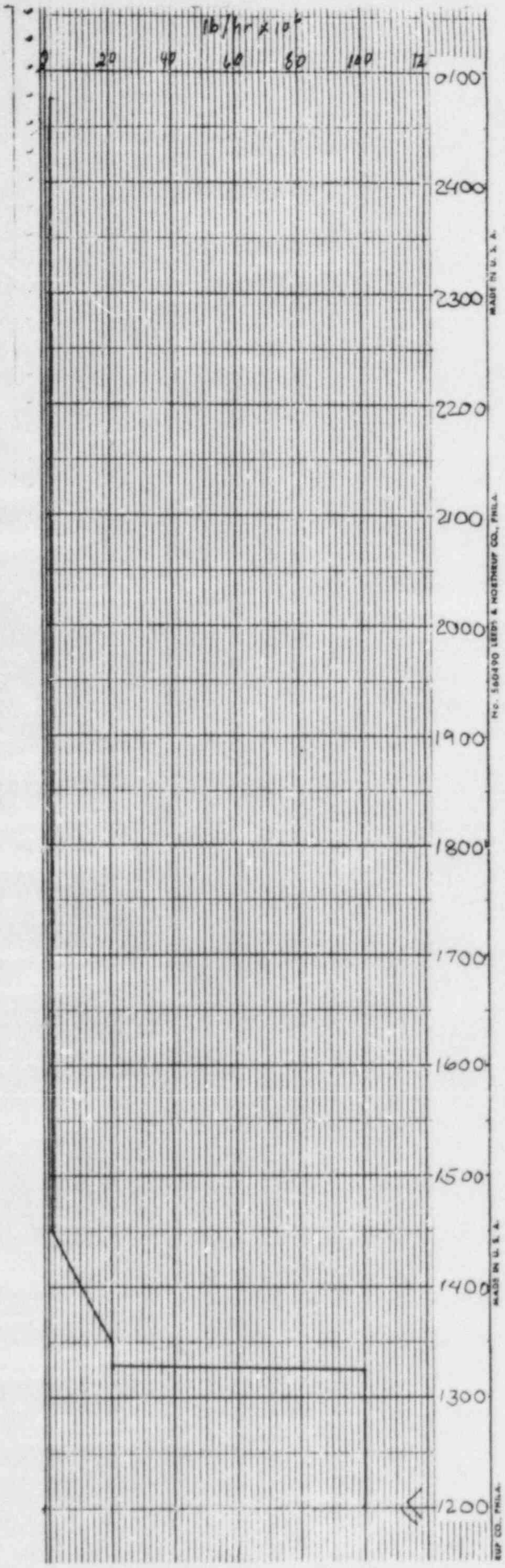
Core Plate DP

(% Full Power)

GRAPH-5

Core Flow

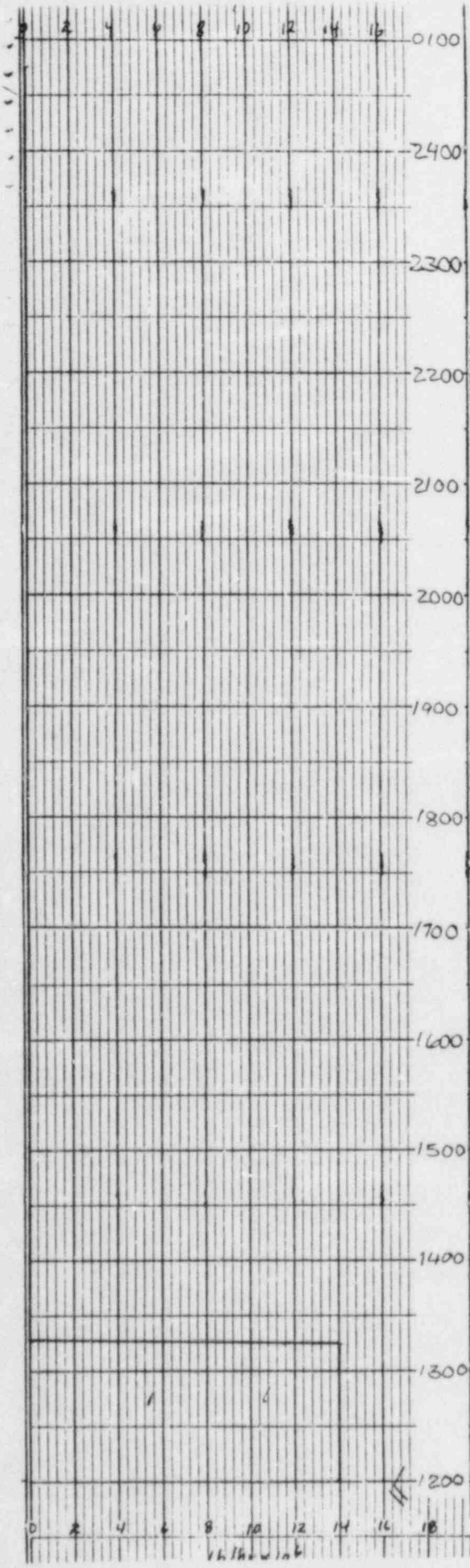
(lb/hr x 10^6)



GRAPH-6

Total Steam Flow

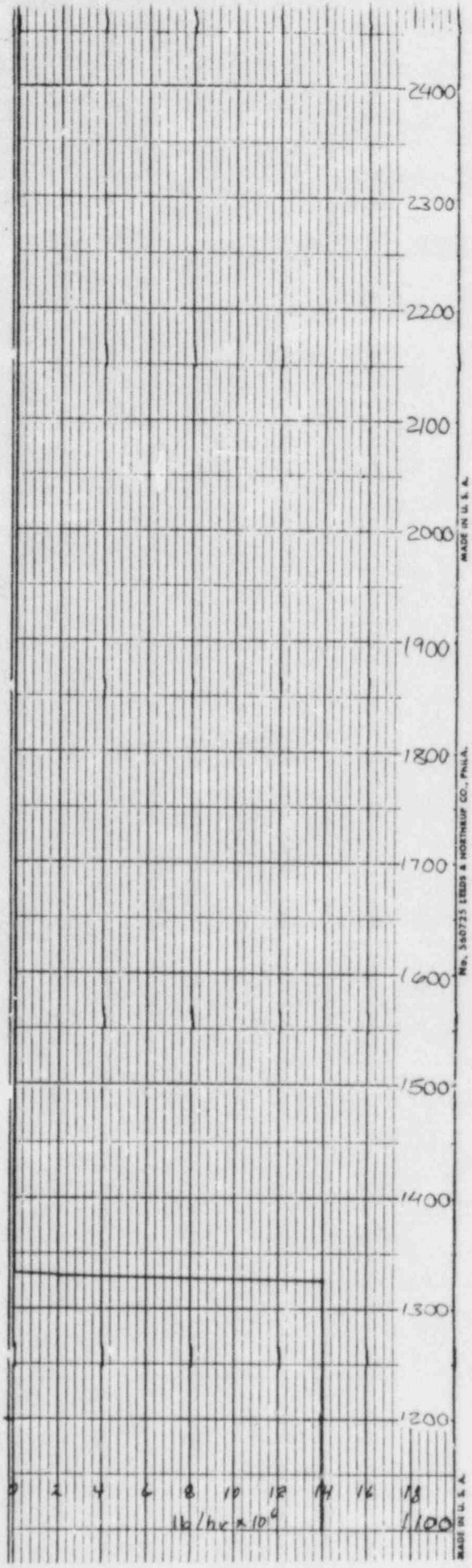
($lb/hr \times 10^6$)



GRAPH - 7

Total Feedwater Flow

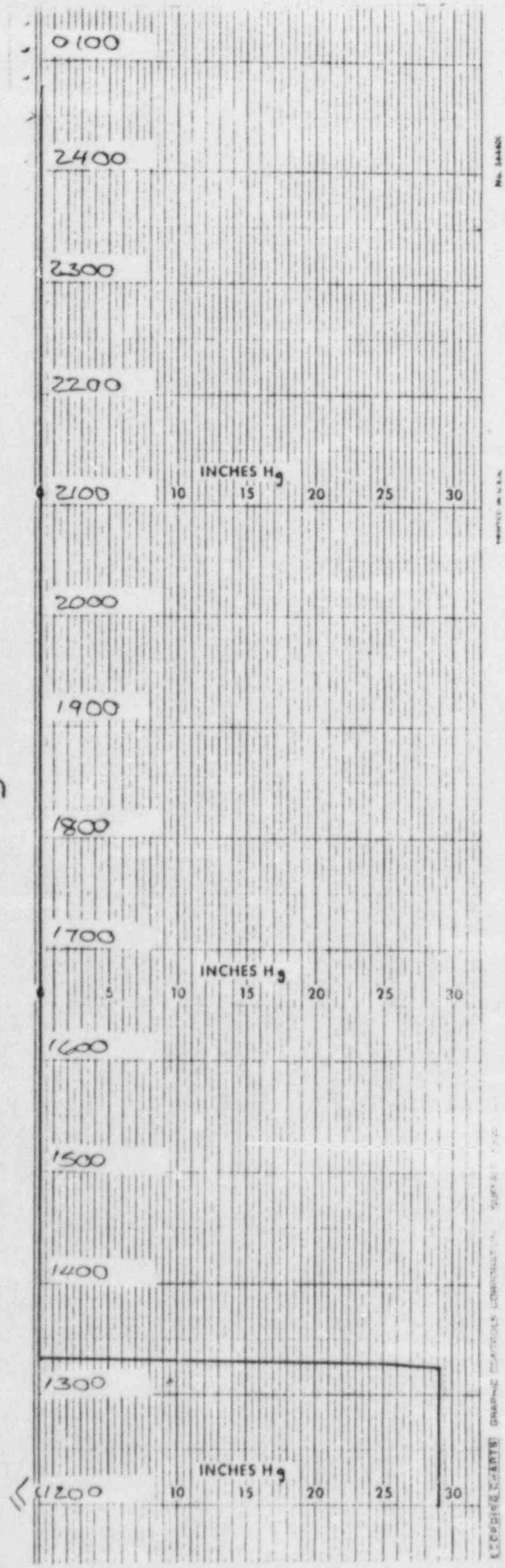
(lb/hr x 10⁶)



GRAPH-8

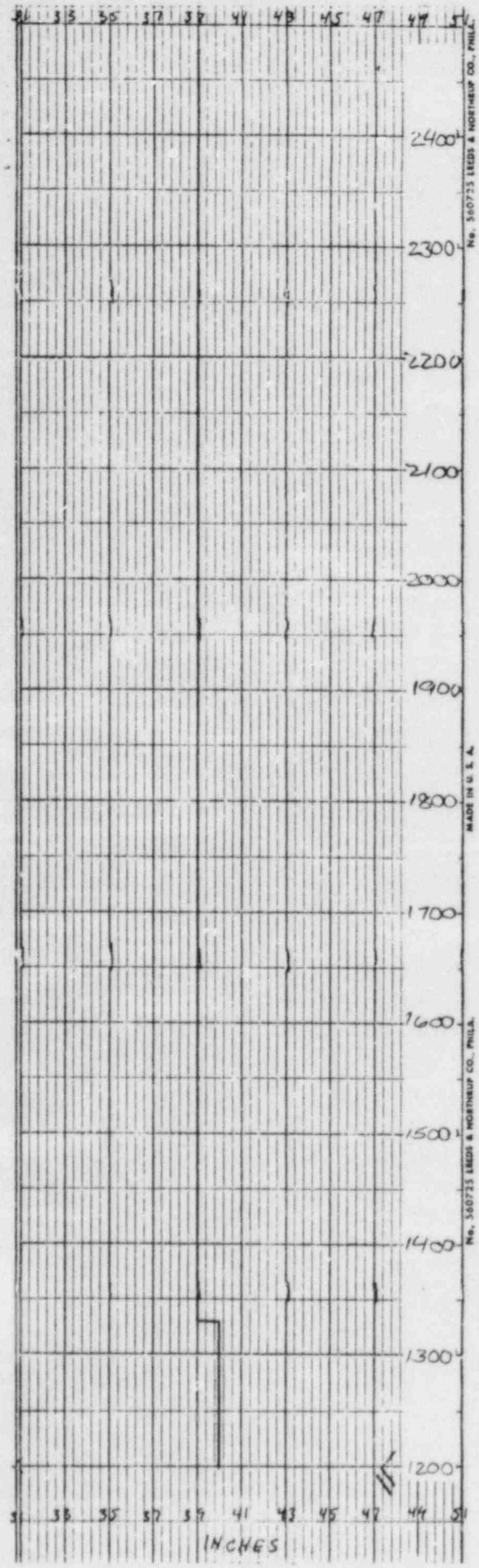
Condenser Vacumm

(inches Hg)



GRAPH-9

Hotwell Level
(inches)

