

BREX 90

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BREX 90 SCOPE AND OBJECTIVES

SCOPE

BREX 90 is designed to meet exercise requirements specified in 10 CFR 50, Appendix E, Section IV.F. The exercise will include participation of NRC Region III personnel. The Joint Public Information Center will not be activated during the exercise. BREX 90 is a utility only exercise and will not include the participation of local governments. State personnel will participate only to the extent of answering phones and supplying information on simulated offsite actions.

OBJECTIVES

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

1. Assessment and Classification
 - a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions.
 - b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification.
2. Communications
 - a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and locals and within one hour to the NRC using the Notification Form.
 - b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed.
 - c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance.
 - d. Provide accurate press release information on plant conditions within one hour after occurrence.
 - e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.
3. Radiological Assessment and Control
 - a. Collect, analyze, document and trend radiological survey data.

- b. Analyze plant radiological conditions and implement protective actions for site personnel in accordance with procedures.
- c. Prepare and brief personnel for activities required in high radiation areas.
- d. Monitor, track and document radiation exposure to maintenance, operations, and monitoring team personnel.
- e. Calculate dose projections based on sample results or monitor readings.
- f. Identify appropriate protective action recommendations.
- g. Perform core damage assessments in accordance with procedures. (This objective will be demonstrated on December 6, 1990.)
- h. Perform environmental sampling in accordance with procedures. (This objective will be demonstrated on December 5, 1990.)

4. Emergency Response Facilities

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

5. Direction and Control

- a. Command and control all Emergency response Facilities in accordance with assigned functions.
- b. Coordinate maintenance activities.
- c. Take appropriate measures to secure emergency equipment, supplies, and support.
- d. Dispatch field teams in accordance with procedures.
- e. Direct and monitor field team actions.

- f. Transfer Command and control in accordance with the Site Emergency Plan.
 - g. Perform accountability within approximately 30 minutes of the Alert classification.
 - h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.
 - i. Effectively coordinate with state and local governments as appropriate.
 - j. Effectively coordinate with NRC exercise players.
6. Exercise Control
- a. Allow adequate free play for players to demonstrate their capabilities.
 - b. Accurately assess performance of exercise players and controllers.

2.0 EXERCISE CONDUCT

2.1 EXERCISE ORGANIZATION

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

Controller/Evaluators observe player activities and judge the effectiveness of Player actions based on Evaluator Checklists in section 2.6. Each CPCo Controller/Evaluator must submit a completed, signed Evaluator Checklist at the conclusion of the exercise. NRC evaluators will also be present for the exercise.

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

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

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

Players include all personnel responding to simulated emergency conditions.

2.2 CONTROLLER ORGANIZATION

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

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

Controller/Evaluators will refer all Player inquiries to the Lead Controller if possible. If the Lead Controller is not

able to answer the question, it should be referred to the Exercise Coordinator.

2.3 EXERCISE DATA AND MESSAGES

Messages and data to drive Player actions are the following appendices:

Appendix A - Sequence of Events

Appendix B - Message Sheets

Appendix C - Rad Monitor Data

Appendix D - Onsite Rad Data

Appendix E - Post Accident Sample Data

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

2.4 EXERCISE GROUND RULES

1. Perform all actions without simulation to the maximum extent possible. This includes acting as if radiation is actually present, donning anti-C's, and minimizing radiation exposure. Simulation is not allowed unless your Controller/Evaluator has authorized simulating a specific action. If authorized to simulate, you should explain to the Controller/Evaluator how the task would be accomplished.
2. Although it may seem artificial, speak out loud to identify your actions and decisions to Controller/Evaluators. This will assist in the evaluation process.
3. Be aware of CPCo Controller/Evaluators and NRC Evaluators in your area.
4. Whenever a Controller/Evaluator provides a message or data, accept it for face value. If you do not understand a message or any Controller/Evaluator provided information, ask for clarification. Exercise data is intended to be clear and straight forward. Scenario developers will never provide data that intentionally misleads Players.
5. If your Controller/Evaluator asks you a question or provides directions, you should answer or comply as

appropriate. If you think he/she is in error, feel free to discuss your concerns. You must, however, accept his/her word as final with respect to scenario related matters.

6. Observe all rules and procedures when entering radiation areas. No one is exempt from normal station radiological practices and procedures.
7. Demonstrate your knowledge of emergency operations and procedures. Use status boards, logs, and message forms to document your actions and instructions from other Players. This will assist in event reconstruction.
8. Keep your focus on the exercise. Unrelated conversations detract from your performance.
9. If an NRC Evaluator asks you a question, you should answer to the best of your knowledge or refer the question to your Team Leader.
10. At the conclusion of the exercise there will be a critique. Team Leaders will be asked for suggestions and comments. Make sure that your comments are known to your Team Leader.

2.5 CRITIQUES

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

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

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

2.6 EVALUATOR CHECKLISTS

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

Each Controller/Evaluator shall submit a completed, signed,

and dated checklist at the conclusion of the exercise.
Problems shall be fully explained on the completed
checklist.

Control Room Evaluator Checklist

- | | |
|---|---|
| 1. Assessment and Classification | Overall: MET NOT MET |
| a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| 2. Communications | Overall: MET NOT MET |
| a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and locals and within one hour to the NRC using the Notification Form. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |

e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
3. Radiological Assessment and Control	Overall: MET NOT MET
c. Prepare and brief personnel for activities required in high radiation areas.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
4. Emergency Response Facilities	Overall: MET NOT MET
a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
b. Staff and activate the Emergency Operations Facility within about an hour and a half of the Site Area Emergency declaration.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
e. Track and prioritize status of key inplant jobs.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
5. Direction and Control	Overall: MET NOT MET
a. Command and control of Emergency Response Facilities in accordance with assigned functions.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
b. Coordinate maintenance activities.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
c. Take appropriate measures to secure emergency equipment, supplies, and support.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
f. Transfer Command and control in accordance with the Site Emergency Plan.	MET MET/PROBLEM NOT MET N/A EXPLANATION:

- | | |
|--|---|
| <p>h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.</p> | <p>MET MET/PROBLEM NOT MET N/A
EXPLANATION:</p> |
| <p>i. Effectively coordinate with state or local governments as appropriate.</p> | <p>MET MET/PROBLEM NOT MET N/A
EXPLANATION:</p> |
| <p>j. Effectively coordinate with NRC exercise players.</p> | <p>MET MET/PROBLEM NOT MET N/A
EXPLANATION:</p> |
| <p>6. Exercise Control</p> | <p>Overall: MET NOT MET</p> |
| <p>a. Allow adequate free play for players to demonstrate their capabilities.</p> | <p>MET MET/PROBLEM NOT MET N/A
EXPLANATION:</p> |
| <p>b. Accurately assess performance of exercise players and controllers.</p> | <p>MET MET/PROBLEM NOT MET N/A
EXPLANATION:</p> |

TSC Evaluator Checklist

- | | |
|---|---|
| 1. Assessment and Classification | Overall: MET NOT MET |
| a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| 2. Communications | Overall: MET NOT MET |
| a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and locals and within one hour to the NRC using the Notification Form. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |

e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
3. Radiological Assessment and Control	Overall: MET NOT MET
a. Collect, analyze, document and trend radiological survey data.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
b. Analyze plant radiological conditions and implement protective actions for site personnel in accordance with procedures.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
e. Calculate dose projections based on sample results or monitor readings.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
f. Identify appropriate protective action recommendations.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
4. Emergency Response Facilities	Overall: MET NOT MET
a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
c. Update status boards at least every 30 minutes.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
e. Track and prioritize status of key in plant jobs.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
5. Direction and Control	Overall: MET NOT MET
a. Command and control of Emergency Response Facilities in accordance with assigned functions.	MET MET/PROBLEM NOT MET N/A EXPLANATION:

c. Take appropriate measures to secure emergency equipment, supplies, and support.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
d. Dispatch field teams in accordance with procedures.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
e. Direct and monitor field team actions.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
f. Transfer Command and control in accordance with the Site Emergency Plan.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
g. Perform accountability within approximately 30 minutes of the Alert classification.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
i. Effectively coordinate with state and local governments as appropriate.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
j. Effectively coordinate with NRC exercise players.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
6. Exercise Control	Overall: MET NOT MET
a. Allow adequate free play for players to demonstrate their capabilities.	MET MET/PROBLEM NOT MET N/A EXPLANATION:
b. Accurately assess performance of exercise players and controllers.	MET MET/PROBLEM NOT MET N/A EXPLANATION:

OSC Evaluator Checklist

2. Communications	Overall:	MET	NOT MET	
e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
3. Radiological Assessment and Control	Overall:	MET	NOT MET	
a. Collect, analyze, document and trend radiological survey data.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
c. Prepare and brief personnel for activities required in high radiation areas.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
d. Monitor, track and document radiation exposure to maintenance, operations, and monitoring team personnel.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
4. Emergency Response Facilities	Overall:	MET	NOT MET	
a. Staff and activate onsite Emergency Response Facilities within approximately 30 minutes of an Alert classification.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
c. Update status boards at least every 30 minutes.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
d. Document field team activities in logs or on appropriate status boards.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
e. Track and prioritize status of key in plant jobs.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			

5. Direction and Control	Overall:	MET	NOT MET	
a. Command and control all Emergency Response Facilities in accordance with assigned functions.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
b. Coordinate maintenance activities.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
c. Take appropriate measures to secure emergency equipment, supplies, and support.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
d. Dispatch field teams in accordance with procedures.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
e. Direct and monitor field team actions.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
g. Perform accountability within approximately 30 minutes of the Alert classification.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
6. Exercise Control	Overall:	MET	NOT MET	
a. Allow adequate free play for players to demonstrate their capabilities.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
b. Accurately assess performance of exercise players and controllers.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			

EOF Evaluator Checklist

- | | | | | |
|---|--------------|-------------|---------|-----|
| 1. Assessment and Classification | Overall: | MET | NOT MET | |
| a. Assess conditions which warrant classification within fifteen minutes of being provided those conditions. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| b. Classify posed conditions in accordance with Emergency Action Levels within fifteen minutes of determination that conditions warrant classification. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| 2. Communications | Overall: | MET | NOT MET | |
| a. Upon making an emergency classification, complete initial notifications within fifteen minutes to the State and locals and within one hour to the NRC using the Notification Form. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| b. Complete subsequent notifications to the State, locals, and NRC on a routine fifteen minute basis or as mutually agreed. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| c. Contact other organizations such as contractors, utilities, fire or medical support within one hour of recognizing that conditions exist that warrant their assistance. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |

d. Provide accurate press release information on plant conditions within one hour after occurrence.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
3. Radiological Assessment and Control	Overall:	MET	NOT MET	
a. Collect, analyze, document and trend radiological survey data.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
e. Calculate dose projections based on sample results or monitor readings.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
f. Identify appropriate protective action recommendations.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
4. Emergency Response Facilities	Overall:	MET	NOT MET	
b. Staff and activate the Emergency Operations Facility within about an hour and a half of the Site Area Emergency declaration.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
c. Update status boards at least every 30 minutes.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
d. Document field team activities in logs or on appropriate status boards.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			
5. Direction and Control	Overall:	MET	NOT MET	
a. Command and control all Emergency Response Facilities in accordance with assigned functions.	MET	MET/PROBLEM	NOT MET	N/A
	EXPLANATION:			

- | | |
|---|---|
| c. Take appropriate measures to secure emergency equipment, supplies, and support. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| e. Direct and monitor field team actions. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| f. Transfer Command and control in accordance with the Site Emergency Plan. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| i. Effectively coordinate with state and local governments as appropriate. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| j. Effectively coordinate with NRC exercise players. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| 6. Exercise Control | Overall: MET NOT MET |
| a. Allow adequate free play for players to demonstrate their capabilities. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |
| b. Accurately assess performance of exercise players and controllers. | MET MET/PROBLEM NOT MET N/A
EXPLANATION: |

RMT Evaluator Checklist

- | | | | | |
|---|--------------|-------------|---------|-----|
| 2. Communications | Overall: | MET | NOT MET | |
| e. Provide updates between appropriate Emergency Response Facilities at least every 30 minutes. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| 3. Radiological Assessment and Control | Overall: | MET | NOT MET | |
| a. Collect radiological survey data. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| h. Brief Emergency Response Facility staffs approximately every 30 minutes on changes in plant status, emergency classification, field team progress, and offsite actions as appropriate. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| 6. Exercise Control | Overall: | MET | NOT MET | |
| a. Allow adequate free play for players to demonstrate their capabilities. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |
| b. Accurately assess performance of exercise players and controllers. | MET | MET/PROBLEM | NOT MET | N/A |
| | EXPLANATION: | | | |

SEQUENCE OF EVENTS

BREX 90 SEQUENCE OF EVENTS

0700/0000

Initial Conditions are provide to Players:

The reactor is operating at 209 MWt

The Primary Coolant System leak rate is .293 gpm unidentified and 4.224 gpm identified.

The Number 1 Control Rod Drive Pump is disassembled for poppet valve repairs. The pump was declared inoperable at 0845 on 12/02/90.

0725/0025

Scram Dump High Water Level annunciation (ALP-1.2, #17) occurs.

Operators will determine Scram Dump Tank drain valve position as being closed, then attempt to reopen the Scram Dump Tank vent and drain valves. They will not be successful. Operators will continue other actions in accordance with ALP-1.2.

0730/0030

The Number 2 Control Rod Drive Pump stops running.

Operators will attempt to restart the pump. They will not be successful. They will then scram the reactor. When verifying that reactor scram has occurred, Operators will find that seventeen control rods have not fully inserted and that reactor power is at 31%. The turbine trips, but the Turbine Bypass Valve operates too sluggishly to control Primary Coolant System pressure.