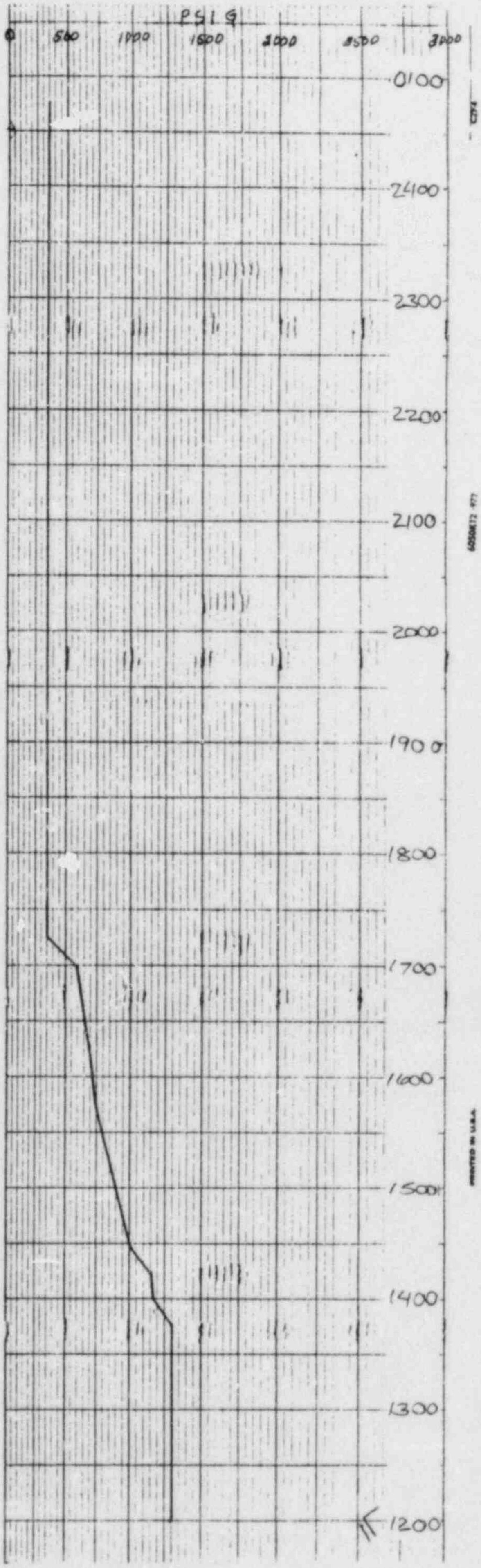


3J-122

GRAPH - 10

CRD Charging Pressure

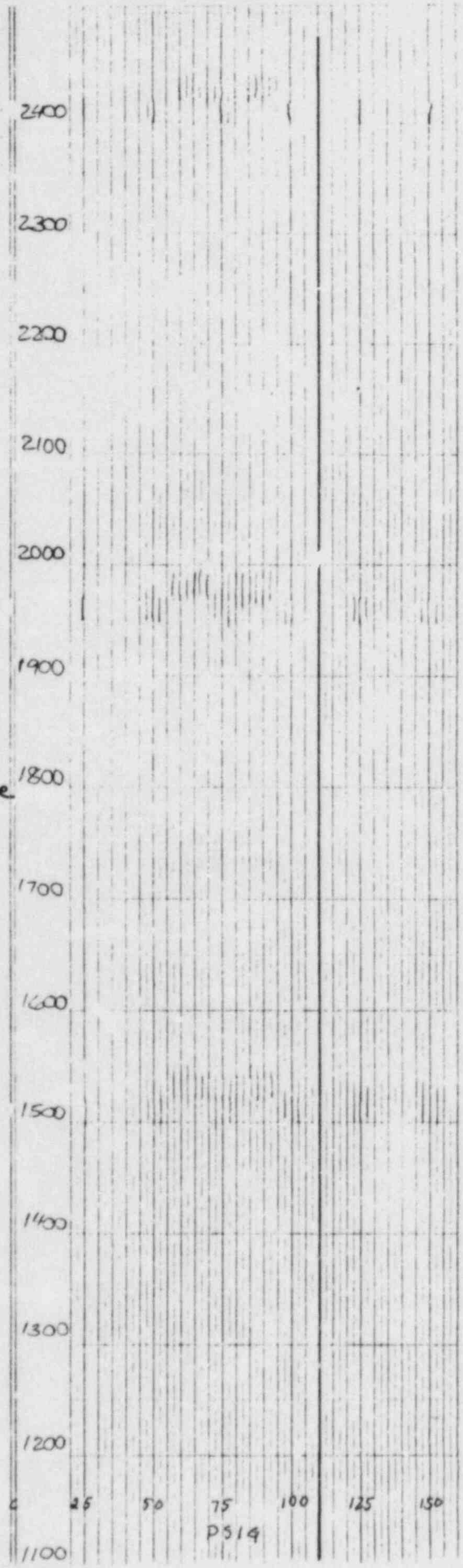
(psig)



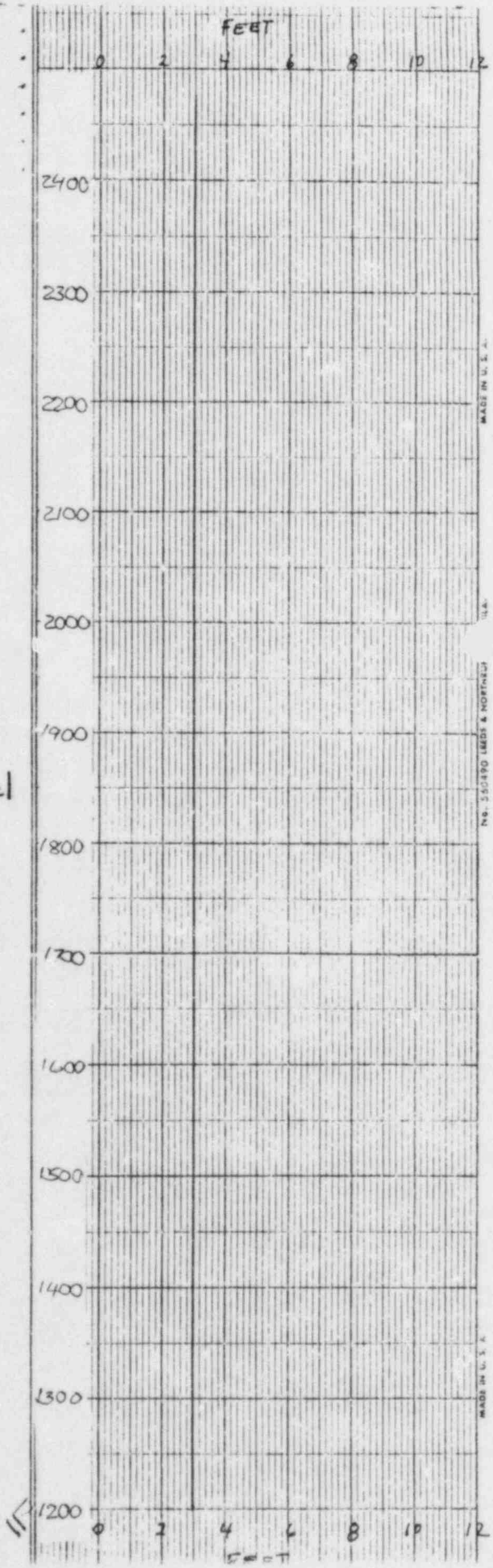
GRAPH-11

Inst. Gas To ADS Pressure

(psig)



GRAPH- 12



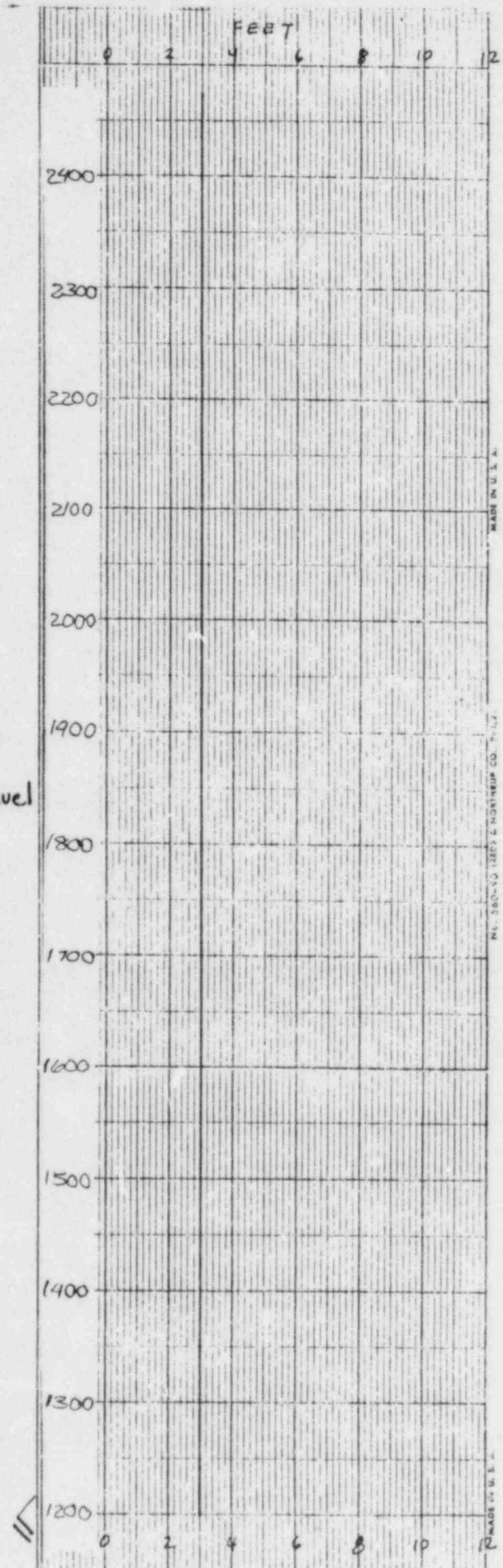
Equip Drain Coll Tank Level

(feet)

GRAPH-13

Equip Drain Surge Tank Level

(feet)

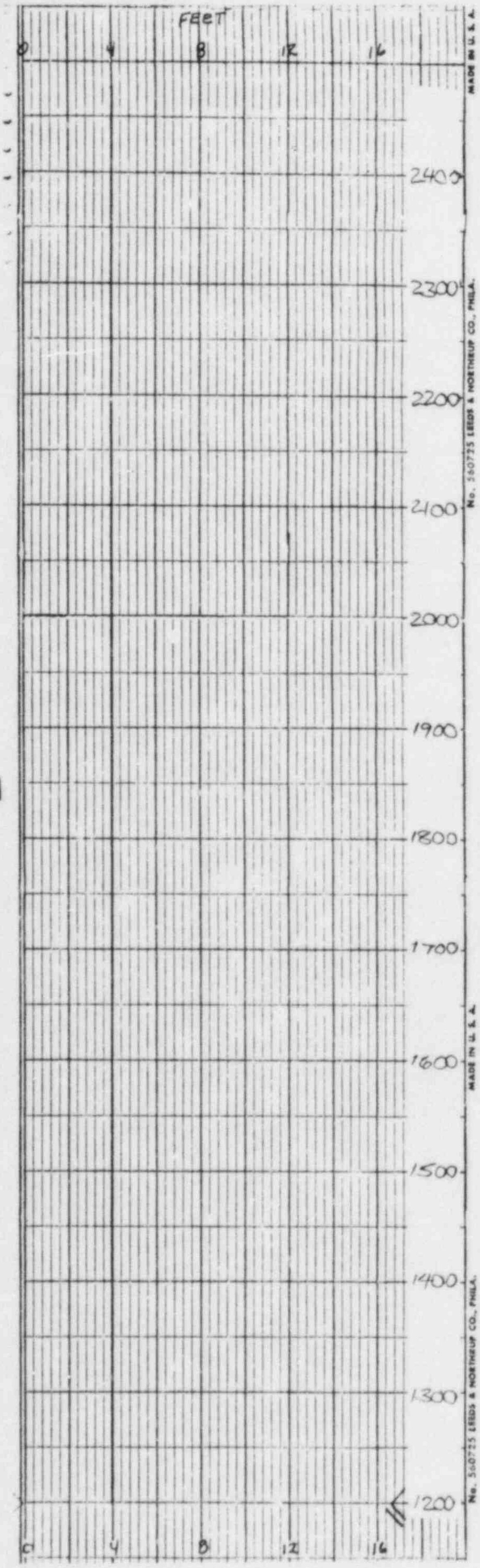


3J-126

GRAPH-14

Floor Drain Coll Tank Level

(feet)

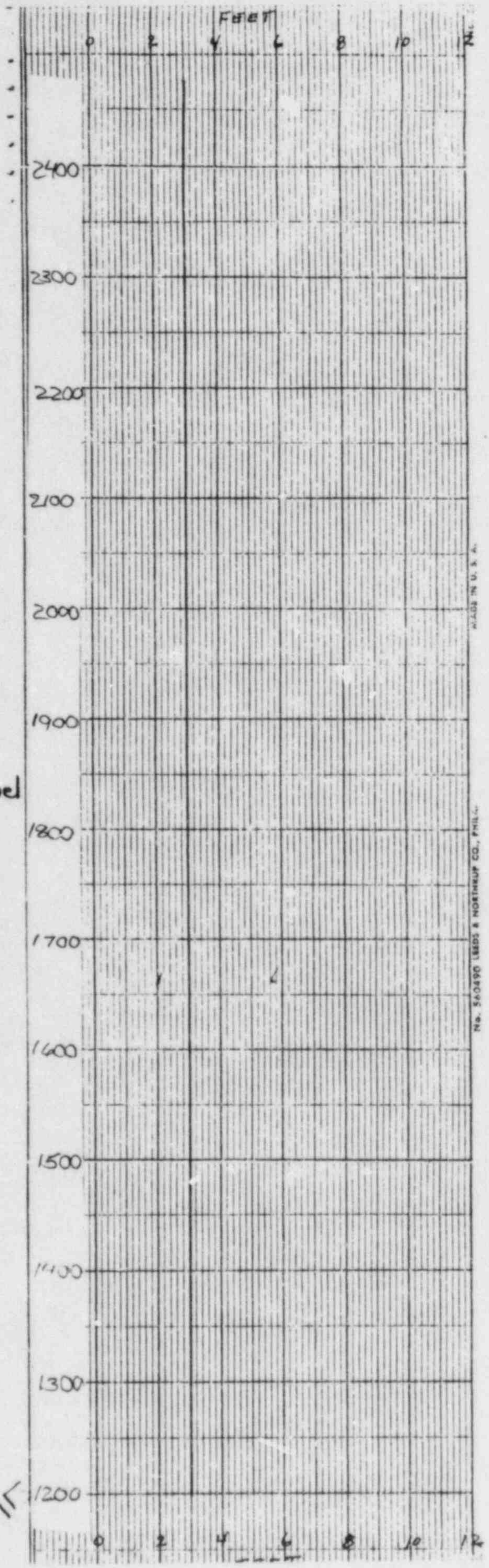


3J-127

GRAPH - 15

Floor Drain Surge Tank Level

(feet)

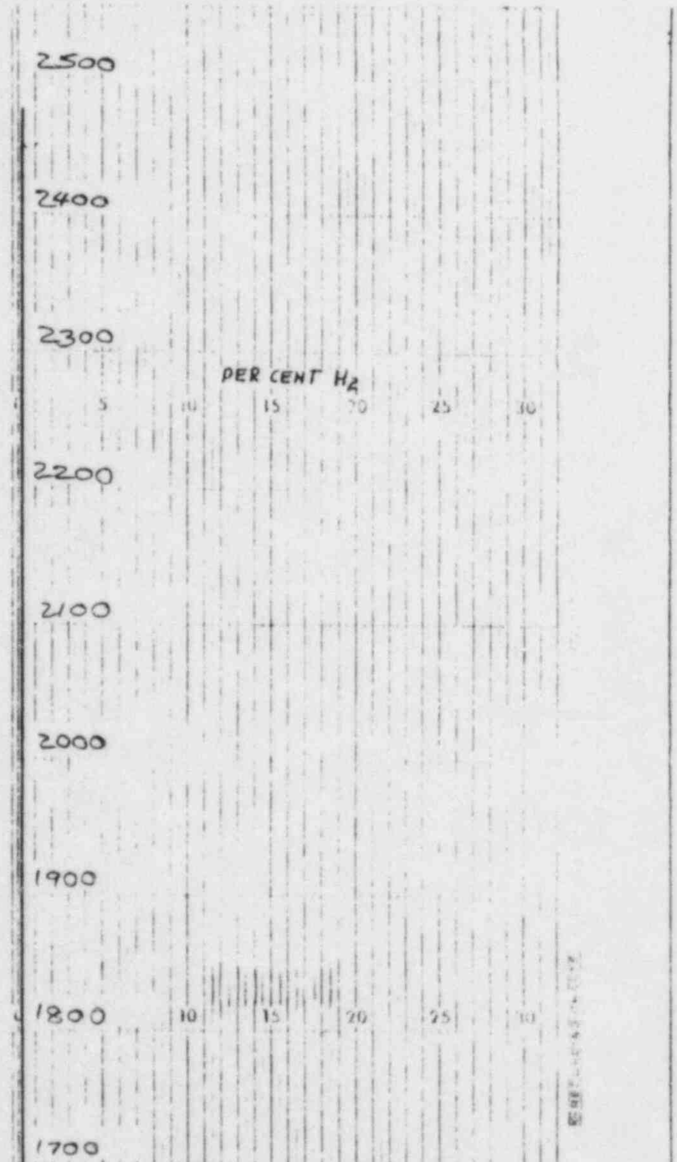


3J-128

GRAPH-16

H_2 Concentration

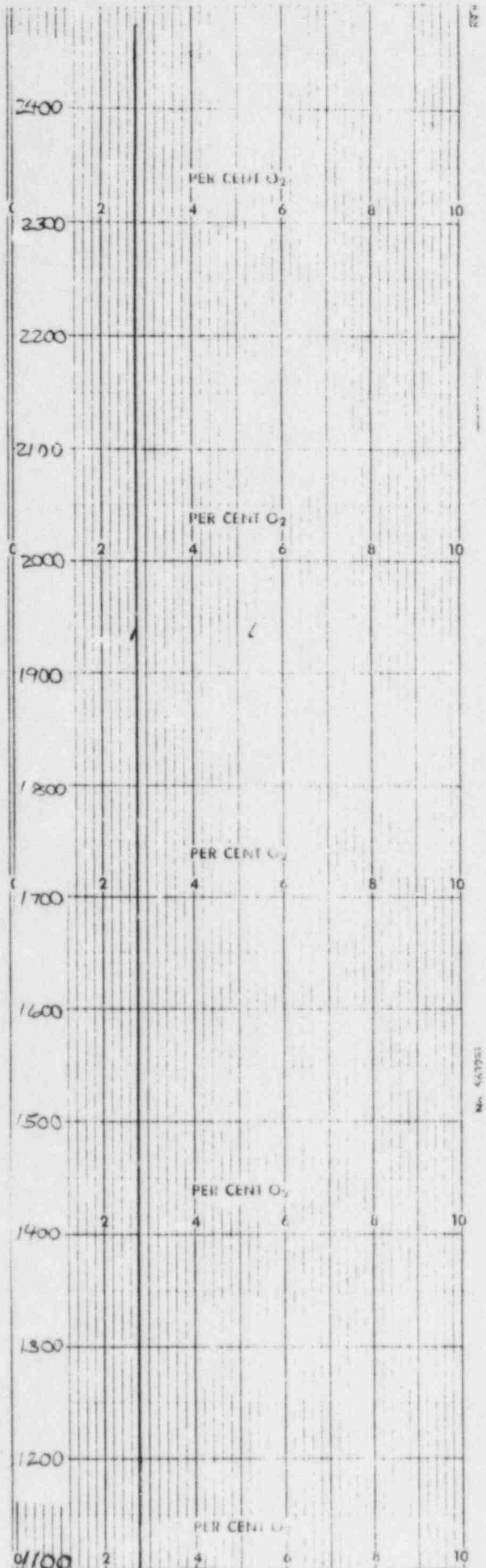
(%)



GRAPH-17

O2 Concentration

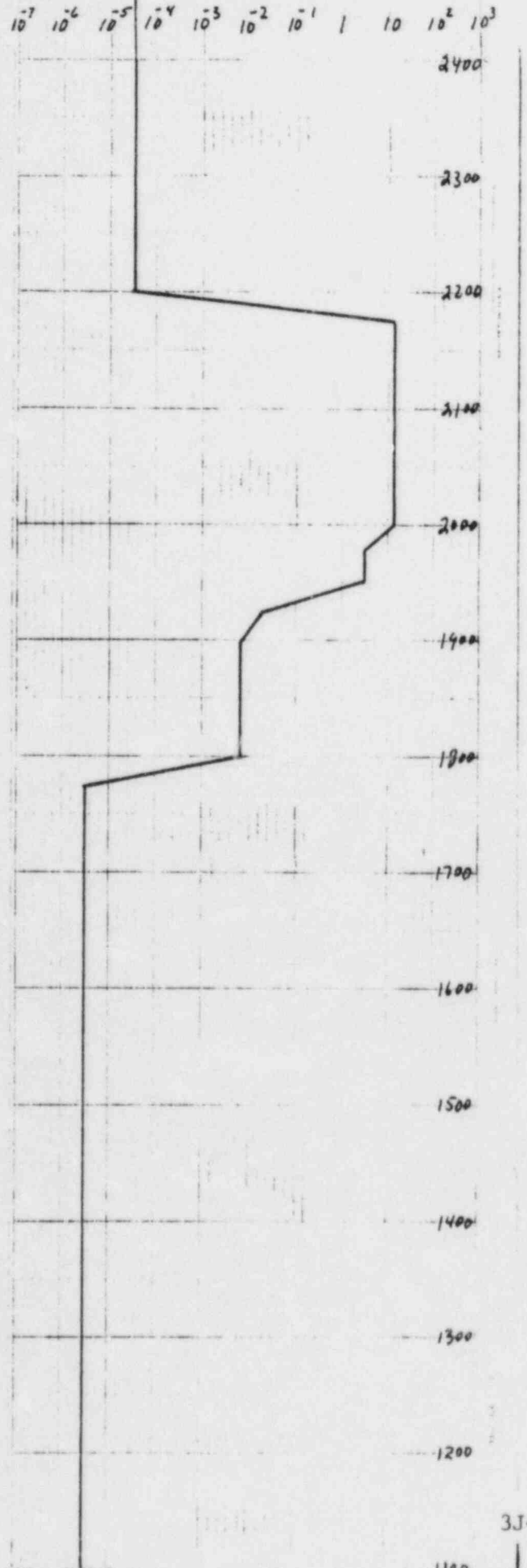
(%)



GRAPH-18

North Vent Stack
Concentration

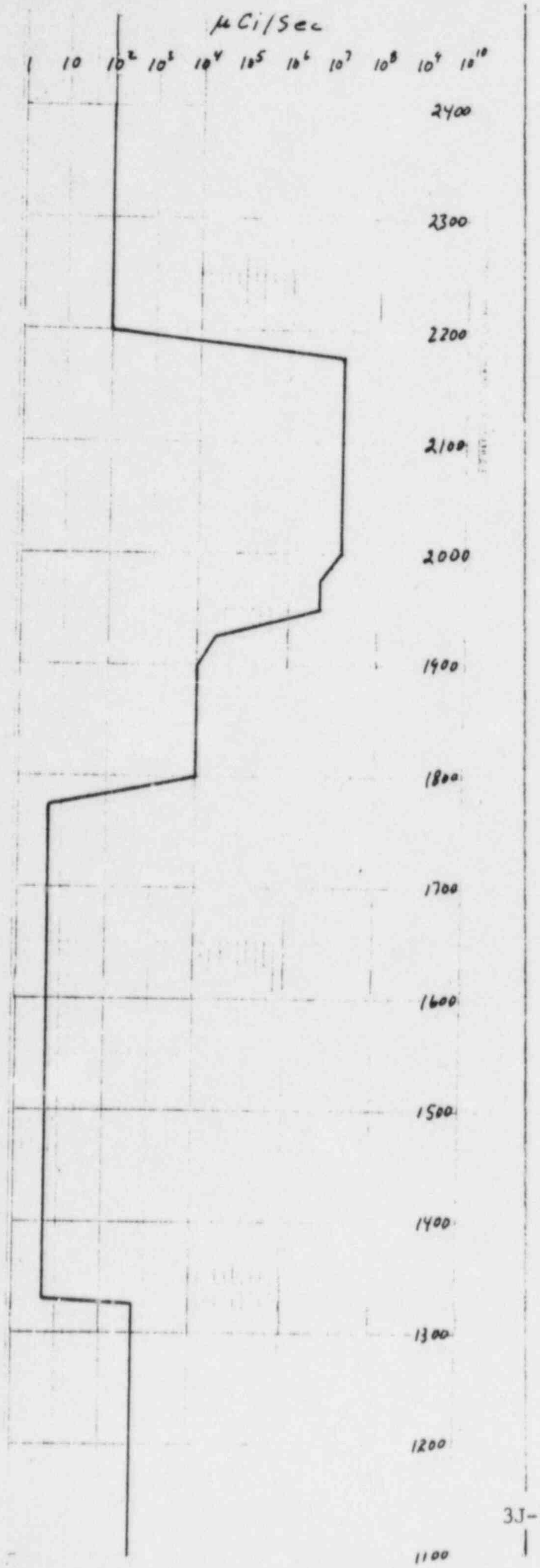
(μCi/cc)



GRAPH-19

North Vent Stack Release Rate

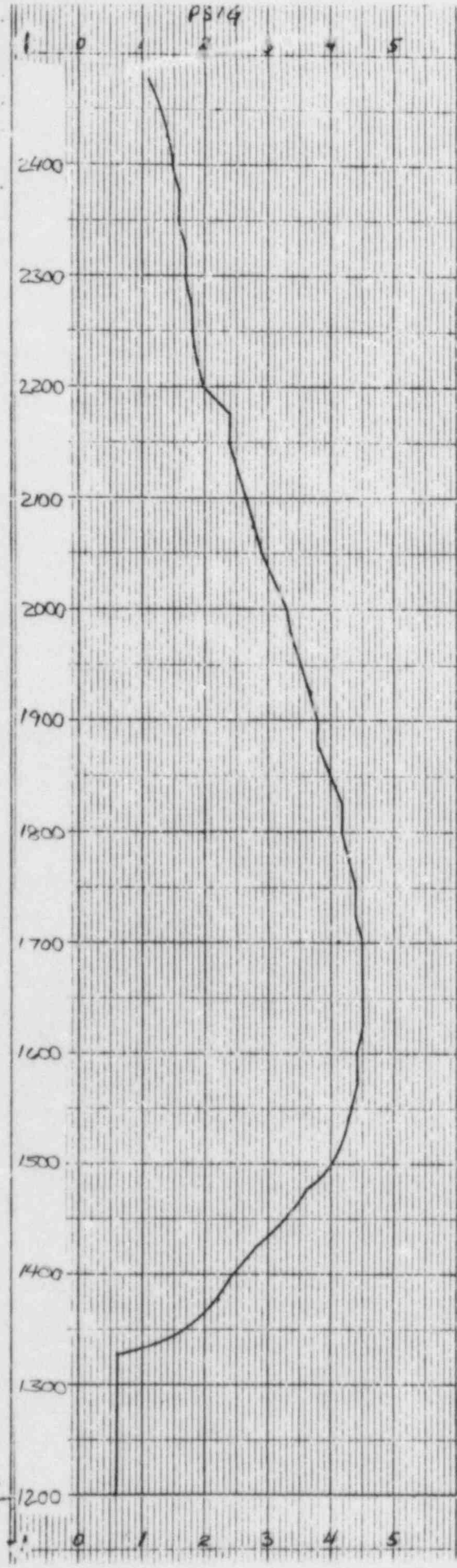
(μCi/sec)



GRAPH-20

Drywell Press (NR)

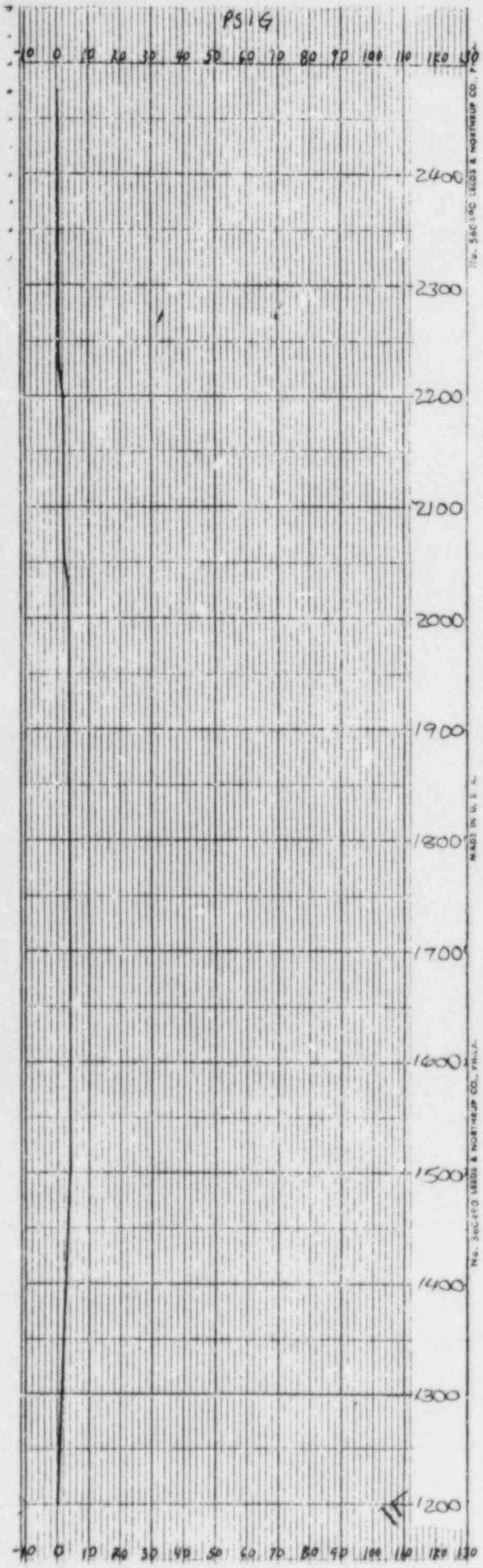
(psig)



GRAPH-20A

Drywell Press (WR)