The Shift Supervisor should declare a Site Area Emergency based on having more than one control rod not fully inserted and the reactor still critical. Accountability begins. Onsite and Offsite Radiological Monitoring Teams are dispatched.

The General Office Response Team and support personnel are requested to report to the EOF.

After carrying out actions of the RC/Q section in EOP-1, power will be reduced to 15% after both recirc pumps have been tripped. Primary Coolant System pressure will increase to the Steam Drum Relief Valve setpoint. The Emergency Condenser will come into service at 1435 psig and the Steam Drum Relief Valves will control Primary Coolant System pressure at approximately 1550 psig.

Containment pressure will rise, and containment isolation will occur at 1.0 psig. The containment spray system will automatically initiate at 2.0 psig and maintain pressure at 8 psig.

The Operator will now initiate Liquid Poison injection and enter ATWS Contingency, but reactor power will show no response.

After carrying out Primary Coolant System level reduction steps of Contingency 4, power will be reduced to approximately 9% with reactor water 2'9" above the top of the fuel.

Primary Coolant System pressure will now be controlled by periodic operation of Steam Drum Relief Valves and containment will be maintained below 2 psig by intermittent use of containment sprays.

Operators will then enter EIP-2, Alternate Boron Injection.

TSC and OSC attention should be focused on the cause of Scram Dump Tank vent and drain valve problems and the cause of Number 2 Control Rod Drive pump failure.

The OSC stockmen and repairmen will be needed to assist in the Alternate Boron Injection procedure.

Containment and Primary Coolant System conditions will remain constant for the next two hours. Operations and Maintenance personnel will attempt to inject sodium pentaborate in accordance with EIP-2. The TSC and OSC should attempt to restore a Control Rod Drive pump in order to permit attempts to manually insert control rods.

0800/0100

Accountability is completed. Plant staff is dispatched to the EOF. Non-essential personnel are evacuated from the site.

0850/0150

Plant personnel arrive at the EOF and prepare to assume notification responsibilities.

0910/0210

The General Office Response Team arrives at the EOF.

0925/0225

Command and Control is transferred to the EOF.

The MSIV closes (due to multiple electrical failures) resulting in high reactor pressure, which in turn causes a spike in reactor power. Local fuel failures occur as a result of severe flux tilts combined with the power spike.

0930/0230

Indications of core damage become apparent.

A General Emergency should be declared based on indications of core degradation. This will be a matter of judgement as reactor water level indicators will show that the core has remained covered. However, the "ATWS with high potential for significant core damage" should lead players to a General Emergency classification. If the Site Emergency Director or Shift Supervisor calls for termination of alternate boron injection, controllers will intervene to preserve scenario continuity.

Personnel from Jackson, Palisades, and NRC Region III arrive at the EOF.

NRC Region III personnel arrive at the plant.

1230/0530

Injection of the first batch of sodium pentaborate is completed. The reactor goes subcritical and Primary Coolant System temperature can be reduced with the Emergency Condenser. Cooldown to approximately 212 degrees F will take about four hours.

1300/0600

The exercise is terminated.

MESSAGE SHEETS

Scenario: BREX 90

Time 0700

Message No: 1

Scenario Time 0000

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

See Control Room Log Sheet, Shift Turnover Sheet, and data sheet.

Message:

Announce following over the Plant Public Address System when directed by the controller: "Attention all personnel. The emergency exercise will commence shortly. All announcements related to the drill will be preceded by and followed by the statement, 'This is a drill'."

For Controller Use Only

Controller Notes:

1. Act as off going SS and give turnover to players.
2. The Control Room Log shows normal operating parameters for 209 MWT reactor operation. Water inventory will show CST, DWST, and Waste Hold tanks nearly full.
3. The Shift Turnover Sheet shows two LCOs in effect. Number 1 CRD Pump is disassembled for repairs to poppet valves. The LCO was entered at 0845 on 12/02/90. The fire barrier between the Station Power Room and the Computer Room is breached. The LCO was entered at 1440 on 11/13/90.

Action Expected:

Players should familiarize themselves with data provided.

TSC DATA SHEET

MESSAGE <u>1</u>		TIME <u>0700</u> SCENARIO TIME <u>0000</u>																																																				
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1850</u> PSIG COND DSCHG <u>220</u> PSIG FDWTR TEMP <u>359</u> F ECS #1 LP <u>119</u> F ECS #2 LP <u>114</u> F COND LVL <u>40</u> % CST LVL <u>95</u> % DWST LVL <u>95</u> % VENT V POS <u>0</u> MSIV POS <u>0</u>	RCP #1 FLOW <u>16.8</u> GPM x 1000 RCP #2 FLOW <u>16.6</u> GPM x 1000 TURBINE INL <u>1305</u> PSIG FW FLOW <u>845</u> lb/HR x 1000 STEAM FLOW <u>860</u> lb/HR x 1000 DRUM LEVEL <u>+1</u> IN CONT PRESS <u>0</u> PSIG CONT W LVL <u><574</u> FT	DRUM RV STATUS OPEN _ SHUT <u>X</u> RX PRESS <u>1333</u> PSIG RX WATER <u>22.6</u> FEET OFF GAS <u>58</u> UNITS	125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>28.30</u> in Hg																																																			
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COMMENTS/PLANT STATUS:				RDS STATUS FIRED _ RESET _ OTHER <u>NORMAL</u> RX WATER LVL <u>G</u> COLOR DRUM LEVEL <u>+1</u> INCHES																																																		

Scenario: BREX 90

Time 0715

Message No: 2

Scenario Time 0015

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 0715

SCENARIO TIME 0015

MESSAGE 2

CORE SPRAY 0 PSIG
 INSTRU AIR 93 PSIG
 FWP DISCHG 1850 PSIG
 COND DISCHG 220 PSIG
 FDWTR TEMP 359 F
 ECS #1 LP 119 F
 ECS #2 LP 114 F
 COND LVL 40 %
 CST LVL 95 %
 DWST LVL 95 %
 VENT V POS 0
 MSIV POS 0

RCP #1 FLOW 16.8 GPM x 1000
 RCP #2 FLOW 16.6 GPM x 1000
 BINE INL 1305 PSIG

DRUM RV STATUS

OPEN _ SHUT X

RX PRESS 1333 PSIG

RX WATER 22.6 FEET

	A	B	C	D	E	F
1		<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	
2	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>
3	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>
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5	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>
6	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	<u>23</u>	

FW FLOW 845 lb/HR x 1000

STEAM FLOW 860 lb/HR x 1000

DRUM LEVEL +1 IN

CONT PRESS 0 PSIG

CONT W LVL <574 FT

125 V DC BUS ENER

Y

CONDENSER VACUUM

28.30 in Hg

OFF GAS 58 UNITS

ECS WATER LVL 100 %
 B/U CORE SPRAY 0 GPM
 PRI CORE SPRAY 0 GPM
 B/U CONT SPRAY 0 GPM
 PRI CONT SPRAY 0 GPM

CRD PP DSG 1740 PSIG

CRD COOLING 12.5 GPM

CRD HEADER 8 GPM

CRD COOLING 26 PSID

CRD HEADER 240 PSID

DCWRM (1,2,3) 97 % 98 % 97 %

STARTUP (6,7) _ CPS _ CPS

138 kV AVAIL Y

46 kV AVAIL Y

EDG AVAIL Y

2B BUS ENER Y

COMMENTS/PLANT STATUS:

RDS STATUS

FIRE _ RESET _

OTHER NORMAL

RX WATER LVL G COLOR

DRUM LEVEL +1 INCHES

Scenario: BREX 90

Time 0725

Message No: 3

Scenario Time 0025

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:
ANNUNCIATOR: Scram Dump Tank Hi Level

For Controller Use Only

Controller Notes:

1. Inform players that SDT Vent Valves and Drain Valves are closed if Players ask.
2. When Operators check scram outlet valves, indicate that they are receiving a closed indication.
3. When Players attempt to reopen the SDT Valves, they will not be successful.

Action Expected:

Operators should refer to ALP - 1.2, #17 and:

1. Check SDT Vent Valves and Drain Valves.
2. Attempt to reopen SDT Valves.
3. Check Scram Outlet Valves.
4. Send an AO to CRD Accumulator Room to check for Scram Valve leakage.

TSC DATA SHEET

TIME 0725

SCENARIO TIME 0025

MESSAGE 3

CORE SPRAY 0 PSIG
 INSTRU AIR 93 PSIG
 FWP DISCHG 1920 PSIG
 COND DS² 220 PSIG
 FDC_{1R} TEMP 359 F
 ECS #1 LP 118 F
 ECS #2 LP 114 F
 COND LVL 39 X
 CST LVL 95 X
 DWST LVL 95 X
 VENT V POS 0
 MSIV POS 0

RCP #1 FLOW 16.8 GPM x 1000
 RCP #2 FLOW 16.6 GPM x 1000
 TURBINE IHL 1305 PSIG

	A	B	C	D	E	F
1	23	23	23	23	23	23
2	23	23	23	23	23	23
3	23	23	23	23	23	23
4	23	23	23	23	23	23
5	23	23	23	23	23	23
6	23	23	23	23	23	23

FW FLOW 845 lb/HR x 1000
 STEAM FLI V 860 lb/HR x 1000
 DRUM LEVEL +1 IN
 COMT PRESS 0 PSIG
 COMT W LVL <574 FT

DRUM RV STATUS

OPEN - SHUT X
 RX PRESS 1332 PSIG
 RX WATER 22.6 FEET

125 V DC BUS ENER
 Y
 CONDENSER VACUUM
 28.30 in Hg

OFF GAS 58 UNITS

ECS WATER LVL 100 X
 B/U CORE SPRAY 0 GPM
 PRI CORE SPRAY 0 GPM
 B/U COMT SPRAY 0 GPM
 PRI COMT SPRAY 0 GPM
 CRD PP DSG 1740 PSIG
 CRD COOLING 12.5 GPM
 CRD HEADER 8 GPM
 CRD COOLING 26 PSID
 CRD HEADER 246 PSID
 DCURM (1,2,3) 97 X 98 X 97 X
 STARTUP (6,7) - CPS - .95

138 KV AVAIL Y
 46 KV AVAIL Y
 EDG AVAIL Y
 2B BUS ENERG Y

COMMENTS/PLANT STATUS:

ANNUNCIATOR: SCRAM DUMP TANK HI LEVEL (ALP - 1.2, #17)

RDS STATUS

FIRED - RESET -
 OTHER NORMAL
 RX WATER LVL 0 COLOR
 DRUM LEVEL +1 INCHES

Scenario: BREX 90

Time 0730

Message No: 4

Scenario Time 0030

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:
ANNUNCIATOR: CRD Pump Low Discharge Pressure

For Controller Use Only

Controller Notes:

1. Inform Players that CRD Pumps are not running if asked.
2. #2 CRD Pump will not start.

Action Expected:

Operators should refer to ALP - 1.4, #9 and:

1. Check status of CRD Pumps.
2. Attempt to start #2 CRD Pump.
3. Manually scram the reactor.
4. Enter ONP - 2.31, Reactor Scrams.

TSC DATA SHEET

MESSAGE <u>4</u>		TIME <u>0730</u> SCENARIO TIME <u>0030</u>																																																		
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1850</u> PSIG COND DSCHG <u>220</u> PSIG FDWTR TEMP <u>360</u> F ECS #1 LP <u>118</u> F ECS #2 LP <u>114</u> F COND LVL <u>39</u> % CST LVL <u>95</u> % DWST LVL <u>95</u> % VENT V POS <u>0</u> MSIV POS <u>0</u>	RCP #1 FLOW <u>16.8</u> GPM x 1000 RCP #2 FLOW <u>16.6</u> GPM x 1000 TURBINE INL <u>1305</u> PSIG FW FLOW <u>845</u> lb/HR x 1000 STEAM FLOW <u>860</u> lb/HR x 1000 DRUM LEVEL <u>+1</u> IN CONT PRESS <u>0</u> PSIG CONT W LVL <u><574</u> FT	DRUM RV STATUS OPEN _ SHUT <u>X</u> RX PRESS <u>1332</u> PSIG RX WATER <u>22.6</u> FEET OFF GAS <u>58</u> UNITS	125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>28.20</u> in Hg																																																	
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ECS WATER LVL <u>100</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>0</u> GPM		CRD PP DSG <u>200</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSIG CRD HEA <u>ck</u> <u>0</u> PSIG DCWRM (1,2,3) <u>97</u> % <u>98</u> % <u>97</u> % STARTUP (6,7) _ CPS _ CPS																																																		
COMMENTS/PLANT STATUS: <u>ANNUNCIATORS:</u> <u>SCRAM DUMP TANK LO LEVEL</u> <u>CRD PUMPS LOW DISCH PRESS (ALP - 1.4, #9)</u>		138 kV AVAIL <u>Y</u> 46 kV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 28 BUS ENERG <u>Y</u>																																																		
		RDS STATUS FIRED _ RESET _ OTHER <u>NORMAL</u> RX WATER LVL <u>G</u> COLOR DRUM LEVEL <u>+1</u> INCHES																																																		

Scenario: BREX 90

Time ****

Message No: 5

Scenario Time ****

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

Message:

1. All Scram Valves indicate open; SDT Valves indicate closed.
2. Turbine has tripped and 116 OCB is open.

For Controller Use Only

Controller Notes:

1. Inform Players that TBV is closed at appropriate time. Attempts to open it will not succeed.
2. All indicators for TBV controls at the console will indicate full downscale. The amber "NONAUTOMATIC" light will be lit, and MO-7067 will indicate closed.
3. On the trip of one Recirc Pump the DCWRMs will read Channel 1 - 5%, Channel 2 - 28%, and Channel 3 - 30 %.
4. On the trip of second Recirc Pump DCWRMs will read Channel 1 - 4%, Channel 2 - 20%, and Channel 3 - 22%.