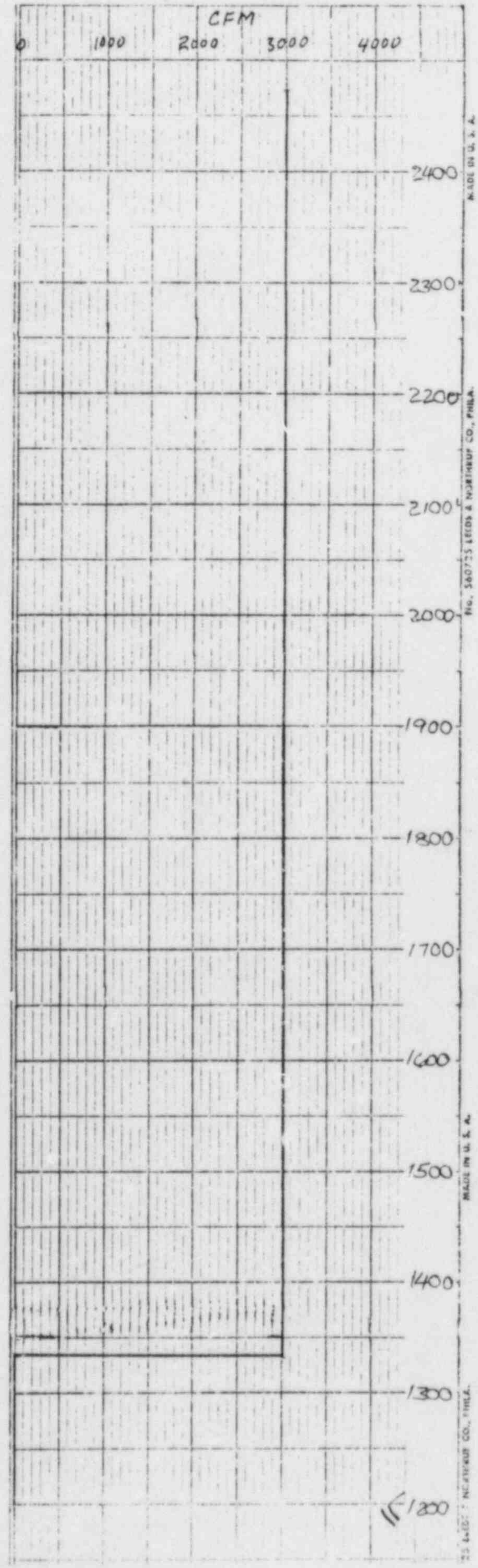
(psig)



3J-134

GRAPH-21

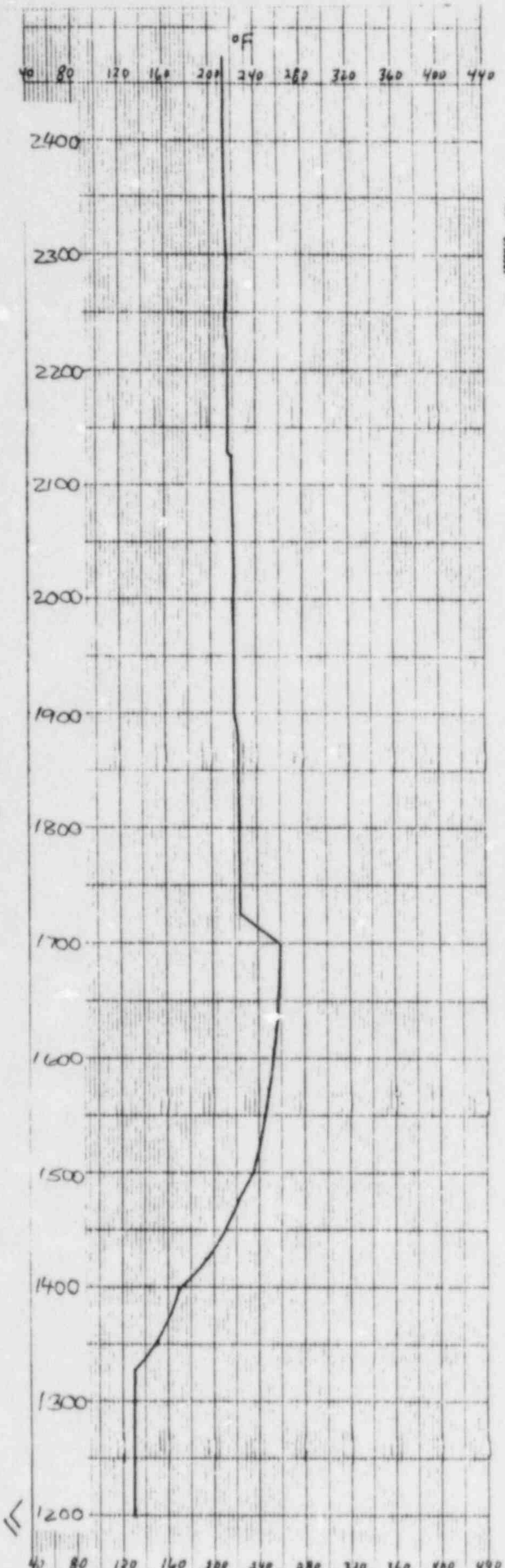
SBTS Flow
(cfm)



GRAPH - 22

Drywell Atmos Temp.

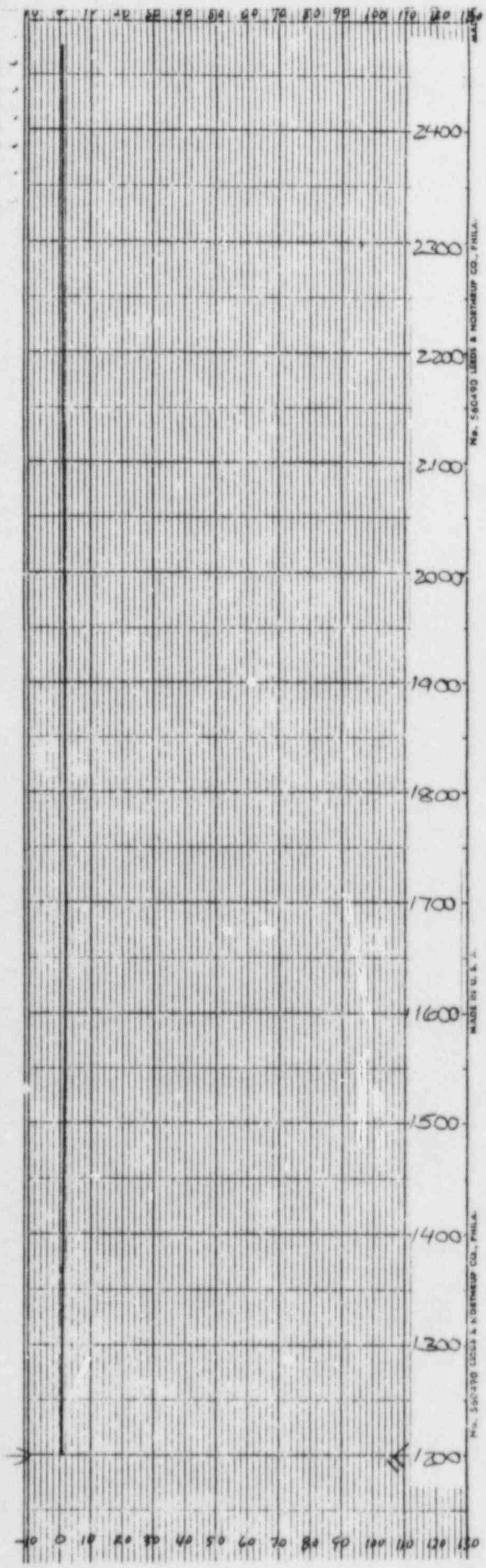
(°F)



3J-136

GRAPH-23

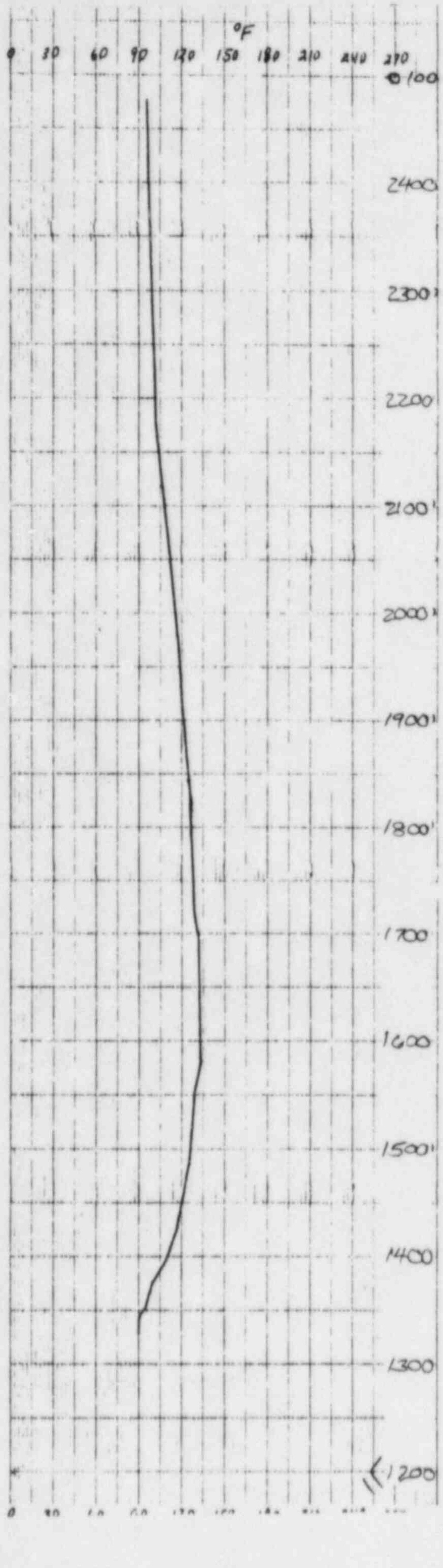
Supp Pool Press
(psig)



GRAPH-24

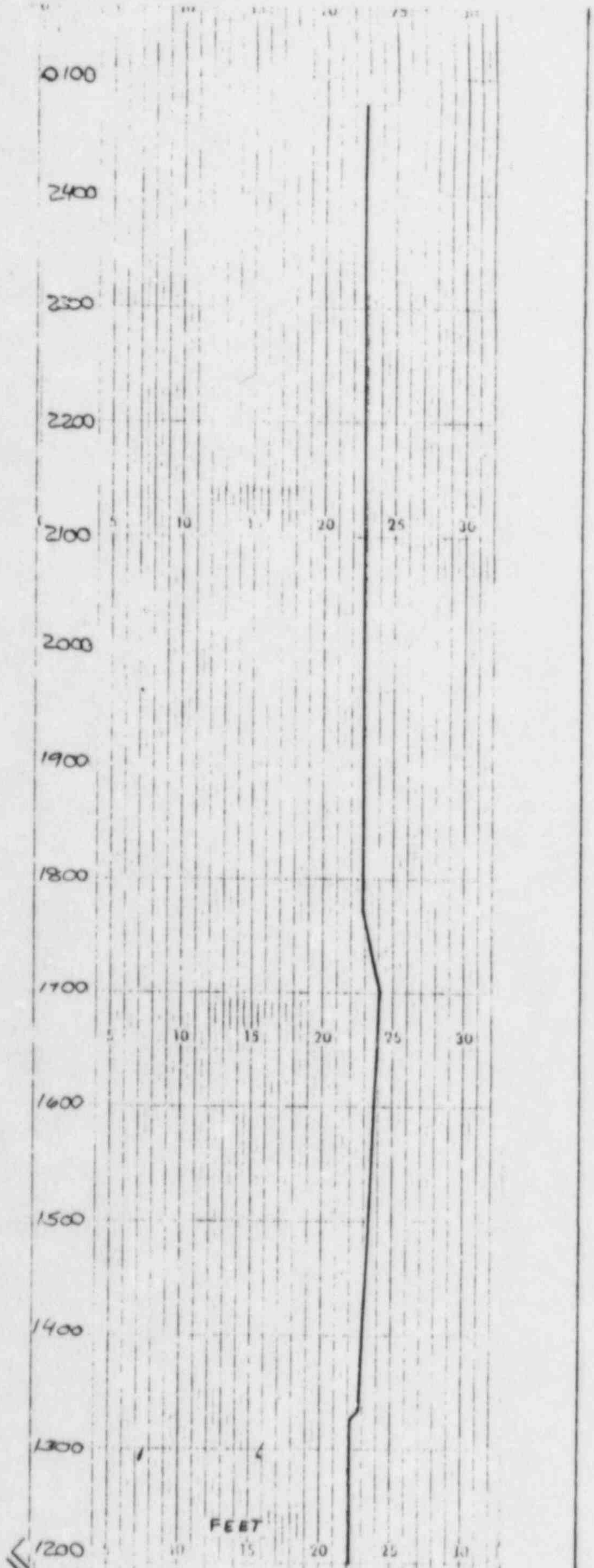
Supp Pool Temp

(°F)



GRAPH-25

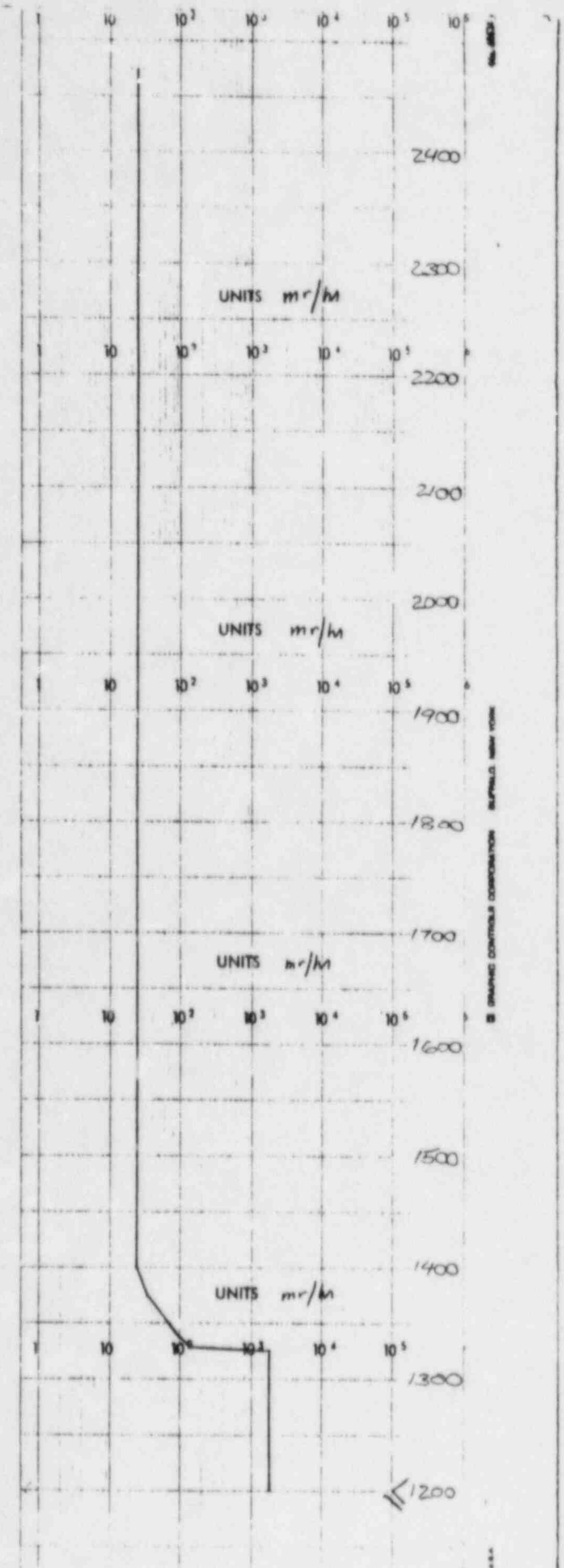
Supp Pool Level
(feet)