Action Expected:

1. The Shift Supervisor should declare a Site Area Emergency.
2. Operators should enter EOP-1 and:
 - a. Verify proper Turbine Bypass Valve operation per ALP-1.2, #21.
 - b. Place mode switch to SHUTDOWN.
 - c. Open RPS undervoltage breakers.
 - d. Trip one Recirc Pump.
 - d. Trip second Recirc Pump.

**** DELIVER THIS MESSAGE IMMEDIATELY AFTER SCRAM.

TSC DATA SHEET

MESSAGE <u>5</u>		TIME ** SCENARIO TIME **																																																		
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1900</u> PSIG COND DISCHG <u>260</u> PSIG FOWTR TEMP <u>280</u> F ECS #1 LP <u>118</u> F ECS #2 LP <u>114</u> F COND LVL <u>39</u> % CST LVL <u>95</u> % DWST LVL <u>95</u> % VENT V POS <u>0</u> MSIV POS <u>0</u>	RCP #1 FLOW <u>16.8</u> GPM x 1000 RCP #2 FLOW <u>16.6</u> GPM x 1000 TURBINE INL <u>1380</u> PSIG FW FLOW <u>260</u> lb/HR x 1000 STEAM FLOW <u>260</u> /HR x 1000 DRUM LEVEL <u>-3</u> IN CONT PRESS <u>0</u> PSIG CONT W LVL <u><574</u> FT	DRUM RL STATUS OPEN <u>_</u> SHUT <u>X</u> RX PRESS <u>1380</u> PSIG RX WATER <u>22.6</u> FEET OFF GAS <u>58</u> UNITS	125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>27</u> in Hg																																																	
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3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>																																														
4	<u>23</u>	<u>17</u>			<u>6</u>																																															
5				<u>23</u>	<u>21</u>	<u>14</u>																																														
6				<u>14</u>	<u>17</u>																																															
ECS WATER LVL <u>100</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>0</u> GPM	CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSIG CRD HEADER <u>0</u> PSIG DCWRM (1,2,3) <u>6</u> % <u>42</u> % <u>45</u> % STARTUP (6,7) <u>_</u> CPS <u>_</u> CPS	138 kV AVAIL <u>Y</u> 46 kV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u>																																																		
COMMENTS/PLANT STATUS: <u>ANNUNCIATORS:</u> <u>BYPASS VALVE CONTROL ABNORMAL (ALP - 1.5, # 50)</u> <u>RPS CHANNEL TROUBLE (ALP - 1.2, #1)</u> <u>CHANNEL 1 SCRAM (ALP - 1.2, #2)</u> <u>CHANNEL 2 SCRAM (ALP - 1.2, #3)</u> <u>MANUAL SCRAM (ALP - 1.2, #7)</u> <u>HI REACTOR PRESSURE (ALP - 1.2, #21)</u> <u>REACTOR HI PRESSURE SCRAM (ALP - 1.2, #19)</u> ** IMMEDIATELY AFTER SCRAM		RDS STATUS FIRED <u>_</u> RESET <u>_</u> OTHER <u>NORMAL</u> RX WATER LVL <u>0</u> COLOR DRUM LEVEL <u>-3</u> INCHES																																																		

Scenario: BREX 90

Time ****

Message No: 5a

Scenario Time ****

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

Message:

ANNUNCIATORS: Circuit A and Circuit B Failure
Poison Air Supply Low Pressure

For Controller Use Only

Controller Notes:

1. When Players inject poison, provide annunciators: Circuit A and Circuit B Failure (ALP-1.4, #30 and #31) and Poison Air Supply Low Pressure (ALP-1.4, #33).
2. When Operator checks Liquid Poison Tank level and pressure, inform him that high level alarm remains on; low level alarm light remains out; and tank pressure is steady at 1950 psig.
3. When operators check DCWRMs, the instruments will show no change from the previous reading.

Action Expected:

1. Should inject liquid poison per EOP-1 and enter EOP-4, ATWS Contingency.
2. Check Liquid Poison Tank level and pressure and check DCWRMs.
3. Should recognize that Liquid Poison injection was unsuccessful and prepare to lower reactor water level per EOP-4, ATWS Contingency.
3. Attempt to determine what is wrong with the TBV.
4. Check power indicating lights at MCC-2B. Both lights are out. Replacement of 6 amp fuses in power supplies will restore TBV to operation.

**** PROVIDE THIS INFORMATION IN SEQUENCE WITH MESSAGE 5.

Scenario: BREX 90

Time ****

Message No: 5b

Scenario Time ****

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FO:

Message for: Control Room Players

Simulated Plant Conditions:

Message:

ANNUNCIATOR: Enclosure High Pressure Scram

For Controller Use Only

Controller Notes:

Action Expected:

1. Should use EIP-3 to bypass containment isolation signal to permit opening the MSIV.
2. Should initiate procedure to inject sodium pentaborate via the feedwater system (EIP-2).

**** PROVIDE THIS MESSAGE TWO MINUTES AFTER SCRAM.

Scenario: BREX 90

Time ****

Message No: 5c

Scenario Time ****

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

Message:

ANNUNCIATORS: Primary Enclosure Spray Actuation
Reactor Containment Spray System Flow Normal

For Controller Use Only

Controller Notes:

1. Containment pressure will be at 2.2 psig.
2. Containment spray flow will be 100 gpm.
3. Provide this information to Players as appropriate.

Action Expected:

Should verify proper operation of Containment Spray System.

Scenario: BREX 90

Time 0745

Message No: 6

Scenario Time 0045

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 0745
 SCLWARIO TIME 0045

MESSAGE 6

CORE SPRAY 0 PSIG
 INSTRU AIR 94 PSIG
 FWP DISCHG 1880 PSIG
 COND DISCHG 260 PSIG
 FOWTR TEMP 80 F
 ECS #1 LP >400 F
 ECS #2 LP >400 F
 COND LVL 30 %
 CST LVL 87 %
 DWST LVL 95 %
 VENT V POS C
 MSIV POS C*

RCP #1 FLOW 0 GPM x 1000
 RCP #2 FLOW 0 GPM x 1000
 TURBINE INL 0 PSIG

	A	B	C	D	E	F
1			<u>4</u>	<u>7</u>		
2	<u>14</u>	<u>23</u>		<u>2</u>		<u>10</u>
3	<u>23</u>	<u>18</u>	<u>6</u>			
4	<u>23</u>	<u>17</u>			<u>6</u>	<u>14</u>
5					<u>23</u>	<u>21</u>
6					<u>14</u>	<u>17</u>

FW FLOW 60 lb/HR x 1000
 STEAM FLOW 0 lb/HR x 1000
 DRUM LEVEL -1 IN
 CONT PRESS 0 PSIG
 CONT W LVL <574 FT

DRUM RV STATUS
 OPEN X SIRUT -

RX PRESS 1540 PSIG
 RX WATER 22.6 FEET

125 V DC BUS EMER
Y
 CONDENSER VACUUM
0 in Hg

OFF GAS 60 UNITS

ECS WATER LVL 100 %
 B/U CORE SPRAY 0 GPM
 PRI CORE SPRAY 0 GPM
 B/U CONT SPRAY 0 GPM
 PRI CONT SPRAY 100 GPM

CRD PP DSG 0 PSIG
 CRD COOLING 0 GPM
 CRD HEADER 0 GPM
 CRD COOLING 0 PSID
 CRD HEADER 0 PSID
 DOURM (1,2,3) 6 % 28 % 30 %
 STARTUP (6,7) - CPS - CPS

138 kV AVAIL Y
 46 kV AVAIL Y
 EDG AVAIL Y
 2B BUS ENERG Y

COMMENTS/PLANT STATUS: ANNUNCIATORS:

EMERGENCY CONDENSER LOW LEVEL (ALP - 1.4, #24)

CONDENSER LO VACUUM (ALP - 1.5, #8)

* MAY BE OPEN

RDS STATUS

FIRED - RESET -
 OTHER -
 RX WATER LVL 0 COLOR
 DRUM LEVEL -1 INCHES

Scenario: BREX 90

Time 0800

Message No: 2

Scenario Time 0100

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

0800 data was developed assuming that the MSIV has been opened and that the TBV has been restored to service. If this has not occurred, an alternate data sheet showing essentially the same conditions as 0745 will be provided.

Action Expected:

TSC DATA SHEET

MESSAGE <u>7</u>		TIME <u>0800</u> SCENARIO TIME <u>0100</u>																																																						
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1980</u> PSIG COND DISCHG <u>260</u> PSIG FDWTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COMD LVL <u>40</u> % CST LVL <u>80</u> % DWST LVL <u>85</u> % VENT V POS <u>C</u> MSIV POS <u>0</u>	RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>1540</u> PSIG FW FLOW <u>60</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRUM LEVEL <u>-1</u> IN CONT PRESS <u>8</u> PSIG CONT W LVL <u><574</u> FT	DRUM RV STATUS OPEN <u>X</u> SHUT <u>-</u> RX PRESS <u>1540</u> PSIG RX WATER <u>22.6</u> FEET OFF GAS <u>60</u> UNITS	125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>24</u> in Hg																																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 5%;">A</th> <th style="width: 5%;">B</th> <th style="width: 5%;">C</th> <th style="width: 5%;">D</th> <th style="width: 5%;">E</th> <th style="width: 5%;">F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td><u>4</u></td> <td><u>7</u></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td></td> <td><u>2</u></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td></td> <td></td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td></td> <td></td> <td><u>6</u></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> </tbody> </table>			A	B	C	D	E	F	1			<u>4</u>	<u>7</u>			2	<u>14</u>	<u>23</u>		<u>2</u>			3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>	4	<u>23</u>	<u>17</u>			<u>6</u>		5				<u>23</u>	<u>21</u>	<u>14</u>	6				<u>14</u>	<u>17</u>		ECS WATER LVL <u>17</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>100</u> GPM		CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADER <u>0</u> PSID DCWRM (1,2,3) <u>4</u> % <u>35</u> % <u>22</u> % STARTUP (6,7) <u>-</u> CPS <u>-</u> CPS		138 kV AVAIL <u>Y</u> 46 kV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u>	
	A	B	C	D	E	F																																																		
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6				<u>14</u>	<u>17</u>																																																			
COMMENTS/PLANT STATUS:				RDS STATUS FIRED <u>-</u> RESET <u>-</u> OTHER <u>-</u> RX WATER LVL <u>6</u> COLOR DRUM LEVEL <u>-1</u> INCHES																																																				

Scenario: BREX 90

Time 0804

Message No: 7a

Scenario Time 0104

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

Message:

ANNUNCIATOR: Emergency Condenser Low Level (ALP-1.4, #24)

For Controller Use Only

Controller Notes:

Action Expected:

Scenario: BREX 90

Time 0815

Message No: 8

Scenario Time 0115

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

See data sheet.

Message:

For Controller Use Only

Controller Notes:

0815 data assumes that the main condenser is in operation and that the Steam Drum Relief Valves are closed. The MSIV should be open by this time. If TBV problems have not been resolved, prompt the operators to check the TBV power supply.

Action Expected:

TSC DATA SHEET

TIME 0615
SCENARIO TIME 0115

MESSAGE 8

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1880 PSIG
COND DSCHG 260 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 40 %
CST LVL 80 %
DWST LVL 76 %
VENT V POS E
MSIV POS 0

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 1340 PSIG

	A	B	C	D	E	F
1						
2	14	23	2	7		10
3	23	18	6			6
4	23	17			23	21
5					14	17
6						

FW FLOW 60 lb/HR x 1000
STEAM FLOW 60 lb/HR x 1000
DRUM LEVEL -1 IN
CONT PRESS 4 PSIG
CONT # LVL <574 FT

DRUM RV STATUS
OPEN - SHUT X
RX PRESS 1350 PSIG
RX WATER 22.6 FEET

125 V DC BUS ENER
Y
CONDENSER VACUUM
26 in Hg

OFF GAS 60 UNITS

ECS WATER LVL 0 %
B/U CORE SPRAY 0 GPM
PRE CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRE CONT SPRAY 100 GPM

CLJ PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DICHRM (1,2,3) 3 % 36 % 21 %
STARTUP (6,7) - CPS -

138 KV AVAIL Y
46 KV AVAIL Y
EDG AVAIL Y
2B BUS ENERG Y

COMMENTS/PLANT STATUS: ANNUNCIATOR:
EMERGENCY CONDENSER LOW LEVEL (ALP - 1.4, #24)

RDS STATUS
FIRED - RESET -
OTHER -
RX WATER LVL 0 COLOR
DRUM LEVEL -1 INCHES

Scenario: BREX 90

Time 0830

Message No: 9

Scenario Time 0130

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 0830
SCENARIO TIME 0130

MESSAGE 0

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1880 PSIG
COND DISCHG 260 PSIG
FWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 40 %
CST LVL 80 %
DWST LVL 67 %
VENT V POS C
MSIV POS 0

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE IML 1340 PSIG

	A	B	C	D	E	F
1						
2	14	23	7			10
3	23	18	1			6
4	23	17		23	21	14
5					14	17
6						

FW FLOW 60 lb/HR x 1000
STEAM FLOW 60 lb/HR x 1000
DRUM LEVEL -1 IN
CONT PRESS 1 PSIG
CONT W LVL 574.2 FT

DRUM RV STATUS
OPEN - SHUT X

RX PRESS 1350 PSIG
RX WATER 22.6 FEET

125 V DC BUS EMER
Y
CONDENSER VACUUM
26 in Hg

OFF GAS 60 UNITS

ECS WATER LVL 0 %
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 100 GPM

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DCURM (1,2,3) 4 % 32 % 23 %
STARTUP (6,7) - CPS -

135 KV AVAIL Y
46 KV AVAIL Y
EDG AVAIL Y
28 BUS ENERG Y

COMMENTS/PLANT STATUS:

RDS STATUS

FIRE - RESET -
OTHER -
RX WATER LVL 6 COLOR
DRUM LEVEL -1 INCHES

Scenario: BREX 90

Time 0845

Message No: 10

Scenario Time 0145

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 0845
SCENARIO TIME 0145

MESSAGE 10

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1800 PSIG
COND DSCHG 260 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 40 %
CST LVL 80 %
DUST LVL 57 %
VENT V POS C
MSIV POS 0

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 1340 PSIG

	A	B	C	D	E	F
1						
2	14	23	2			10
3	23	18	6			6
4	23	17			23	21
5					14	17
6						

FW FLOW 60 lb/HR x 1000
STEAM FLOW 60 lb/HR x 1000
DRUM LEVEL -1 IN
CONT PRESS 0 PSIG
CONT W LVL 574.2 FT

DRUM RV STATUS
OPEN - SHUT X
RX PRESS 1350 PSIG
RX WATER 22.6 FEET

125 V DC BUS ENER
Y
CONDENSER VACUUM
26 in Hg

OFF GAS 60 UNITS

ECS WATER LVL 0 %
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 0 GPM

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DCWRM (1,2,3) 4 x 25 x 27 x
STARTUP (6,7) - CPS -

138 KV AVAIL Y
46 KV AVAIL Y
EDG AVAIL Y
2R BUS ENERG Y

COMMENTS/PLANT STATUS:

RDS STATUS

FIRED - RESET -
OTHER -
RX WATER LVL 6 COLOR
DRUM LEVEL -1 INCHES

Scenario: BREX 90

Time 0900

Message No: 11

Scenario Time 0200

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

<p>MESSAGE <u>11</u></p> <p>CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1880</u> PSIG COND DSCHG <u>260</u> PSIG FDMTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>40</u> % CST LVL <u>80</u> % DWST LVL <u>48</u> % VENT V POS <u>C</u> MSIV POS <u>Q</u></p>		<p>TIME <u>0900</u> SCENARIO TIME <u>0200</u></p>																																																		
<p>RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>1340</u> PSIG</p>		<p>DRUM RV STATUS OPEN <u>-</u> SHUT <u>X</u> RX PRESS <u>1350</u> PSIG RX WATER <u>22.6</u> FEET</p>																																																		
<p>FW FLOW <u>85</u> lb/HR x 1000 STEAM FLOW <u>85</u> lb/HR x 1000 DRUM LEVEL <u>-1</u> IN CONT PRESS <u>0</u> PSIG CONT W LVL <u>574.2</u> FT</p>		<p>125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>26</u> in Hg</p>																																																		
<p>ECS WATER LVL <u>0</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>0</u> GPM</p>		<p>OFF GAS <u>60</u> UNITS</p>																																																		
<table border="1"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td><u>2</u></td> <td><u>7</u></td> <td><u>-</u></td> <td><u>-</u></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td><u>-</u></td> <td><u>-</u></td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td><u>-</u></td> <td><u>-</u></td> <td><u>6</u></td> <td><u>-</u></td> </tr> <tr> <td>5</td> <td><u>-</u></td> <td><u>-</u></td> <td><u>-</u></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td><u>-</u></td> <td><u>-</u></td> <td><u>-</u></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> </tbody> </table>			A	B	C	D	E	F	1							2	<u>14</u>	<u>23</u>	<u>2</u>	<u>7</u>	<u>-</u>	<u>-</u>	3	<u>23</u>	<u>18</u>	<u>6</u>	<u>-</u>	<u>-</u>	<u>10</u>	4	<u>23</u>	<u>17</u>	<u>-</u>	<u>-</u>	<u>6</u>	<u>-</u>	5	<u>-</u>	<u>-</u>	<u>-</u>	<u>23</u>	<u>21</u>	<u>14</u>	6	<u>-</u>	<u>-</u>	<u>-</u>	<u>14</u>	<u>17</u>		<p>138 KV AVAIL <u>Y</u> 66 KV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u></p>	
	A	B	C	D	E	F																																														
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<p>CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADER <u>0</u> PSID DCWRM (1,2,3) <u>3</u> x <u>20</u> x <u>35</u> % STARTUP (6,7) <u>-</u> CPS <u>-</u> CPS</p>		<p>COMMENTS/PLANT STATUS:</p>																																																		
<p>RDS STATUS FIRED <u>-</u> RESET <u>-</u> OTHER <u>-</u> RX WATER LVL <u>6</u> COLOR DRUM LEVEL <u>-1</u> INCHES</p>																																																				

Scenario: BREF 90

Time 0915

Message No: 12

Scenario Time 0215

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

MESSAGE <u>12</u>		TIME <u>0215</u> SCENARIO TIME <u>0215</u>																																																		
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1880</u> PSIG COND DSCHG <u>260</u> PSIG FDWTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>40</u> % CST LVL <u>80</u> % DWST LVL <u>40</u> % VENT V POS <u>C</u> MSIV POS <u>0</u>	RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>1340</u> PSIG FW FLOW <u>85</u> lb/HR x 1000 STEAM FLOW <u>85</u> lb/HR x 1000 DRUM LEVEL <u>-1</u> IN CONT PRESS <u>0</u> PSIG CONT W LVL <u>574.2</u> FT	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>—</td> <td><u>4</u></td> <td><u>7</u></td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td>—</td> <td><u>2</u></td> <td>—</td> <td>—</td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td>—</td> <td>—</td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td>—</td> <td>—</td> <td><u>6</u></td> <td>—</td> </tr> <tr> <td>5</td> <td>—</td> <td>—</td> <td>—</td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td>—</td> <td>—</td> <td>—</td> <td><u>14</u></td> <td><u>17</u></td> <td>—</td> </tr> </tbody> </table>		A	B	C	D	E	F	1	—	<u>4</u>	<u>7</u>	—	—	—	2	<u>14</u>	<u>23</u>	—	<u>2</u>	—	—	3	<u>23</u>	<u>18</u>	<u>6</u>	—	—	<u>10</u>	4	<u>23</u>	<u>17</u>	—	—	<u>6</u>	—	5	—	—	—	<u>23</u>	<u>21</u>	<u>14</u>	6	—	—	—	<u>14</u>	<u>17</u>	—	DRUM RV STATUS OPEN _ SHUT <u>X</u> %X PRESS <u>1350</u> PSIG RX WATER <u>22.6</u> FEET OFF GAS <u>60</u> UNITS 138 kV AVAIL <u>Y</u> 46 kV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u>
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ECS WATER LVL <u>0</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>0</u> GPM		CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADER <u>0</u> PSID DCWRM (1,2,3) <u>2</u> % <u>18</u> % <u>40</u> % STARTUP (6,7) _ CPS _ CPS																																																		
COMMENTS/PLANT STATUS: <u>ANNUNCIATOR:</u> <u>DEMIX WATER STORAGE TANK HIGH-LOW LEVEL (ALP - 1.4, #53)</u>		125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>26</u> in Hg																																																		
		RDS STATUS FIRED _ RESET _ OTHER _____ RX WATER LVL <u>0</u> COLOR DRUM LEVEL <u>-1</u> INCHES																																																		

Scenario: BREX 90

Time 0925

Message No: 13

Scenario Time 0225

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

Message:

ANNUNCIATORS: Reactor High Pressure
Reactor High Pressure Scram
Reactor Very High Pressure

For Controller Use Only

Controller Notes:

1. When Operators attempt to determine the cause of high reactor pressure, inform them that the MSIV is closed and provide the 0925 data sheet.
2. Attempts to reopen the MSIV will fail.

Action Expected:

1. Determine the cause of high reactor pressure.
2. Attempt to reopen the MSIV.

TSC DATA SHEET

MESSAGE <u>13</u>		TIME <u>0925</u> SCENARIO TIME <u>0225</u>																																																		
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1880</u> PSIG COND DSCHG <u>260</u> PSIG FDWTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>35</u> % CST LVL <u>80</u> % DWST LVL <u>30</u> % VENT V POS <u>C</u> MSIV POS <u>C</u>	RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>0</u> PSIG <table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td><u>4</u></td> <td><u>7</u></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td></td> <td><u>2</u></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td></td> <td></td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td></td> <td></td> <td><u>6</u></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> </tbody> </table> FW FLOW <u>85</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRUM LEVEL <u>-1</u> IN CONT PRESS <u>.50</u> PSIG CONT W LVL <u>574.2</u> FT		A	B	C	D	E	F	1			<u>4</u>	<u>7</u>			2	<u>14</u>	<u>23</u>		<u>2</u>			3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>	4	<u>23</u>	<u>17</u>			<u>6</u>		5				<u>23</u>	<u>21</u>	<u>14</u>	6				<u>14</u>	<u>17</u>		DRUM RV STATUS OPEN <u>X</u> SHUT <u>_</u> RX PRESS <u>1540</u> PSIG RX WATER <u>22.6</u> FEET 125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>18</u> in Hg OFF GAS <u>60</u> UNITS	ECS WATER LVL <u>30</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>0</u> GPM CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSIG CRD HEADER <u>0</u> PSIG DCWRM (1,2,3) <u>3</u> % <u>21</u> % <u>38</u> % STARTUP (6,7) <u>_</u> CPS <u>_</u> CPS
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6				<u>14</u>	<u>17</u>																																															
COMMENTS/PLANT STATUS: <u>MSIV CLOSES</u>		ANNUNCIATORS: <u>CONDENSER LOW VACUUM ALARM</u> <u>ACOUSTIC MONITOR ALARM</u> <u>RX HIGH HIGH PRESSURE ALARM</u> <u>RX VERY HIGH PRESSURE ALARM</u>																																																		
		RDS STATUS FIRED <u>_</u> RESET <u>_</u> OTHER <u>_____</u> RX WATER LVL <u>G</u> COLOR DRUM LEVEL <u>-1</u> INCHES																																																		

Scenario: BREX 90

Time 0930

Message No: 14

Scenario Time 0230

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

1. Players should recognize that extensive fuel damage has occurred and discontinue efforts to reopen the MSIV.
2. SED should declare a General Emergency.
3. Operators should verify that Containment Sprays are in operation.

TSC DATA SHEET

MESSAGE 14		TIME 0930	SCENARIO TIME 0230																																										
<p>CORE SPRAY 0 PSIG INSTRU AIR 54 PSIG FWP DISCHG 1880 PSIG COND DISCHG 260 PSIG FDMTR TEMP 80 F ECS #1 LP >400 F ECS #2 LP >400 F COND LVL 35 % CST LVL 77 % DVUS: LVL 21 % VENT V POS E MSIV POS E</p>	<p>RCP #1 FLOW 0 GPM x 1000 RCP #2 FLOW 0 GPM x 1000 TURBINE INL 0 PSIG</p>	<p>DRUM RV STATUS OPEN X SHUT -- RX PRESS 1540 PSIG RX WATER 22.6 FEET</p>	<p>125 V DC BUS ENER Y CONDENSER VACUUM 6 in Hg</p>																																										
<p>FW FLOW 85 lb/HR x 1000 STEAM FLOW 0 lb/HR x 1000 DRUM LEVEL -1 IN CONT PRESS 3 PSIG CONT W LVL 574.2 FT</p>	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>4</td> <td>7</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>14</td> <td>23</td> <td>2</td> <td></td> <td>10</td> </tr> <tr> <td>3</td> <td>23</td> <td>18</td> <td>6</td> <td></td> <td>6</td> </tr> <tr> <td>4</td> <td>23</td> <td>17</td> <td></td> <td>23</td> <td>21</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td>16</td> <td>17</td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	A	B	C	D	E	F	1		4	7			2	14	23	2		10	3	23	18	6		6	4	23	17		23	21	5				16	17	6						<p>OFF GAS OSH UNITS</p> <p>138 KV AVAIL Y 46 KV AVAIL Y ECG AVAIL Y 28 BUS ENERG Y</p>	<p>RDS STATUS FIRED -- RESET -- OTHER -- RX WATER LVL 0 COLOR DRUM LEVEL -1 INCHES</p>
A	B	C	D	E	F																																								
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<p>ECS WATER LVL 0 % B/U CORE SPRAY 0 GPM PRI CORE SPRAY 0 GPM B/U CONT SPWAY 0 GPM PRI CONT SPRAY 100 GPM</p>	<p>CRD PP USG 0 PSIG CRD COOLING 0 GPM CRD HEADER 0 GPM CRD COOLING 0 PSID CRD HEADER 0 PSID DCURM (1,2,3) 3 X 22 X 37 % STARTUP (6,7) 0 CPS 0 CPS</p>	<p>COMMENTS/PLANT STATUS: ANNUNCIATORS: EMERGENCY CONDENSER VENT HI RADIATION (ALP - 1,3, #352) RIGID CONTAINMENT GAMMA RADIATION (ALP - 1,3, #352) AREA MONITORING HIGH RADIATION PROCESS LIQUID MONITORING HIGH RADIATION (ALP - 1,3, #252)</p>																																											

Scenario: BREX 90

Time 0945

Message No: 15

Scenario Time 0245

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

MESSAGE <u>15</u>		TIME <u>0945</u> SCENARIO TIME <u>0245</u>	
CORE SPRAY <u>0</u> PSIG INSTRU A12 <u>96</u> PSIG FWP 015CHG <u>1850</u> PSIG COND D5CHG <u>260</u> PSIG FWTR TEMP <u>80</u> F ECS #1 LP <u>400</u> ECS #2 LP <u>320</u> COND LVL <u>12</u> CST LVL <u>12</u> PNST LVL <u>12</u> V POS <u>0</u> MSIV POS <u>0</u>		DRUM RV <u>514</u> PS OPEN <u>1</u> RX PRESS <u>1540</u> PSIG RX WATER <u>22.6</u> FEET 125 V DC BUS EMER Y CONDENSER VACUUM 0 in Hg	
RCP #1 <u>0</u> GPM x 1000 RCP #2 <u>0</u> GPM x 1000 TURBINE INL <u>0</u> PSIG FW FLOW <u>0</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRAIN LEVEL <u>1</u> IN CONT PRESS <u>10</u> PSIG CONT W LVL <u>574.8</u> FT		OFF GAS OSH UNITS 138 KV AVAIL <u>Y</u> 46 KV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 28 BUS EMERG <u>Y</u>	
ECS WATER LVL <u>0</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>100</u> GPM		CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADER <u>0</u> PSID DOWRM (1,2,3) <u>4</u> x <u>30</u> x <u>28</u> % STARTUP (6,7) <u>0</u> CPS	
COMMENTS/PLANT STATUS:		RDS STATUS FIRED <u>0</u> RESET <u>0</u> OTHER <u>0</u> RX WATER LVL <u>0</u> COLOR <u>0</u> DRUM LEVEL <u>1</u> INCHES	

Scenario: BREX 90

Time 1000

Message No: 16

Scenario Time 0300

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

Operators should respond to CST low level alarm by transferring water from Waste Hold Tank to CST.