GRAPH-26

Main Stm Line Rad Mon

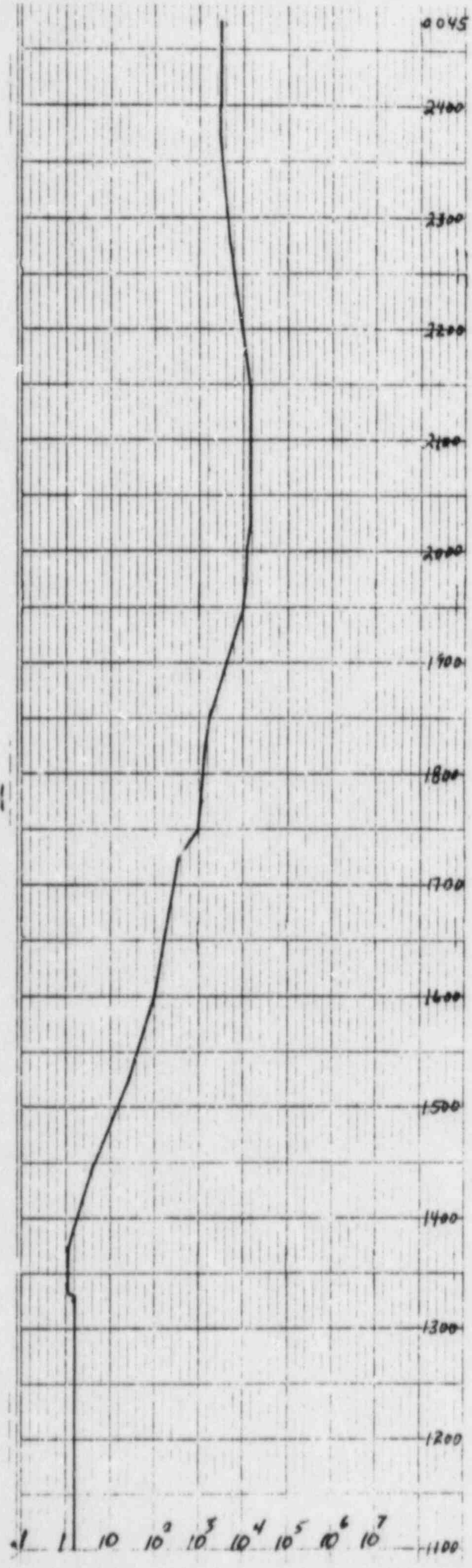
mR/hr



GRAPH-27

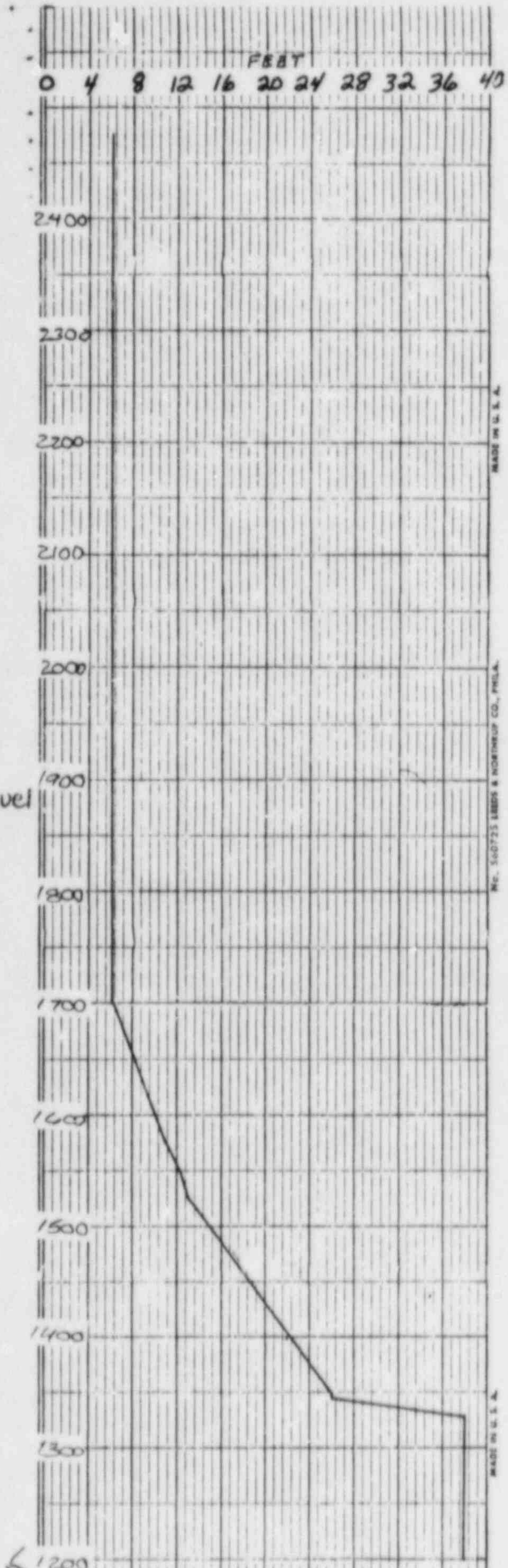
Containment Rad Level

(R/hr)



GRAPH-28

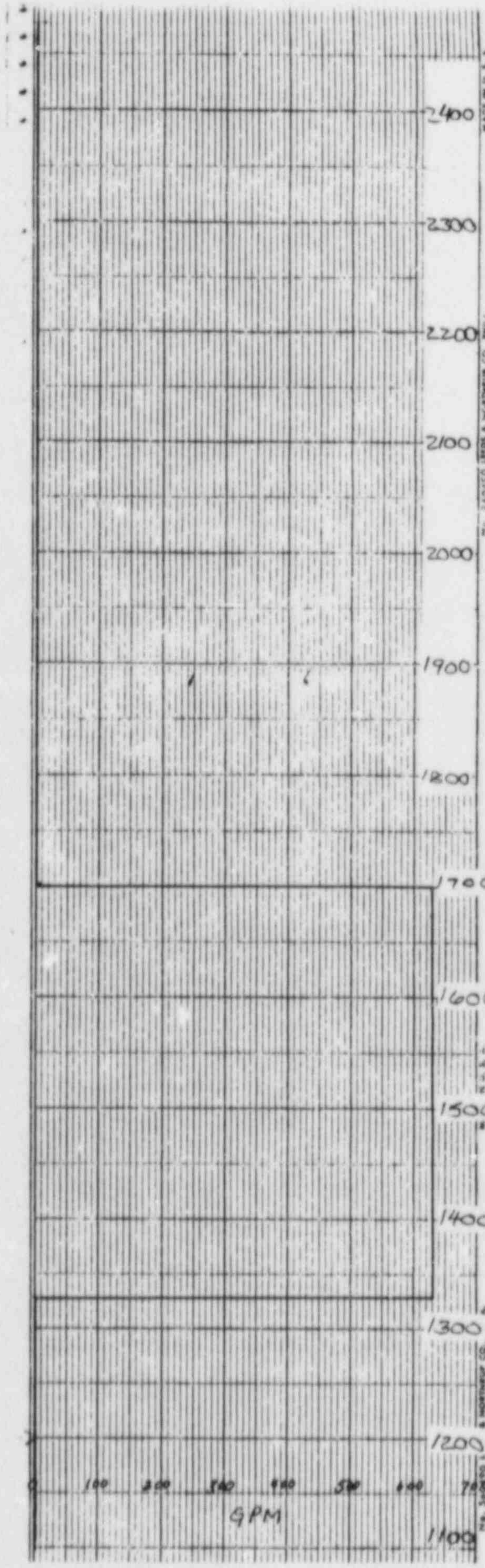
Cond. Stor Tank Level (feet)



GRAPH-29

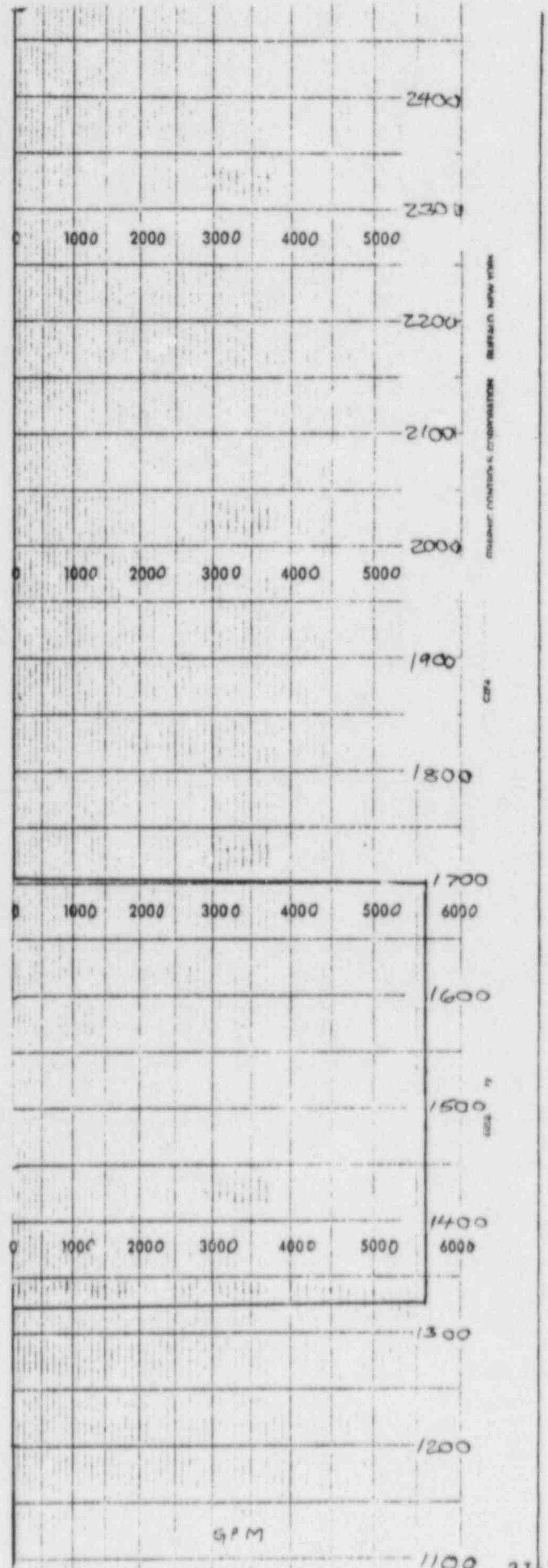
RCIC Flow

(gpm)



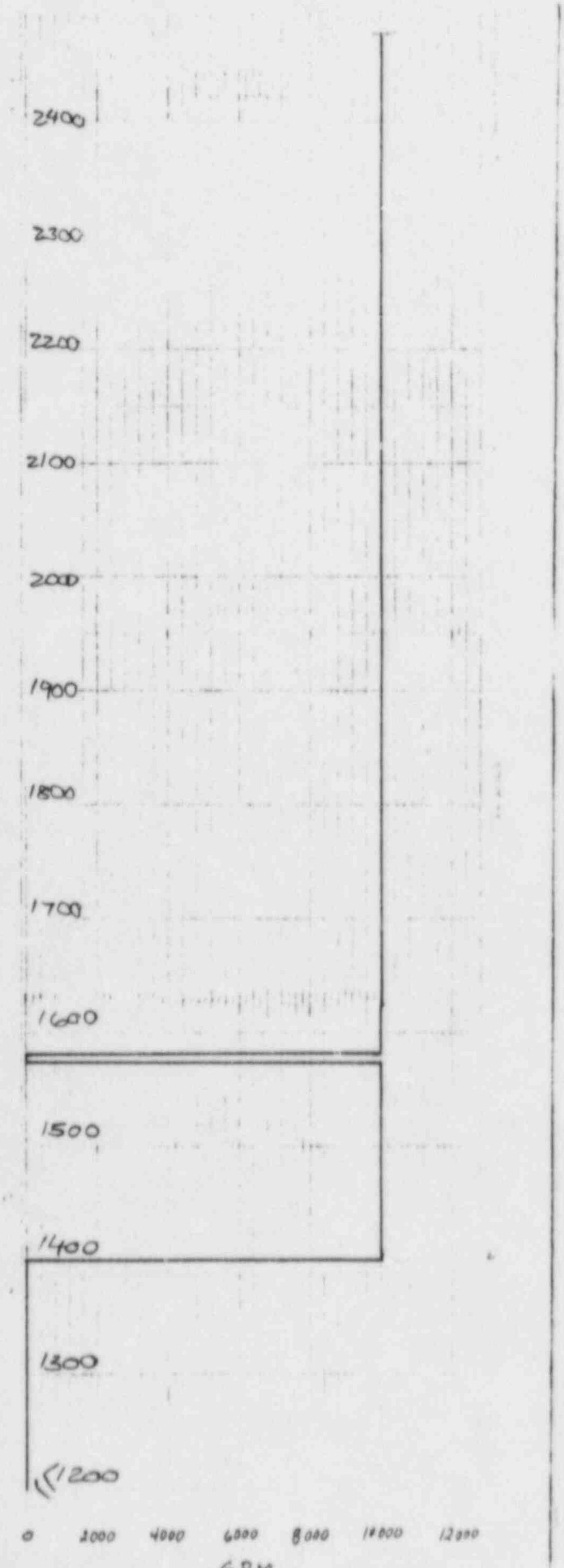
GRAPH - 30

HPCI Flow
(gpm)