TSC DATA SHEET

MESSAGE 16

TIME 1000
SCENARIO TIME 0300

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1880 PSIG
COND DSCHG 260 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 35 %
CST LVL 69 %
DWST LVL 3 %
VENT V POS C
MSIV POS C

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 0 PSIG

DRUM RV STATUS
OPEN X SHUT _

RX PRESS 1540 PSIG
RX WATER 17.5 FEET

	A	B	C	D	E	F
1			<u>4</u>	<u>7</u>		
2	<u>14</u>	<u>23</u>		<u>2</u>		
3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>
4	<u>23</u>	<u>17</u>			<u>6</u>	
5				<u>23</u>	<u>21</u>	<u>14</u>
6				<u>14</u>	<u>17</u>	

FW FLOW 45 lb/HR x 1000
STEAM FLOW 0 lb/HR x 1000
DRUM LEVEL -30 IN
CONT PRESS 7 PSIG
CONT W LVL 575.1 FT

125 V DC BUS ENER
Y

CONDENSER VACUUM
0 in Hg

OFF GAS OSH UNITS

ECS WATER LVL 0 %
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CON: SPRAY 100 GPM

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DCWRM (1,2,3) 4 % 32 % 15 %
STARTUP (6,7) _ CPS _ CPS

138 kV AVAIL Y
46 kV AVAIL Y
EDG AVAIL Y
26 BUS EMERG Y

COMMENTS/PLANT STATUS: ANNUNCIATOR:
CONDENSATE STORAGE TANK HI/LO LEVEL (ALP - 1.4, #51)

RDS STATUS

FIRED _ RESET _
OTHER _____
RX WATER LVL 2.9 CM COLOR
DRUM LEVEL -30 INCHES

Scena.

Time 1015

Message No: 17

Scenario Time 0315

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

The heat removal capacity to the emergency condenser is limited to the heat removal capacity of fire water cooling flow to the Emergency Condenser shell side. This accounts for the 20,000 lb/hr increase in feed water flow.

Action Expected:

Either Operators or the TSC should recognize that the increase in feedwater flow is caused by diminished heat removal capacity of the Emergency Condenser, which has resulted from loss of demin water makeup.

TSC DATA SHEET

TIME 1015
SCENARIO TIME 0315

MESSAGE 17

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1880 PSIG
COND DSCHG 260 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 35 X
CST LVL 61 X
DMST LVL 0 X
VENT V POS C
MSIV POS C

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 0 PSIG

FW FLOW 60 lb/HR x 1000
STEAM FLOW 0 lb/HR x 1000
DRUM LEVEL -30 IN
CONT PRESS 8 PSIG
CONT W LVL 575.6 FT

	A	B	C	D	E	F
1			4	7		
2	14	23		2		10
3	23	18	6			6
4	23	17			23	21
5					14	17
6						

DRUM RV STATUS
OPEN X SHUT -

RX PRESS 1540 PSIG
RX WATER 17.5 FEET

125 V DC BUS EMER
Y
CONDENSER VACUUM
0 in Hg

OFF GAS OSH UNITS

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DCARM (1,2,3) X X 30 X 10 X
STARTUP (6,7) - CPS - CPS

ECS WATER LVL 0 X
B/U CORE SPRAY 0 GPM
P/I CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 100 GPM

138 KV AVAIL Y
46 KV AVAIL Y
EDG AVAIL Y
28 BUS ENERG Y

COMMENTS/PLANT STATUS:

RDS STATUS

FIRED - RESET -
OTHER -
RX WATER LVL 2.9" COLOR
DRUM LEVEL -30 INCHES

Scenario: BREX 90

Time 1030

Message No: 18

Scenario Time 0330

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

The reduced rate of level decrease in CST is based on the assumption that operators will transfer water from the Waste Hold Tank to CST. CST level assumes Waste Hold Tank is being transferred to CST at 90 GPM.

Action Expected:

TSC DATA SHEET

MESSAGE <u>18</u>		TIME <u>1030</u> SCENARIO TIME <u>0330</u>																																																		
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1880</u> PSIG COND DSCHG <u>260</u> PSIG FDWTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>35</u> % CST LVL <u>59</u> % DWST LVL <u>0</u> % VENT V POS <u>C</u> MSIV POS <u>C</u>	RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>0</u> PSIG FW FLOW <u>60</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRUM LEVEL <u>-30</u> IN CONT PRESS <u>8</u> PSIG CONT W LVL <u>575.8</u> FT	DRUM RV STATUS OPEN <input checked="" type="checkbox"/> SHUT <input type="checkbox"/> RX PRESS <u>1540</u> PSIG RX WATER <u>17.5</u> FEET OFF GAS OSH UNITS 138 kV AVAIL <input type="checkbox"/> 46 kV AVAIL <input type="checkbox"/> EDG AVAIL <input type="checkbox"/> 2B BUS EMERG <input type="checkbox"/>	125 V DC BUS ENER <input type="checkbox"/> CONDENSER VACUUM <u>0</u> in Hg																																																	
		<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td><u>4</u></td> <td><u>7</u></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td></td> <td><u>2</u></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td></td> <td></td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td></td> <td></td> <td><u>6</u></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> </tbody> </table>		A	B	C	D	E	F	1			<u>4</u>	<u>7</u>			2	<u>14</u>	<u>23</u>		<u>2</u>			3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>	4	<u>23</u>	<u>17</u>			<u>6</u>		5				<u>23</u>	<u>21</u>	<u>14</u>	6				<u>14</u>	<u>17</u>		
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ECS WATER LVL <u>0</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>100</u> GPM		CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSIG CRD HEADER <u>0</u> PSIG DCWRM (1,2,3) <u>2</u> X <u>25</u> X <u>12</u> X STARTUP (6,7) <u>_</u> CPS <u>_</u> CPS																																																		
COMMENTS/PLANT STATUS:																																																				
			RDS STATUS FIRED <u>_</u> RESET <u>_</u> OTHER <u>_____</u> RX WATER LVL <u>219</u> COLOR DRUM LEVEL <u>-30</u> INCHES																																																	

Scenario: BREX 90

Time 1045

Message No: 19

Scenario Time 0345

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

MESSAGE 19		TIME 1045																																											
SCENARIO TIME 0345																																													
<p>CORE SPRAY 0 PSIG INSTRU AIR 94 PSIG FWP DISCHG 1880 PSIG COND DSCNG 260 PSIG FWTR TEMP 80 F ECS #1 LP >400 F ECS #2 LP >400 F COND LVL 35 % CST LVL 57 % DWST LVL 0 % VENT V POS C MSIV POS C</p>	<p>RCP #1 FLOW 0 GPM x 1000 RCP #2 FLOW 0 GPM x 1000 TURRINE INL 0 PSIG</p>	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>14</td> <td>23</td> <td>2</td> <td></td> <td>10</td> </tr> <tr> <td>3</td> <td>23</td> <td>18</td> <td>6</td> <td></td> <td>6</td> </tr> <tr> <td>4</td> <td>23</td> <td>17</td> <td></td> <td>23</td> <td>21 14</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td>14</td> <td>17</td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	A	B	C	D	E	F	1						2	14	23	2		10	3	23	18	6		6	4	23	17		23	21 14	5				14	17	6						<p>DRUM RV STATUS OPEN X SHUT - RX PRESS 1540 PSIG RX WATER 17.5 FEET</p>
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<p>FW FLOW 60 lb/HR x 1000 STEAM FLOW 0 lb/HR x 1000 DRUM LEVEL -30 IN CONT PRESS 8 PSIG CONT W LVL 576 FT</p>	<p>OFF GAS OSH UNITS</p>	<p>125 V DC BUS EMER Y CONDENSER VACUUM 0 In Hg</p>	<p>138 kV AVAIL Y 46 kV AVAIL Y EDG AVAIL Y 2P BUS EMERG Y</p>																																										
<p>ECS WATER LVL 0 % B/U CORE SPRAY 0 GPM PRI CORE SPRAY 0 GPM B/U CONT SPRAY 0 GPM PRI CONT SPRAY 100 GPM</p>	<p>CRD PP DSG 0 PSIG CRD COOLING 0 GPM CRD HEADER 0 GPM CRD COOLING 0 PSIG CRD HEADER 0 PSIG DCLWPM (1,2,3) 3 X 18 X 18 % STARTUP (6,7) - CPS - CPS</p>	<p>COMMENTS/PLANT STATUS:</p>	<p>RDS STATUS FIRED - RESET - OTHER - RX WATER LVL 2.9" COLOR DRUM LEVEL -30 INCHES</p>																																										

Scenario: BREX 90

Time 1100

Message No: 20

Scenario Time 0400

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

MESSAGE <u>20</u>						TIME <u>1100</u> SCENARIO TIME <u>0400</u>																																																	
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1880</u> PSIG COND DSCHG <u>260</u> PSIG FDWTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>35</u> % CST LVL <u>55</u> % DWST LVL <u>0</u> % VENT V POS <u>C</u> MSIV POS <u>C</u>	RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>0</u> PSIG FW FLOW <u>60</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRUM LEVEL <u>-30</u> IN CONT PRESS <u>8</u> PSIG CONT W LVL <u>576.3</u> FT	DRUM RV STATUS OPEN <u>X</u> SHUT <u>_</u> RX PRESS <u>1540</u> PSIG RX WATER <u>17.5</u> FEET	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td><u>4</u></td> <td><u>7</u></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td></td> <td><u>2</u></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td></td> <td></td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td></td> <td></td> <td><u>6</u></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> </tbody> </table>				A	B	C	D	E	F	1			<u>4</u>	<u>7</u>			2	<u>14</u>	<u>23</u>		<u>2</u>			3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>	4	<u>23</u>	<u>17</u>			<u>6</u>		5				<u>23</u>	<u>21</u>	<u>14</u>	6				<u>14</u>	<u>17</u>		125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>0</u> in Hg
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		ECS WATER LVL <u>0</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>100</u> GPM	CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADER <u>0</u> PSID DCWRM (1,2,3) <u>3</u> % <u>12</u> % <u>26</u> % STARTUP (6,7) <u>_</u> CPS <u>_</u> CPS	138 kV AVAIL <u>Y</u> 46 kV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u>																																																			
COMMENTS/PLANT STATUS:						RDS STATUS FIRED <u>_</u> RESET <u>_</u> OTHER <u>_____</u> RX WATER LVL <u>2'9"</u> COLOR DRUM LEVEL <u>-30</u> INCHES																																																	

Scenario: BREX 90

Time 1115

Message No: 21

Scenario Time 0415

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

MESSAGE ?1		TIME <u>1115</u> SCENARIO TIME <u>0415</u>																																																		
CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>94</u> PSIG FWP DISCHG <u>1880</u> PSIG COND DSCHG <u>260</u> PSIG FDWTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>35</u> % CST LVL <u>53</u> % DWST LVL <u>0</u> % VENT V POS <u>C</u> MSIV POS <u>C</u>	RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>0</u> PSIG <table style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 5%;">A</th> <th style="width: 5%;">B</th> <th style="width: 5%;">C</th> <th style="width: 5%;">D</th> <th style="width: 5%;">E</th> <th style="width: 5%;">F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td><u>4</u></td> <td><u>7</u></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td></td> <td><u>2</u></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td></td> <td></td> <td><u>10</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td></td> <td></td> <td><u>6</u></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> </tbody> </table> FW FLOW <u>60</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRUM LEVEL <u>-30</u> IN CONT PRESS <u>8</u> PSIG CONT W LVL <u>576.5</u> FT		A	B	C	D	E	F	1			<u>4</u>	<u>7</u>			2	<u>14</u>	<u>23</u>		<u>2</u>			3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>	4	<u>23</u>	<u>17</u>			<u>6</u>		5				<u>23</u>	<u>21</u>	<u>14</u>	6				<u>14</u>	<u>17</u>		DRUM RV STATUS OPEN <u>X</u> SHUT <u>_</u> RX PRESS <u>1540</u> PSIG RX WATER <u>17.5</u> FEET OFF GAS <u>OSH</u> UNITS	125 V DC BUS ENER <u>Y</u> CONDENSER VACUUM <u>0</u> in Hg
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ECS WATER LVL <u>0</u> % B/U CORE SPRAY <u>0</u> GPM PRI CORE SPRAY <u>0</u> GPM B/U CONT SPRAY <u>0</u> GPM PRI CONT SPRAY <u>100</u> GPM		CRJ PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADER <u>0</u> PSID DCWRM (1,2,3) <u>2</u> % <u>8</u> % <u>30</u> % STARTUP (6,7) <u>_</u> CPS <u>_</u> CPS																																																		
138 kV AVAIL <u>Y</u> 46 kV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u>		COMMENTS/PLANT STATUS:																																																		
		RDS STATUS FIRED <u>_</u> RESET <u>_</u> OTHER <u>_____</u> RX WATER LVL <u>2'9"</u> COLOR DRUM LEVEL <u>-30</u> INCHES																																																		