GRAPH-31

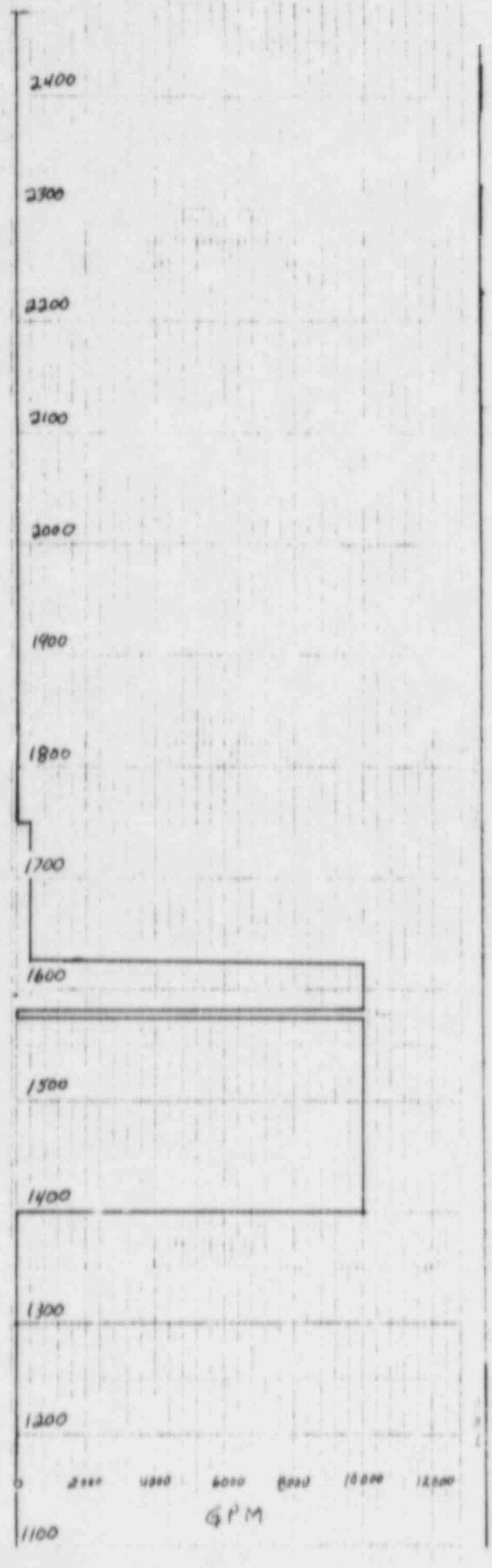
RHR A Flow
(gpm)



GRAPH-32

RHR B Flow

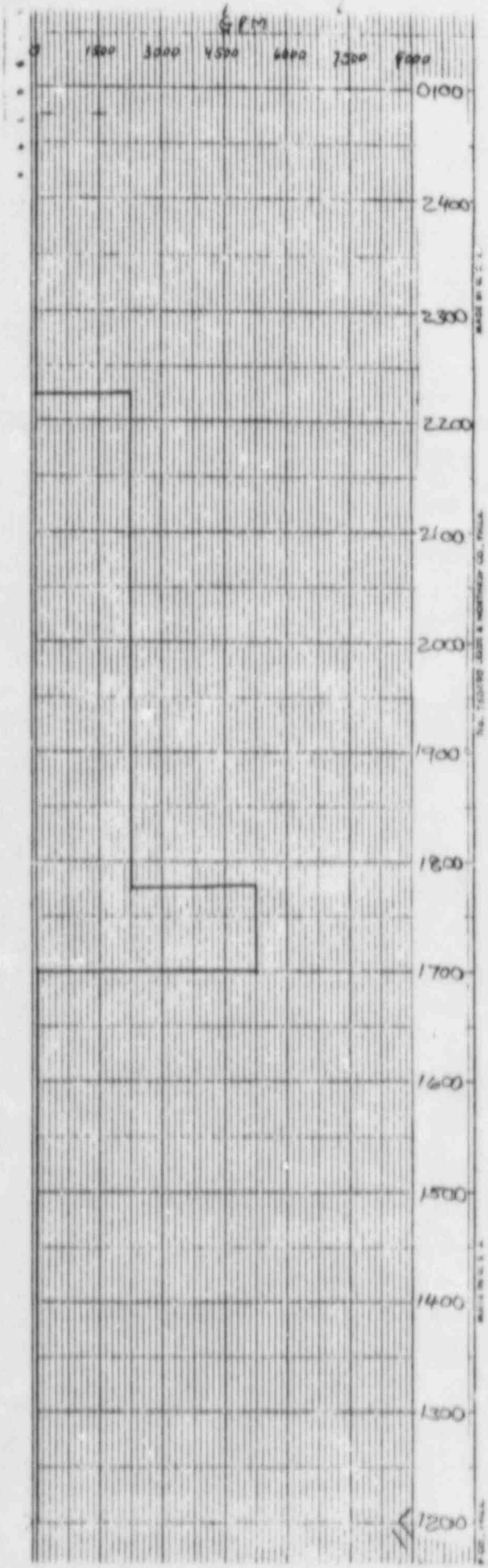
(gpm)



GRAPH-33

Core Spray A Flow

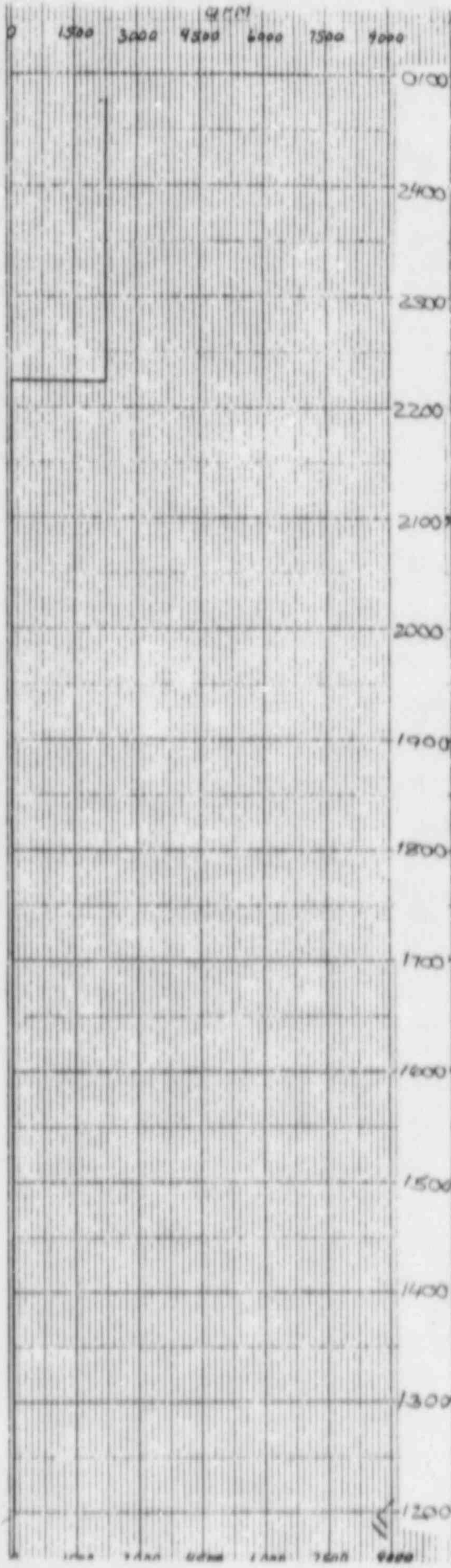
(gpm)



GRAPH-34

Core Spray B Flow

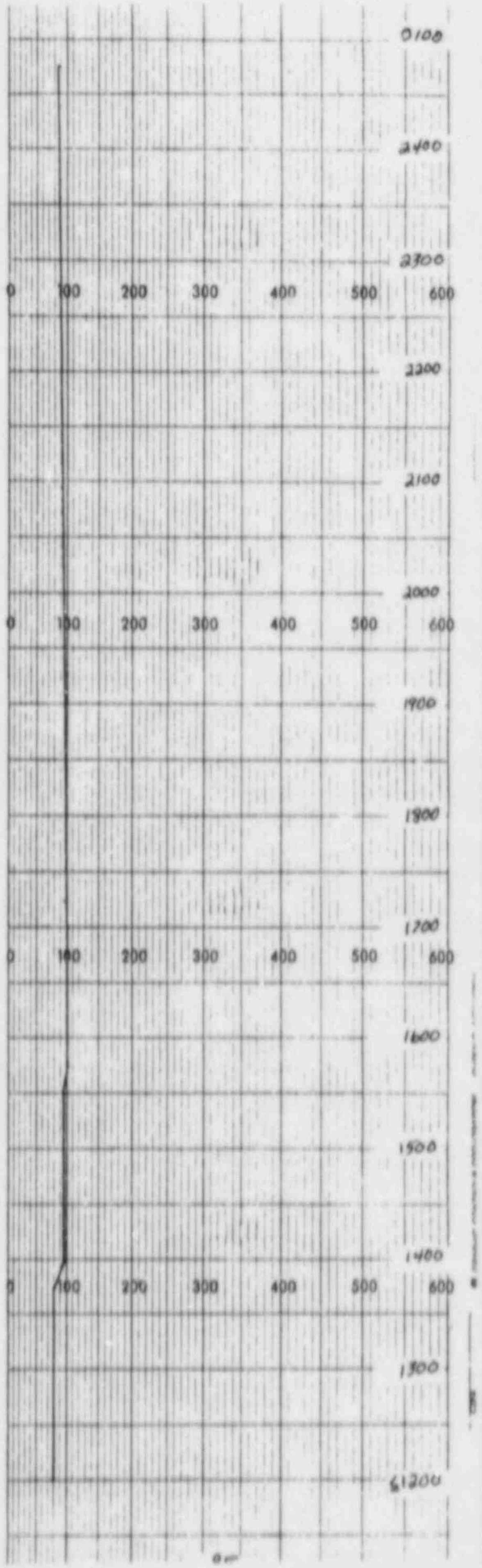
(gpm)



GRAPH-35

RHR Hx Outlet Temp

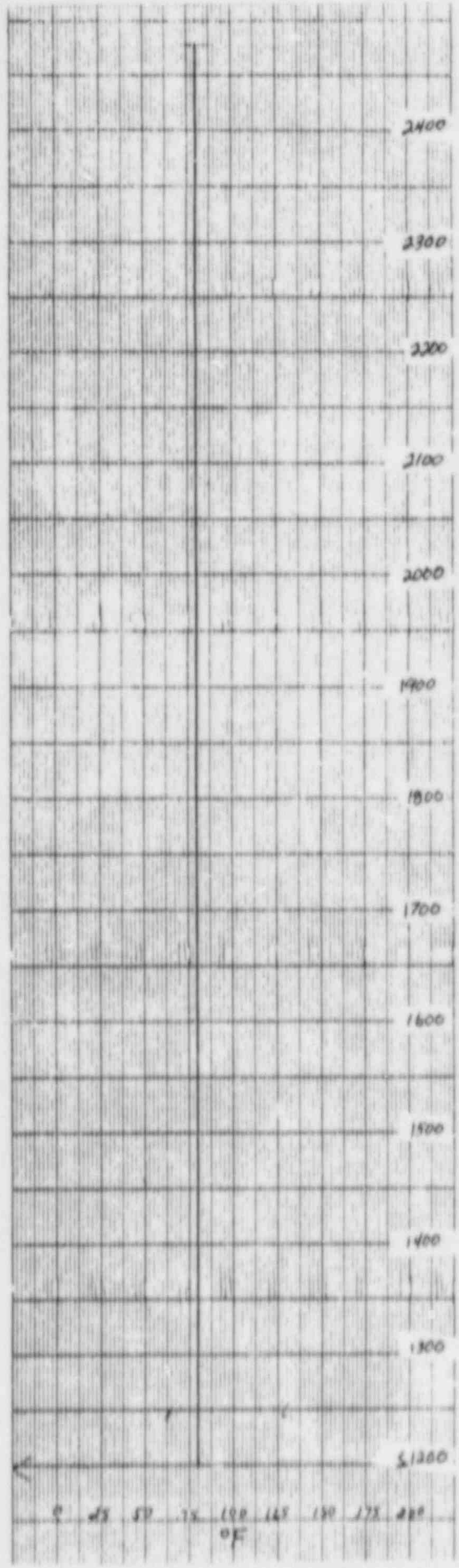
(°F)



GRAPH-36

RHR SW Inlet Temp.

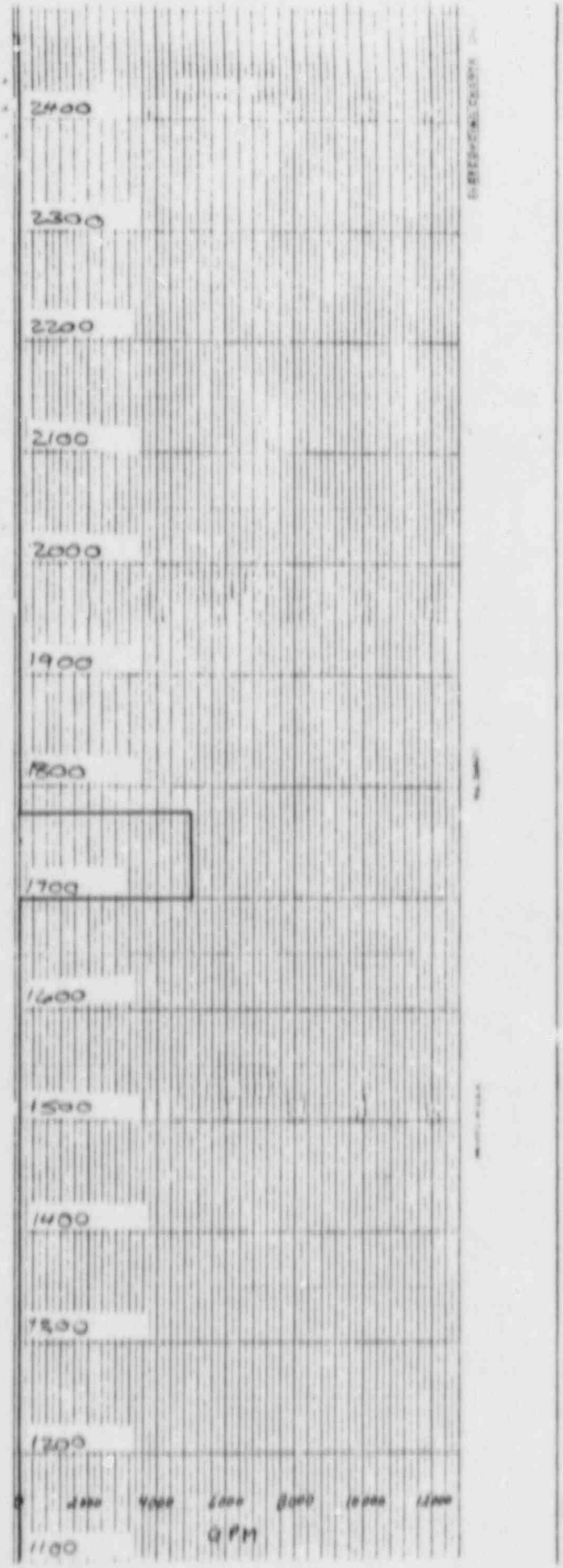
(°F)