Scenario: BREX 90

Time 1130

Message No: 22

Scenario Time 0430

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 1130
SCENARIO TIME 0430

MESSAGE 22

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1880 PSIG
COND DISCHG 250 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 35 %
CST LVL 51 %
DWTST LVL 0 %
VENT V POS E
MSIV POS C

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 0 PSIG

FW FLOW 60 lb/HR x 1000
STEAM FLOW 0 lb/HR x 1000
DRUM LEVEL -30 IN
CONT PRESS 8 PSIG
CONT W LVL 576.7 FT

	A	B	C	D	E	F
1			4	7		
2	14	23		2		10
3	23	18	6			
4	23	17			6	14
5				23	21	
6				14	17	

DRUM RV STATUS
OPEN X SHUT -
RX PRESS 1540 PSIG
RX WATER 17.5 FEET

125 V DC BUS EMER
Y
CONDENSER VACUUM
0 in Hg

OFF GAS DSR UNITS

ECS WATER LVL 0 %
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 100 GPM

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DOWRM (1,2,3) 2 % 12 % 27 %
STARTUP (6,7) _ CPS _

138 kV AVAIL Y
46 kV AVAIL Y
EDG AVAIL Y
2B BUS ENERG Y

COMMENTS/PLANT STATUS:

RDS STATUS

FIRED _ RESET -
OTHER _____
RX WATER LVL 2.9" COLOR
DRUM LEVEL -30 INCHES

Scenario: BREX 90

Time 1145

Message No: 23

Scenario Time 0445

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 1145
SCENARIO TIME 0445

MESSAGE 23

CORE SPRAY 0 PSIG
INSTRU AIR 94 PSIG
FWP DISCHG 1880 PSIG
COND DSCHG 260 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 35 %
CST LVL 49 %
DWST LVL 0 %
VENT V POS C
MSIV POS C

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 0 PSIG

FW FLOW 60 lb/HR x 1000
STEAM FLOW 0 lb/HR x 1000
DRUM LEVEL -30 IN
CONT PRESS 0 PSIG
CONT W LVL 576.8 FT

	A	B	C	D	E	F
1			4	7		
2	14	23		2		10
3	23	18	6			
4	23	17			6	
5				23	21	14
6				14	17	

DRUM RV STATUS
OPEN X SHUT -
RX PRESS 1540 PSIG
RX WATER 17.5 FEET

OFF GAS OSH UNITS

130 kV AVAIL Y
46 kV AVAIL Y
EDG AVAIL Y
2B BUS ENERG Y
CRD PP OSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DOWNM (1,2,3) X X 18 X 18 X
STARTUP 5,7) - CPS -

ECS WATER LVL 0 %
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 100 GPM

125 V DC BUS EMER
Y
CONDENSER VACUUM
0 in Hg

COMMENTS/PLANT STATUS:

RDS STATUS
FIRED - RESET -
OTHER -
RX WATER LVL 2.9" COLOR
DRUM LEVEL -30 INCHES

Scenario: BREX 90

Time 1200

Message No: 24

Scenario Time 0500

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

MESSAGE 24		TIME 1200	SCENARIO TIME 0500																																										
<p>CORE SPRAY 0 PSIG</p> <p>INSTRU AIR 94 PSIG</p> <p>FWP DISCHG 1880 PSIG</p> <p>COND DSCRG 260 PSIG</p> <p>FDTR TEMP 80 F</p> <p>ECS #1 LP >400 F</p> <p>ECS #2 LP >400 F</p> <p>COND LVL 35 X</p> <p>CST LVL 47 X</p> <p>DMST LVL 0 X</p> <p>VENT V POS C</p> <p>MSIV POS C</p>	<p>RCP #1 FLOW 0 GPM x 1000</p> <p>RCP #2 FLOW 0 GPM x 1000</p> <p>TURBINE INL 0 PSIG</p> <p>FW FLOW 60 lb/HR x 1000</p> <p>STEAM FLOW 0 lb/HR x 1000</p> <p>DRUM LEVEL -30 IN</p> <p>CONT PRESS 0 PSIG</p> <p>CONT W LVL 577 FT</p>	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>14</td> <td>23</td> <td>4</td> <td>7</td> <td>-</td> </tr> <tr> <td>2</td> <td>23</td> <td>18</td> <td>2</td> <td>-</td> <td>10</td> </tr> <tr> <td>3</td> <td>23</td> <td>17</td> <td>6</td> <td>-</td> <td>6</td> </tr> <tr> <td>4</td> <td>23</td> <td>17</td> <td>-</td> <td>23</td> <td>21</td> </tr> <tr> <td>5</td> <td>-</td> <td>-</td> <td>-</td> <td>14</td> <td>17</td> </tr> <tr> <td>6</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	A	B	C	D	E	F	1	14	23	4	7	-	2	23	18	2	-	10	3	23	17	6	-	6	4	23	17	-	23	21	5	-	-	-	14	17	6	-	-	-	-	-	<p>DRUM RV STATUS</p> <p>OPEN X SHUT -</p> <p>RX PRESS 1540 PSIG</p> <p>RX WATER 17.5 FEET</p> <p>125 V DC BUS ENER</p> <p>Y</p> <p>CONDENSER VACUUM</p> <p>0 In Hg</p>
A	B	C	D	E	F																																								
1	14	23	4	7	-																																								
2	23	18	2	-	10																																								
3	23	17	6	-	6																																								
4	23	17	-	23	21																																								
5	-	-	-	14	17																																								
6	-	-	-	-	-																																								
<p>OFF GAS OSH UNITS</p> <p>139 KV AVAIL Y</p> <p>46 KV AVAIL Y</p> <p>EDG AVAIL Y</p> <p>28 BUS ENERG Y</p>		<p>COMMENTS/PLANT STATUS:</p>																																											
<p>ECS WATER LVL 0 X</p> <p>B/U CORE SPRAY 0 GPM</p> <p>PRI CORE SPRAY 0 GPM</p> <p>B/U CONT SPRAY 0 GPM</p> <p>PRI CONT SPRAY 100 GPM</p>		<p>DRUM RV STATUS</p> <p>OPEN X SHUT -</p> <p>RX PRESS 1540 PSIG</p> <p>RX WATER 17.5 FEET</p>																																											
<p>CRD PP DSG 0 PSIG</p> <p>CRD COOLING 0 GPM</p> <p>CRD HEADER 0 GPM</p> <p>CRD COOLING 0 PSID</p> <p>CRD HEADER 0 PSID</p> <p>DCURM (1,2,3) X X 26 X 13 X</p> <p>STARTUP (6,7) - CPS - CPS</p>		<p>RDS STATUS</p> <p>FIRE - RESET -</p> <p>OTHER -</p> <p>RX WATER LVL 2.9" COLOR</p> <p>DRUM LEVEL -30 INCHES</p>																																											

Scenario: BREX 90

Time 1215

Message No: 25

Scenario Time 0515

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

TIME 1215
SCENARIO TIME 0515

MESSAGE 25

CORE SPRAY 0 PSIG
INSTRU AIR 24 PSIG
FWP DISCHG 1880 PSIG
COND DSCHG 260 PSIG
FDWTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 35 X
CST LVL 45 X
DNST LVL 0 X
VENT V POS C
MSIV POS C

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE INL 0 PSIG

	A	B	C	D	E	F
1			4	7		
2	14	23	2			10
3	23	18	6		6	
4	23	17			23	21
5					14	17
6						

FW FLOW 60 lb/HR x 1000
STEAM FLOW 0 lb/HR x 1000
DRUM LEVEL -30 IN
CONT PRESS 8 PSIG
CONT W LVL 577.2 FT

DRUM RV STATUS
OPEN X SHUT -
RX PRESS 1540 PSIG
RX WATER 17.5 FEET

125 V DC BUS EMER
Y
CONDENSER VACUUM
0 in Hg

OFF GAS OSH UKETS

138 KV AVAIL Y
46 KV AVAIL Y
EDG AVAIL Y
2B BUS ENERG Y

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
D/CURM (1,2,3) 4 X 30 X 5 X
STARTUP (6,7) - CPS - CPS

ECS WATER LVL 0 X
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 100 GPM

COMMENTS/PLANT STATUS:

RDS STATUS

FIRE - RESET -
OTHER -
RX WATER LVL 2.9 M COLOR
DRUM LEVEL -30 INCHES

Scenario: BREX 90

Time 1220

Message No: 26

Scenario Time 0520

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: AOs on Turbine Deck

Simulated Plant Conditions:

Message:

Sodium pentaborate is ready to be transferred to the Main Condenser.

For Controller Use Only

Controller Notes:

Action Expected:

1. AOs should notify the Control Room.
2. Control Room operators should begin the transfer of sodium pentaborate per EIP-3.

Scenario: BREX 90

Time 1230

Message No: 27

Scenario Time 0530

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: Control Room Players

Simulated Plant Conditions:

See data sheet.

Message:

For Controller Use Only

Controller Notes:

1. The exercise may be terminated at this time for plant personnel as judged appropriate by the Exercise Coordinator.
2. Instruct Operators to announce exercise termination to personnel via plant PA System.

Action Expected:

Operators should recognize that power reduction is occurring.

TSC DATA SHEET

TIME 1230
SCENARIO TIME 0530

MESSAGE 27

CORE SPRAY 0 PSIG
INSTRU AT: 94 PSIG
FWP DISCHG 1880 PSIG
COND DISCHG 260 PSIG
FDNTR TEMP 80 F
ECS #1 LP >400 F
ECS #2 LP >400 F
COND LVL 35 X
CST LVL 44 X
DWTST LVL 0 X
VENT V POS C
MSIV POS C

RCP #1 FLOW 0 GPM x 1000
RCP #2 FLOW 0 GPM x 1000
TURBINE IRL 0 PSIG

	A	B	C	D	E	F
1			4	7		
2	14	23		2		10
3	23	18	6			
4	23	17			6	
5					23	21
6					14	17

FW FLOW 20 lb/HR x 1000
STEAM FLOW 0 lb/HR x 1000
DRUM LEVEL -30 IN
CONT PRESS 0 PSIG
CONT W LVL 577.3 FT

DRUM RV STATUS

OPEN X SHUT -
RX PRESS 1540 PSIG
RX WATER 17.5 FEET

125 V DC BUS EMER
Y
CONDENSER VACUUM
0 in Hg

OFF GAS OSH UNITS

130 KV AVAIL Y
46 KV AVAIL Y
EDG AVAIL Y
28 BUS ENERG Y

CRD PP DSG 0 PSIG
CRD COOLING 0 GPM
CRD HEADER 0 GPM
CRD COOLING 0 PSID
CRD HEADER 0 PSID
DCMRM (1,2,3) 1 X 2 X 3 X
STARTUP (6,7) - CPS - CPS

ECS WATER LVL 0 X
B/U CORE SPRAY 0 GPM
PRI CORE SPRAY 0 GPM
B/U CONT SPRAY 0 GPM
PRI CONT SPRAY 100 GPM

COMMENTS/PLANT STATUS:

RDS STATUS

FIRED - RESET -
OTHER -
RX WATER LVL 2.9 COLOR
DRUM LEVEL -30 INCHES

Scenario: BREX 90

Time 1245

Message No: 28

Scenario Time 0545

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: EOF/remaining TSC Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

Action Expected:

TSC DATA SHEET

<p>MESSAGE <u>28</u></p> <p>CORE SPRAY <u>0</u> PSIG INSTRU AIR <u>04</u> PSIG FWP DISCHG <u>1890</u> PSIG COND DSCNG <u>275</u> PSIG FDMTR TEMP <u>80</u> F ECS #1 LP <u>>400</u> F ECS #2 LP <u>>400</u> F COND LVL <u>40</u> % CST LVL <u>43</u> % DWST LVL <u>0</u> % VENT V POS <u>5</u> MSIV POS <u>5</u></p>	<p>RCP #1 FLOW <u>0</u> GPM x 1000 RCP #2 FLOW <u>0</u> GPM x 1000 TURBINE INL <u>0</u> PSIG</p> <p>FW FLOW <u>0</u> lb/HR x 1000 STEAM FLOW <u>0</u> lb/HR x 1000 DRUM LEVEL <u>30</u> IN CONT PRESS <u>4</u> PSIG CONT W LVL <u>577.4</u> FT</p>	<p>DRUM RV STATUS OPEN <u>-</u> SHUT <u>X</u></p> <p>RX PRESS <u>1350</u> PSIG RX WATER <u>17.6</u> FEET</p>	<p>TIME <u>1245</u> SCENARIO TIME <u>0545</u></p>	<p>125 V DC BUS EMER <u>Y</u></p> <p>CONDENSER VACUUM <u>0</u> in Hg</p>																																																
<p>CRD PP DSG <u>0</u> PSIG CRD COOLING <u>0</u> GPM CRD HEADER <u>0</u> GPM CRD COOLING <u>0</u> PSID CRD HEADEK <u>0</u> PSID DCURM (1,2,3) <u>6E-1</u> % <u>7E-1</u> % <u>6E-1</u> % STARTUP (6,7) <u>-</u> CPS <u>-</u> CPS</p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td><u>14</u></td> <td><u>23</u></td> <td><u>2</u></td> <td><u>-</u></td> <td><u>-</u></td> <td><u>10</u></td> </tr> <tr> <td>3</td> <td><u>23</u></td> <td><u>18</u></td> <td><u>6</u></td> <td><u>-</u></td> <td><u>6</u></td> <td><u>-</u></td> </tr> <tr> <td>4</td> <td><u>23</u></td> <td><u>17</u></td> <td><u>-</u></td> <td><u>23</u></td> <td><u>21</u></td> <td><u>14</u></td> </tr> <tr> <td>5</td> <td><u>-</u></td> <td><u>-</u></td> <td><u>-</u></td> <td><u>14</u></td> <td><u>17</u></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		A	B	C	D	E	F	1							2	<u>14</u>	<u>23</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>10</u>	3	<u>23</u>	<u>18</u>	<u>6</u>	<u>-</u>	<u>6</u>	<u>-</u>	4	<u>23</u>	<u>17</u>	<u>-</u>	<u>23</u>	<u>21</u>	<u>14</u>	5	<u>-</u>	<u>-</u>	<u>-</u>	<u>14</u>	<u>17</u>		6							<p>OFF GAS GSH UNITS</p> <p>138 KV AVAIL <u>Y</u> 46 KV AVAIL <u>Y</u> EDG AVAIL <u>Y</u> 2B BUS ENERG <u>Y</u></p>	<p>RDS STATUS</p> <p>FIRED <u>-</u> RESET <u>-</u> OTHER <u>-</u> RX WATER LVL <u>2'9"</u> COLOR <u>-</u> DRUM LEVEL <u>30</u> INCHES</p>
	A	B	C	D	E	F																																														
1																																																				
2	<u>14</u>	<u>23</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>10</u>																																														
3	<u>23</u>	<u>18</u>	<u>6</u>	<u>-</u>	<u>6</u>	<u>-</u>																																														
4	<u>23</u>	<u>17</u>	<u>-</u>	<u>23</u>	<u>21</u>	<u>14</u>																																														
5	<u>-</u>	<u>-</u>	<u>-</u>	<u>14</u>	<u>17</u>																																															
6																																																				
<p>COMMENTS/PLANT STATUS:</p>																																																				

Scenario: BREX 90

Time 1300

Message No: 29

Scenario Time 0600

BIG ROCK POINT NUCLEAR PLANT

EMERGENCY PREPAREDNESS EXERCISE MESSAGE FORM

Message for: EOF/remaining TSC Players

Simulated Plant Conditions:
See data sheet.

Message:

For Controller Use Only

Controller Notes:

The exercise will be terminated as judged appropriate by the Exercise Coordinator.

Action Expected:

TSC DATA SHEET

TIME 1300

SCENARIO TIME 0600

MESSAGE 29

CORE SPRAY 0 PSIG
 INSTRU AIR 94 PSIG
 FWP DISCHG 1890 PSIG
 COND DSCHG 275 PSIG
 FDWTR TEMP 80 F
 ECS #1 LP >400 F
 ECS #2 LP >400 F
 CCMD LVL 40 %
 CST LVL 43 %
 DWST LVL 0 %
 VENT V POS C
 MSIV POS C

RCP #1 FLOW 0 GPM x 1000
 RCP #2 FLOW 0 GPM x 1000
 TURBINE INL 0 PSIG

FW FLOW 0 lb/HR x 1000
 STEAM FLOW 0 lb/HR x 1000
 DRUM LEVEL -30 IN
 CCNT PRESS 1 PSIG
 CONT W LVL 577.5 FT

	A	B	C	D	E	F
1			<u>4</u>	<u>7</u>		
2	<u>14</u>	<u>23</u>		<u>2</u>		
3	<u>23</u>	<u>18</u>	<u>6</u>			<u>10</u>
4	<u>25</u>	<u>17</u>			<u>6</u>	
5				<u>23</u>	<u>21</u>	<u>14</u>
6				<u>14</u>	<u>17</u>	

DRUM RV STATUS

OPEN _ SHUT X

RX PRESS 1115 PSIG
 RX WATER 17.5 FEET

125 V DC BUS ENER
Y

CONDENSER VACUUM
0 in Hg

GPF GAS QSH UNITS

ECS WATER LVL 0 %
 B/U CORE SPRAY 0 GPM
 PRI CORE SPRAY 0 GPM
 B/U CONT SPRAY 0 GPM
 PRI CONT SPRAY 100 GPM

CRD PP DSG 0 PSIG
 CRD COOLING 0 GPM
 CRD HEADER 0 GPM
 CRD COOLING 0 PSIG
 CRD HEADER 0 PSIG
 DCWRM (1,2,3) 2E-1 % 2E-1 % 3E-1 %
 STARTUP (6,7) _ CPS _ CPS

138 KV AVAIL Y
 45 KV AVAIL Y
 EDG AVAIL Y
 2B BUS ENER Y

COMMENTS/PLANT STATUS:

ROS STATUS

FIRE _ RESET _
 OTHER _
 RX WATER LVL 2.9 CORN
 DRUM LEVEL -30 IN

RAD MONITOR DATA

AREA MONITORS

	0315	0330	0345	0400	0415	0430	0445	0500	0515	0530	0545	0600
1. PERSONNEL LOCK	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
2. SPENT FUEL STRG	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
3. COND ACCESS AREA	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
4. OFFICE CORRIDOR	.13	.17	.22	.21	.22	.24	.25	.26	.27	.28	.26	.24
5. AIR CMPRSSR RM	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
6. NEW FUEL STRG	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
7. EM. COND. VENT WEST	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
8. COND DEMIN ENTR	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
9. SHOP	0.7	.72	.74	.75	.76	.78	.78	.79	0.8	0.8	.79	.78
10 CONTROL RM	.06	.06	.06	.06	.06	.06	.06	.05	.06	.06	.06	.06
11 SPHERE 607	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
12 SPHERE 582	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
13 CONDENSER	111	129	144	170	184	204	216	225	244	252	243	234
14 LAUNDRY RM	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
15 EXHAUST PLINUM	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
16 LOCKER RM	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07
17 TRB SHIELD WALL	385	447	503	590	635	710	745	770	843	870	840	810
18 RADWASTE VLT	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
20 EM. COND. VENT EAST	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH
HIGH RANGE	31	36	40	47	50	56	57	60	64	66	64	61

BREX-90

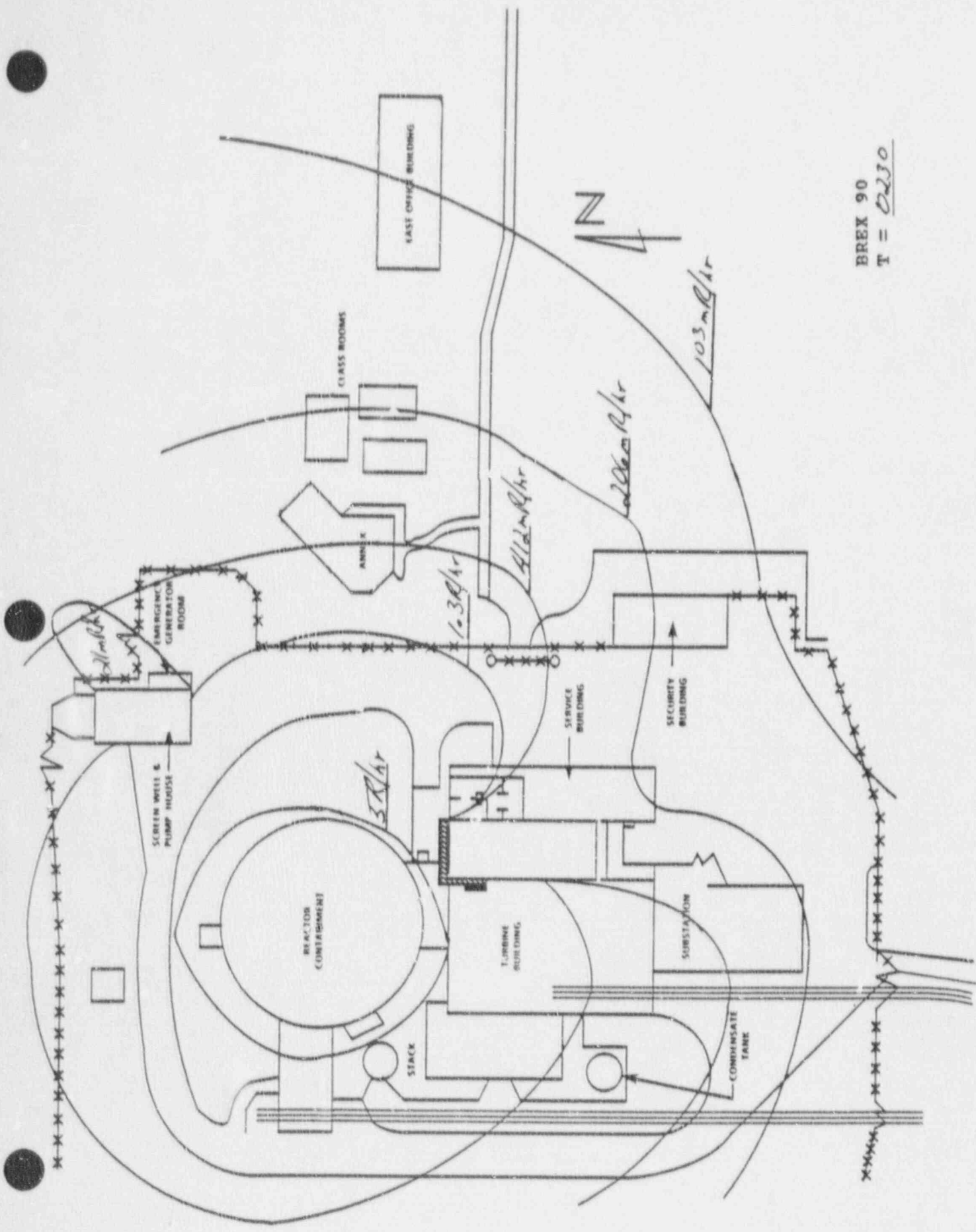
PROCESS MONITORS

	0015	0030	0045	0100	0115	0130	0145	0200	0215	0230	0245	0300		
MAIN CONDENSER RP-8107	8.5E5-----											OSH	OSH	OSH
CONTAINMENT COOLING RP-8109	2.8E7-----											OSH	OSH	OSH
CONTAINMENT SERVICE WATER RP-8109	4.5-----											OSH	OSH	OSH
CANAL DISCHARGE RP-8110	325-----											OSH	OSH	OSH
RADWASTE DISCHARGE RP-8111	2800-----													
	0315	0330	0345	0400	0415	0430	0445	0500	0515	0530	0545	0600		
MAIN CONDENSER RP-8107	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH		
CONTAINMENT COOLING RP-8109	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH		
CONTAINMENT SERVICE WATER RP-8109	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH		
CANAL DISCHARGE RP-8110	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH	OSH		
RADWASTE DISCHARGE RP-8111	2800-----													