GRAPH-37

RHRC Flow

(gpm)

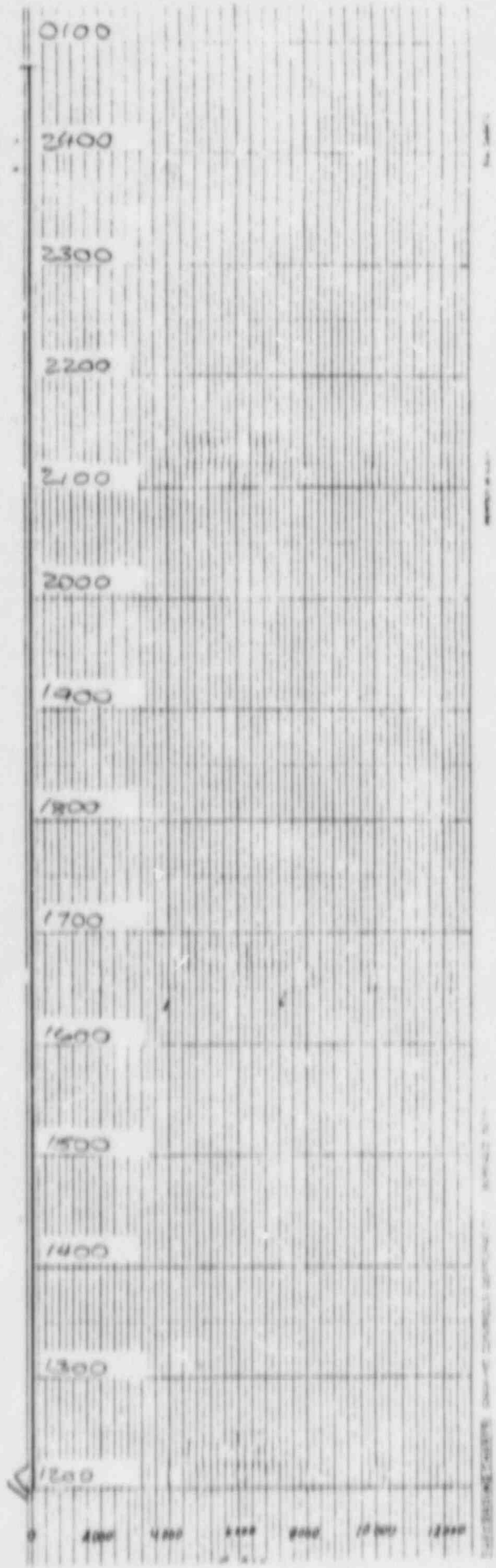


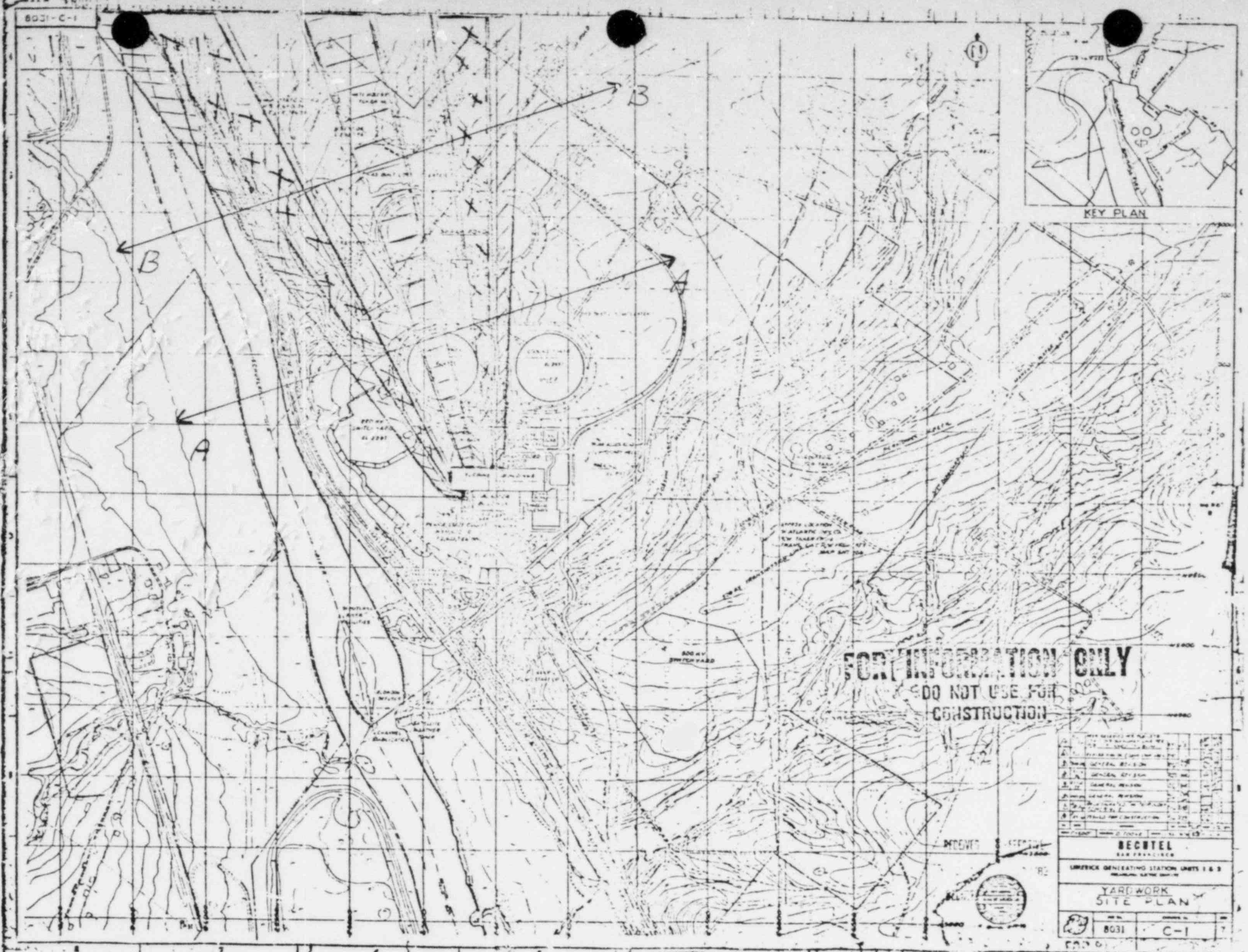
33-151

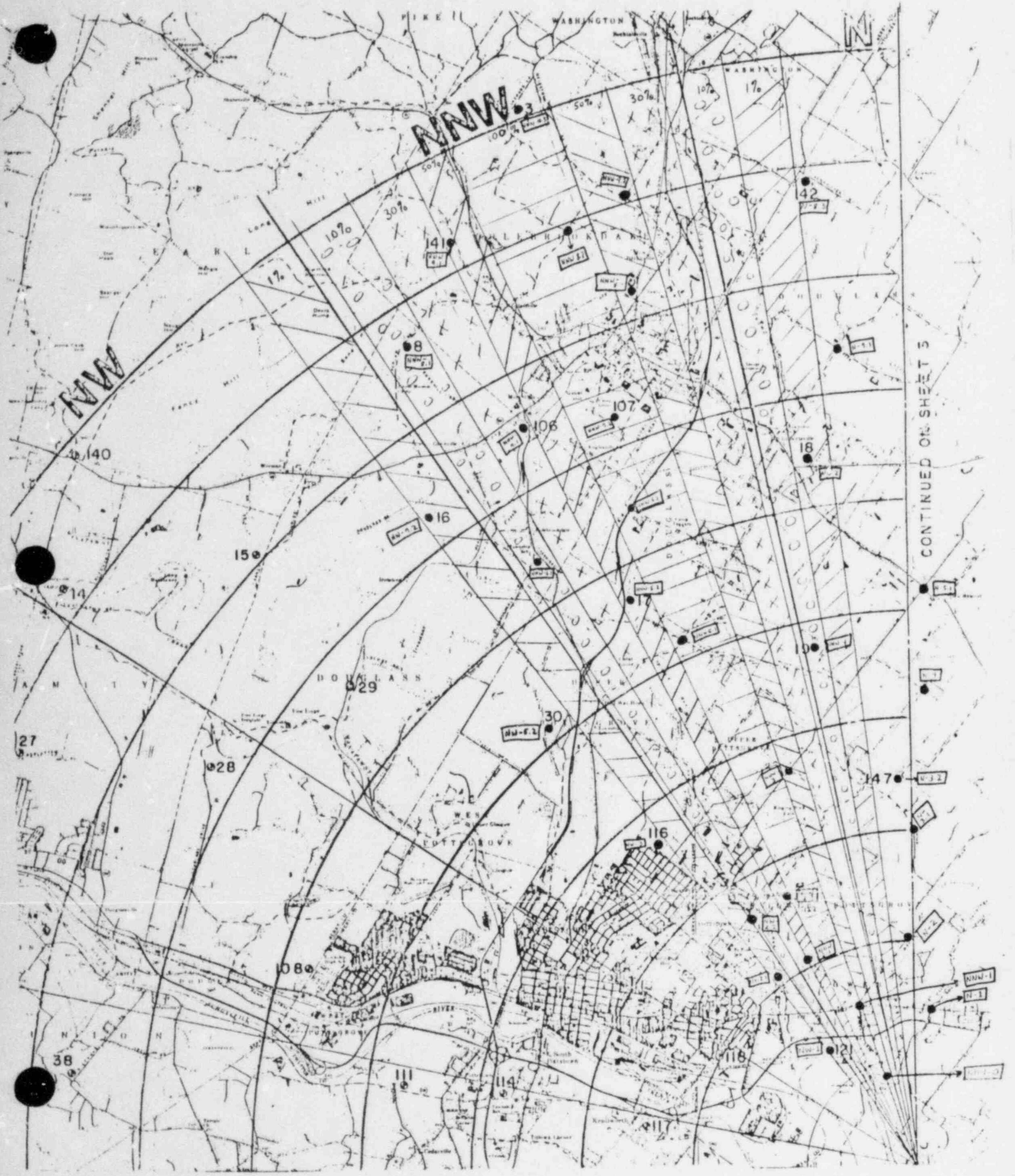
GRAPH-38

RHR D Flow

(gpm)




8031-C-1
KEY PLAN
B
B
A
A
FOR INFORMATION ONLY
DO NOT USE FOR
CONSTRUCTION
BECHTEL
SAN FRANCISCO
LIMERICK GENERATING STATION UNITS 1 & 2
YARDWORK
SITE PLAN
8031
C-1


6
5
4
3
NNW
NW
N
DOUGLASS
CONTINUED ON SHEET 5
NNW-1
N-1
100%
50%
30%
10%
1%
3
141
142
8
107
106
18
16
15
140
14
17
10
29
30
27
28
147
116
108
121
118
38
111
114
117

OBSERVER CHECKLIST

OBSERVER ____________________

LOCATION/GROUP OBSERVED: CONTROL ROOM DATE __________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
I. ACTIVATION AND RESPONSE		
Control room personnel rapidly and correctly interpreted the problem.		
Control Room personnel knew when to refer to the Emergency Operating procedures, Emergency Plan and which Emergency Implementing procedures to use.		
Plant process information was available when required.		
CR personnel obtained timely meteorological data.		
CR personnel got timely release information from radiological and effluent monitor systems.		
CR personnel responded quickly to personal injury incident.		
CR personnel responded quickly to fire alarm.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
CR operators responded properly to simulated operational events.		
HP assistance was requested as needed.		
Event classifications were timely, accurate and clear.		
The (I) E. Director took action to determine what other conditions might exist which would verify the accuracy of the initial indication.		
Control Room personnel took appropriate actions to mitigate the effects of the accident.		
Technical advise was reqested and/or received from the proper people.		
The emergency was upgraded or downgraded when appropriate.		
The (I) E. D. made the correct response to implement on-site and off-site assessment and protective measures.		
II. <u>COMMUNICATIONS/DISSEMINATION OF INFORMATION</u>		
Notifications were timely and porperly completed.		
Communication networks were operational and utilized efficiently.		
Communication flow was adequate to ensure that information was timely, effective, and efficient.		
Phone listings were available, complete and up-to-date.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
General status announcements were made and updated periodically throughout the drill. Proper data flow was maintained between TSC and Control Room.		
Logs were maintained.		
The ambient noise level in the Control Room was not a problem.		
Transfer of information within the Control Room was clearly and completely understood.		
III. <u>PROCEDURES</u>		
Emergency Operating Procedures and Emergency Plan Implementing Procedures were clearly marked and readily available in Control Room.		
Procedures used were current and controlled.		
IV. <u>DIRECTION AND CONTROL</u>		
The (I) E.D. promptly assumed control and authority.		
Action was taken to initiate activation of the Emergency Facilities when plant conditions and procedures indicated they should be activated.		
The proper management chain of command in the Control Room was followed when making decisions.		
Emergency control and authority was properly transferred to the designated Emergency		
The transfer of control and authority was announced and logged.		

EVENT/CRITERIA	RATING SCALE	COMMENTS

V. MATERIAL AND EQUIPMENT

Plant Monitoring System functioned correctly.

Radiation Meteorological Monitoring System (RMMS) functioned correctly.

ERFDS functioned correctly.

Met data available independent of RMMS.

Public Address System functioned correctly.

Paging/Callout System functioned correctly.

Message recorders functioned correctly.

PABX and dedicated Hotlines functioned correctly.

Station Alarm/Fire Alarm System functioned correctly.

Radios functioned correctly.

VI. PROTECTIVE MEASURES

Personnel in the control room adequately protected from radiological and chemical hazards.

Supplies such as respirators, protective clothing and KI for control room personnel were available.

HP personnel were available as needed.

EVENT/CRITERIA	RATING SCALE	COMMENTS
VII. <u>ACCESS CONTROL</u>		
Access to Control Room was limited to personnel assigned to the control room, or participating in the drill exercise.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: DOSE ASSESSMENT - CR DATE __________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
The need to perform dose measurements was promptly identified.		
The correct procedures were used for making dose calculations.		
Shift Technical Advisor (STA) assigned to perform dose calculations were familiar with the procedures.		
Dose calculations were performed efficiently and accurately.		
Some means were available to verify that the dose calculations were correct.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: TECHNICAL SUPPORT CENTER DATE ______

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
I. ACTIVATION AND RESPONSE		
The TSC was activated and manned in a timely manner at the Alert Action Level.		
Command and control authority was transferred from the control room according to procedure.		
The transfer of command and control was formal, was announced, and was logged.		
Follow-on activities to manage injured persons.		
Follow-on activities to manage fire.		
Field survey group dispatched, if appropriate.		
II. COMMUNICATIONS/DISSEMINATION OF INFORMATION		
Plant status and/or radiation parameters needed to determine the existing conditions were		

EVENT/CRITERIA	RATING SCALE	COMMENTS
available in the TSC including portable radiological monitoring, chemistry and meteorological data.		
Communication with State, Counties and NRC officials was quickly established.		
Initial (if appropriate) and Follow-Up Notifications were made in timely (usually 15 minutes) fashion.		
Major changes in plant or radiation release status was made known to all parties quickly.		
Off-site protective action recommendations were made quickly and clearly.		
All responsible persons in the TSC kept abreast of current conditions.		
Communications between TSC and CR, EOF, OSC and HESC were established and used.		
Comminication with field survey group was adequate.		
Discussions were held concerning trends, prognosis, courses of action.		
III. <u>PROCEDURES</u>		
Current and controlled copies of the Emergency Plan and Implementing Procedure s were available.		
Personnel using procedures were trained and familiar with them.		
Communication with off-site groups were made in accordance		

EVENT/CRITERIA	RATING SCALE	COMMENTS
with procedures.		
IV. <u>DIRECTION AND CONTROL</u>		
Transfer of command from Control Room was clear and understood by all persons in TSC.		
Transfer of command from TSC to EOF was clear and understood by all persons in TSC.		
Appropriate TSC personnel made prompt recommendations.		
Logs were kept.		
Recommendations were passed on to Emergency Director for decisions.		
Proper classification upgrading and downgrading was done.		
V. <u>MATERIAL AND EQUIPMENT</u>		
ERFDS was operational.		
Blueprints as-built drawings, maps, etc. were available.		
PABX sound powered, and dedicated Hotlines functioned correctly.		
Public Address System functioned correctly.		
Radios functioned correctly.		
Facsimile machine functioned correctly.		
PABX and dedicated Hotlines functioned correctly.		
Status boards in place and used.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
VI. PROTECTIVE MEASURES		
HP coverage available in TSC (air sampling, dose rate instruments).		
Protective equipment and supplies for TSC personnel.		
Plant evacuation decisions logical and clear.		
Plant evacuation directives included travel routes, special precautions, etc.		
Continuing accountability information given to Security.		
In-plant radiological monitoring reported to TSC.		
VII. ACCESS CONTROL		
Only those people with assigned responsibilities were in TSC.		
Sign-in system was employed.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: HEALTH PHYSICS DATE __________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Adequate trained personnel were available to furnish HP coverage for the emergency situation and First Aid teams, Chemistry, Search and Rescue teams, Fire teams, Repair teams, EOF, OSC and evacuees.		
Onsite monitoring equipment was easily accessible and properly distributed.		
Equipment was checked for proper operability prior to its use.		
Standard HP practices were employed for entry into actual or potential radiation areas.		
Proper survey records, dosimetry, stay time, etc. were maintained during entry.		
Survey results were reported to the appropriate personnel.		
Follow-up actions were taken on survey results.		

OBSERVER CHECKLIST

OBSERVER ____________________

==

LOCATION/GROUP OBSERVED: SEARCH AND RESCUE TEAM DATE __________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
OSC Supervisor selected three or more volunteers to serve as team.		
If radiological hazards are involved, one team member is a HP Technician.		
Team members have current first aid training.		
Team members briefed in accordance with procedure		
At least one team member has required formal access permit to area being entered.		
Radio check performed.		
Safety and first aid equipment available as needed.		
Communications maintained with OSC during search and rescue.		
Log of activities kept.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Pocket dosimeters were frequently checked and properly logged.		
The TSC, OSC & CR habitability was frequently monitored.		
Team members had adequate understanding of proper utilization of equipment (survey instruments, radios, SCBA's, etc.).		
Inplant Survey results were systematically collected by the Plant Survey Group Leader		
The correct procedure was used to establish emergency dose limits, if needed.		
Authorization to exceed 10CFR20 Exposure Limits were documented.		
Debriefing conducted, records and logs collected.		
Personal dosimetry used, if needed.		
TSC informed of results of search and rescue.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: DOSE ASSESSMENT - TSC DATE ______

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Initial and subsequent dose calculations were performed in a timely manner.		
Computerized equipment was properly utilized (RMMS).		
Plume was defined and tracked.		
Teams were contacted, briefed, and dispatched expeditiously.		
Communications were maintained with all teams.		
Personnel was efficiently utilized.		
Dose Assessment Team Leader initiated and provided periodic updates to the Emegency Director on Protective ~~Actions~~.		
Status was maintained on team exposure levels.		
Comparisons were made between projected and actual field measurements.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Field Survey Group weɾe provided with adequate information to perform their duties.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: OFFSITE MONITORING TEAMS DATE _______

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Initial team briefings were held.		
Team assembled with field kits, vehicles and communications equipment in a timely manner.		
Field Monitoring kits were checked for contents before leaving site.		
Instruments checked for proper operability and current calibration.		
Teams received explicit instructions of where to go and what to sample.		
Procedures for conducting offsite monitoring were consulted and followed.		
Vehicles were readily available.		
Vehicle checked for contamination after mission completed.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Sampling locations were readily located.		
Samples were properly packaged, identified and labeled.		
Pocket dosimeters were periodically checked.		
Pocket dosimeter readings were logged in upon return to LGS.		
Communications were maintained with the TSC and/or EOF throughout sampling activity.		

OBSERVER CHECKLIST

OBSERVER ________________

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LOCATION/GROUP OBSERVED: FIRE TEAM DATE ________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Reaction time between fire alarm and fire team activation is timely.		
Fire fighting personnel response time to the scene of the fire was timely.		
Fire team members report to scene of fire with appropriate fire fighting gear and equipment.		
Initial assessment of fire situation is adequately performed.		
When it is apparent team cannot control the fire, offsite support is requested and obtained in a timely manner.		
Communications are maintained between the fire team leader and the CR (Control Room).		
Adequate information is provided by the fire team to the Control Room for their assessment.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Smooth transition and coordination is made between plant fire team and local fire department.		
Arrival of local fire department to fire scene is timely.		
Patient was made ready for transport by the First Aid team.		
Dosimeter was left with the patient.		
Adequate HP's coverage was provided at the hospital.		
Patient's radiation doses are monitored by HP personnel.		
HP performed radiation survey of ambulance at hospital before vehicle was released.		
Consideration/measures were taken to prevent spread of contamination.		
Periodic status reports are provided to the Shift Supervisor as to the injured individual's status.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: FIRST AID TEAM DATE _______

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
First Aid Team assembly was timely following notification.		
First Aid team assebled with the proper first aid equipment.		
Accident/injury assessment made by the First Aid team.		
First Aid assistance was rendered in a timely manner.		
Appropriate decontamination measures were taken.		
Maintained communications linkage with Control Room.		
The HP escort reacted properly to the simulated event.		
The request for and notification of ambulance was in accordance to procedures.		
Patient was made ready for transport by the First Aid team.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Dosimeter was left with the patient.		
Adequate HP's coverage was provided at the hospital.		
Patient's radiation doses are monitored by HP personnel.		
HP performed radiation survey of ambulance at hospital before vehicle was released.		
Consideration/measures were taken to prevent spread of contamination.		
Periodic status reports are provided to the Shift Supervisor as to the injured individual's status.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: OPERATIONAL SUPPORT CENTER DATE ______

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
I. ACTIVATION AND RESPONSE		
The OSC was activated in a timely fashion.		
All support personnel listed in the Emergency Plan were available in the OSC.		
The personnel stationed in the OSC understood their emergency response functions.		
There were enough specialists available to fill all demands for HP, Fire Brigades, Search and Rescue teams, Repair teams, and Field Monitoring teams.		
II. COMMUNICATIONS/DISSEMINATION OF INFORMATION		
Communications with the Control Room and TSC were adequate.		
Communication with HP and Assistance were adequate.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Comminications with specialty teams was adequate.		
There was adequate information flow from the TSC concerning plant conditions and hazardous areas.		
There was adequate information flow from the OSC to specialty teams.		
III. PROCEDURES		
The Emergency Plan and Implementing Procedures were available and current and controlled copies.		
Appropriate procedures were available, as needed, for the specialty teams.		
IV. DIRECTION AND CONTROL		
The OSC was supervised (coordinated) adequately.		
A chain-of-command was established.		
Team formation and briefings were done quickly and accurately.		
Information for continuing accountability was supplied to Security.		
V. MATERIAL AND EQUIPMENT		
The office and communication equipment necessary to activate the OSC were available.		
Specialized tools were obtainable.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
VI. PROTECTIVE MEASURES		
Protective equipment, clothing and decontamination facilities were available.		
The OSC was monitored for radiation.		
VII. ACCESS CONTROL		
Only OSC assigned personnel were in the prescribed areas.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: EMERGENCY CHEMISTRY DATE __________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
I. ACTIVATION AND RESPONSE		
The Chemistry Engineer reported promptly to the Technical Assessment area of the TSC.		
The Chemistry Supervisor reported promptly to the RAE Laboratory.		
An adequate number of technicians were available or were called in.		
Analytical results were available within the specified times.		
II. COMMUNICATIONS/DISSEMINATION OF INFORMATION		
Communications with the Control Room and/or TSC were adequate.		
Directions given to technicians were clear.		

EVENT/CRITERIA	RATING SCALE	COMMENTS

Plant status information was available to laboratory personnel.

III. PROCEDURES

The following procedures were available and followed:

IV. DIRECTION AND CONTROL

Samples were collected and analyzed as requested by Control Room or TSC.

Chemistry Supervisor (or alternate) was clearly in command.

Analytical results were verified.

Logs of actions were kept.

V. MATERIAL AND EQUIPMENT

Analytical equipment functioned properly.

Sample points were accessible and open (valves correctly aligned by Control Room and/or technicians).

VI. PROTECTIVE MEASURES

Health Physics covereage was requested as needed.

Protective equipment was available to lab personnel.

EVENT/CRITERIA	RATING SCALE	COMMENTS
VII. ACCESS CONTROL		
Only personnel with emergency responsibilities were present during exercise.		
Access to PASS, etc. was made according to procedure.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: EMERGENCY OPERATIONS FACILITY DATE ______

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
I. ACTIVATION AND RESPONSE		
EOF was activated and manned within a reasonable time after declaration of Site Emergency or at the discretion of the Site Emergency Coordinator or Emergency Director.		
Site Emergency Coordinator received briefing from Emergency Director prior to assuming command and control.		
EOF personnel informed of assumption of specific responsibilities.		
Sign-in system used to assume full staffing.		

EVENT/CRITERIA	RATING SCALE	COMMENTS

II. COMMUNICATIONS/DISSEMINATION OF INFORMATION

Communications were checked and established with Control Room, TSC, HESC and required offsite Federal, State, County, and local agencies.

Technical Support Center notified of assumption of command and control of EOF designated responsibilities.

Needed data was available from TSC and CR

EOF received prompt information on radiological status, both on and off-site.

Pertinent information quickly (15 minutes) transmitted to off-site groups.

Up-to-date meteorological data was available.

Plant status information was promptly available.

Communication with off-site monitoring teams was adequate.

General status announcements and updates were made to EOF personnel throughout exercise.

EOF coordinated the supply of information to Hqtrs ESC Public Information Services

Status boards used and kept current.

EVENT/CRITERIA	RATING SCALE	COMMENTS

III. PROCEDURES

Emergency Plan and Implementing Procedures were available in current and controlled copies.

EOF participants were familiar with procedures.

Correct procedures were used.

IV. DIRECTION AND CONTROL

The organizational structure and chain of command in EOF was clear.

Appropriate people made prompt decisions and recommendations.

EOF Staff took appropriate follow-up actions to care for injured personnel, if any.

Status boards kept current.

Plume pathway tracked and visible.

Emergency classifications and action level notifications transmitted to proper authorities as required.

Protective action recommendations were made clearly and timely.

Continuing accountability data forwarded to Security.

V. MATERIAL AND EQUIPMENT

ERFDS was available.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Facsimile machine functioned.		
Status boards available.		
Reference materials, procedures, prints, etc., available.		
VI. ACCESS CONTROL		
Only assigned EOF people were present.		
Security Control Established		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: DOSE ASSESSMENT - EOF DATE ________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

* If not observed, so note in Comments column.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Initial and subsequent dose calculations were performed in a timely manner.		
Computerized equipment was properly utilized (RMMS).		
Plume was defined and tracked.		
Teams were contacted, briefed, and dispatched expeditiously.		
Communications were maintained with all teams.		
Personnel was efficiently utilized.		
Dose Assessment Team Leader will initiated and provided periodical updates to the Site Emergency Coordinator on PAG's		
Status was maintained on team exposure levels.		
Offsite monitoring data were coordinated with State.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Comparisons were made between projected and actual field measurements.		
Field Survey Group were provided with adequate information to perform their duties.		

OBSERVER CHECKLIST

OBSERVER ____________________

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LOCATION/GROUP OBSERVED: Hqtrs Emergency Support CenterDATE __________

DIRECTIONS: Circle the number on the rating scale that corresponds to the evaluation made by the observer. The Rating Scale is defined as follows:

S = Satisfactory

U = Unsatisfactory

NO = Not Observed

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EVENT/CRITERIA	RATING SCALE	COMMENTS

I. ACTIVATION AND RESPONSE

The Hqtrs Emergency Support Center was fully staffed in a timely fashion.

The Emergency Support Officer was clearly in command.

Information was received quickly from Emergency Support Center (ESC)

II. COMMUNICATIONS/DISSEMINATION OF INFORMATION

Emergency News were coordinated prior release as required by EP-C with functions.

Emergency News Releases were made in a accordance with prescribed procedure.

Spokespersons were clearly identified.

EVENT/CRITERIA	RATING SCALE	COMMENTS
Rumor control methods were used.		
III. PROCEDURES		
Controlled and current copies of the Emergency Plan and Implementing Procedures were available.		
IV. DIRECTION AND CONTROL		
Emergency Support Officer was clearly in control of the ESC.		
Major decisions were made by Emergency Support Officer in consulation with his staff.		
News releases were reviewed and issued smoothly and quickly.		
Logistical Support and manpower requests were acted on in an expeditous manner by staff		
Liaison with off-site law enforcement was provided, as appropriate.		
Spokespersons were knowledgeable about technical aspects of plant problems.		
V. MATERIAL AND EQUIPMENT		
Space for staff was adequate.		
Space for news media representatives were adequate.		
Adequate telephones to handle traffic were available.		

EVENT/CRITERIA	RATING SCALE	COMMENTS
Facsimile machine operable.		
VI. <u>PROTECTIVE MEASURES</u>		
(Not applicable).		
VII. <u>ACCESS CONTROL</u>		
Only persons with assigned emergency responsibilities were present.		