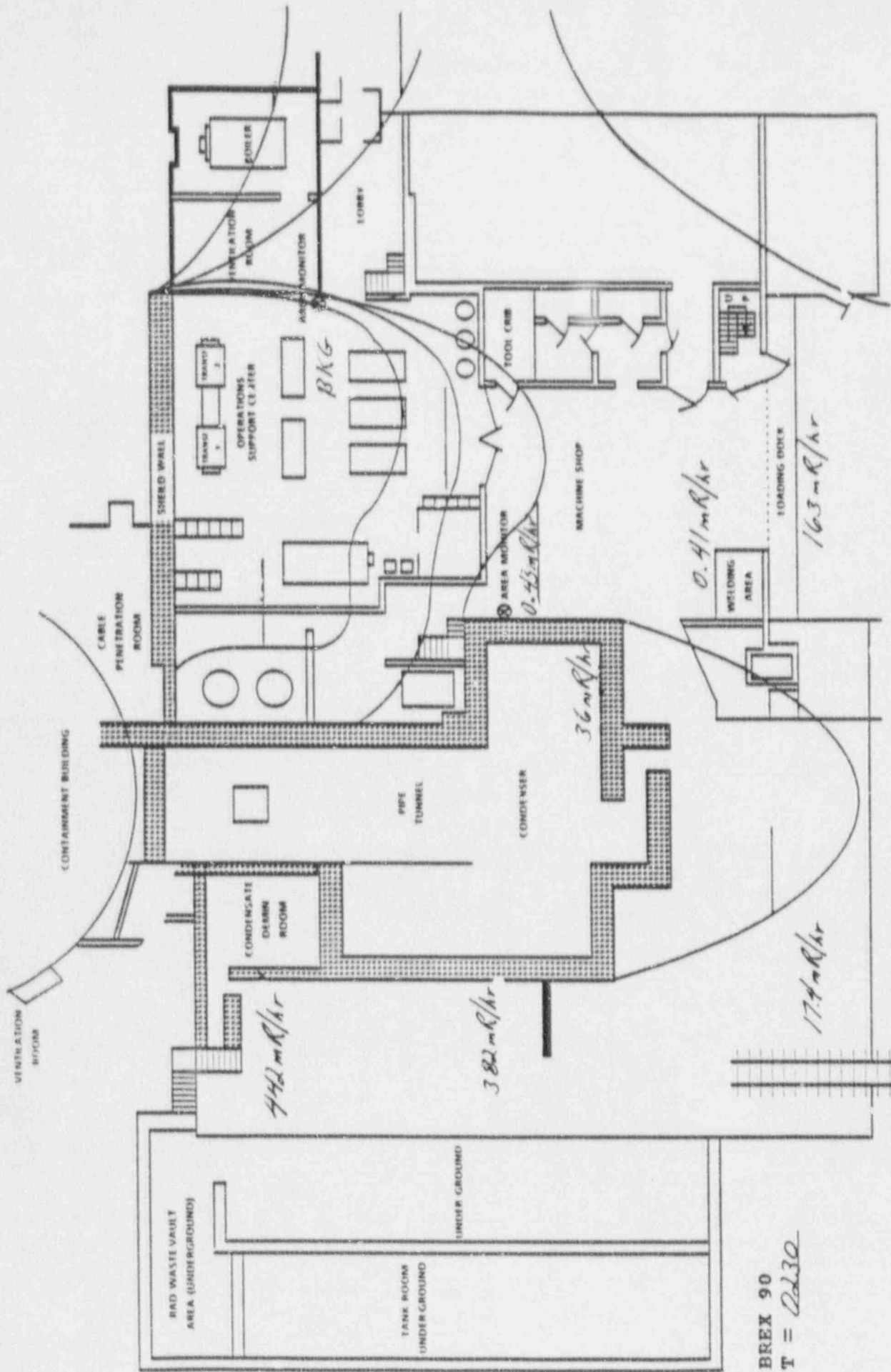
BREX-90
STACK GAS MONITOR

	0015	0030	0045	0100	0115	0130	0145	0200	0215	0230	0245	0300
1. RI-8326 (CPM) IODINE/PART.	4E2	4E2	4E2	4E2	4E2	4E2	4E2	4E2	4E2	6E2	6E2	6E2
2. RI-8327 (CPM) NOBLE GAS	3E3	3E3	3E3	3E3	3E3	3E3	3E3	3E3	3E3	1E6	1E6	1E6
3. RI-8328 MR/H (HIGH RANGE)	0	0	0	0	0	0	0	0	0	.4	.4	.4
	0315	0330	0345	0400	0415	0430	0445	0500	0515	0530	0545	0600
1. RI-8326 (CPM) IODINE/PART.	7E2	7E2	7E2	7E2	7E2	7E2	7E2	8E2	8E2	7E2	7E2	7E2
2. RI-8327 (CPM) NOBLE GAS	1.1E6	-----						2.2E6	2.7E6	2.2E6		
3. RI-8328 MR/H (HIGH RANGE)	.5	.5	.5	.5	.5	.5	.5	.6	.7	.7	.6	.6

ONSITE RAD DATA



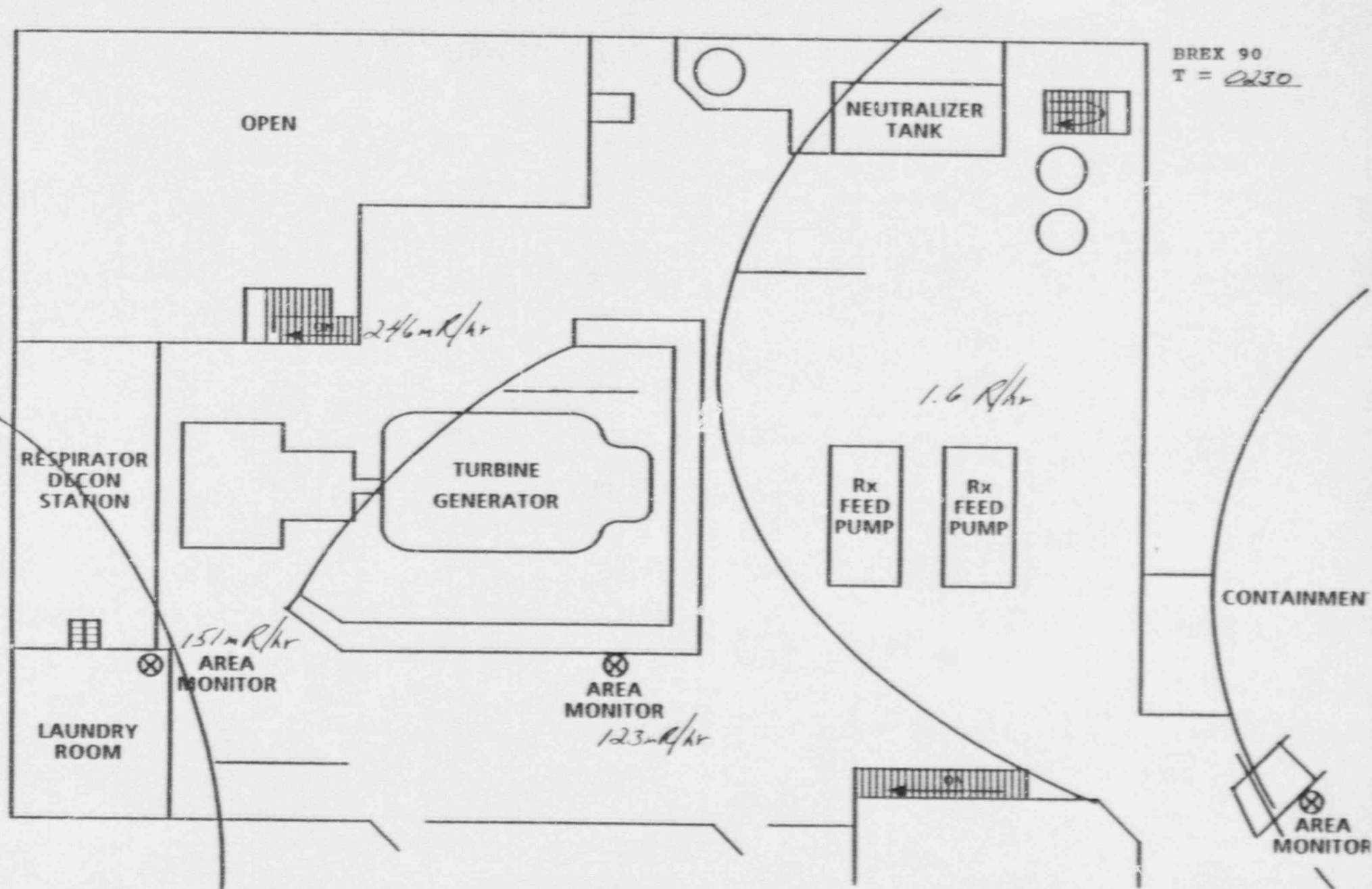
BREX 90
 T = 0230

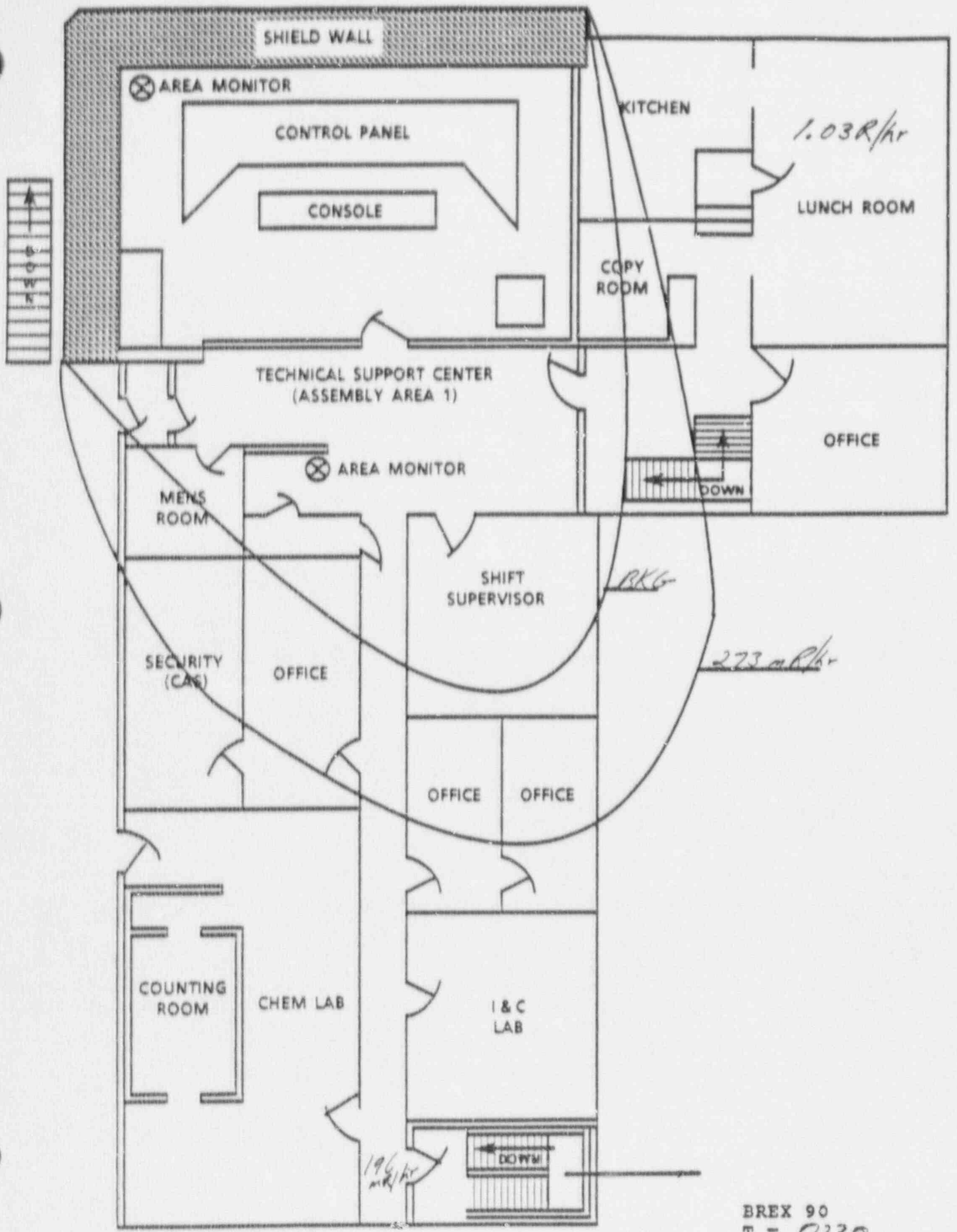


BREX 90
T = 0.230

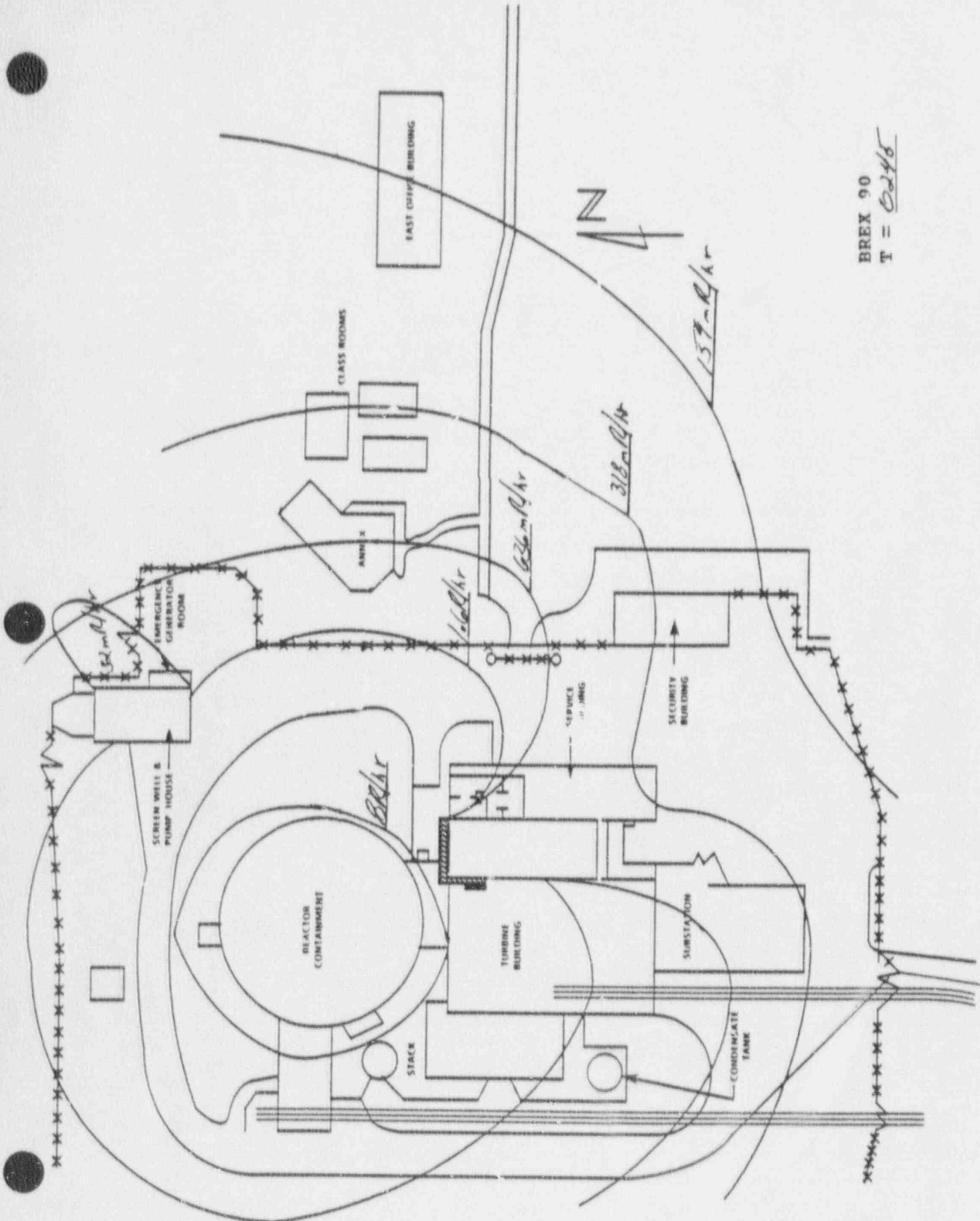
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0230

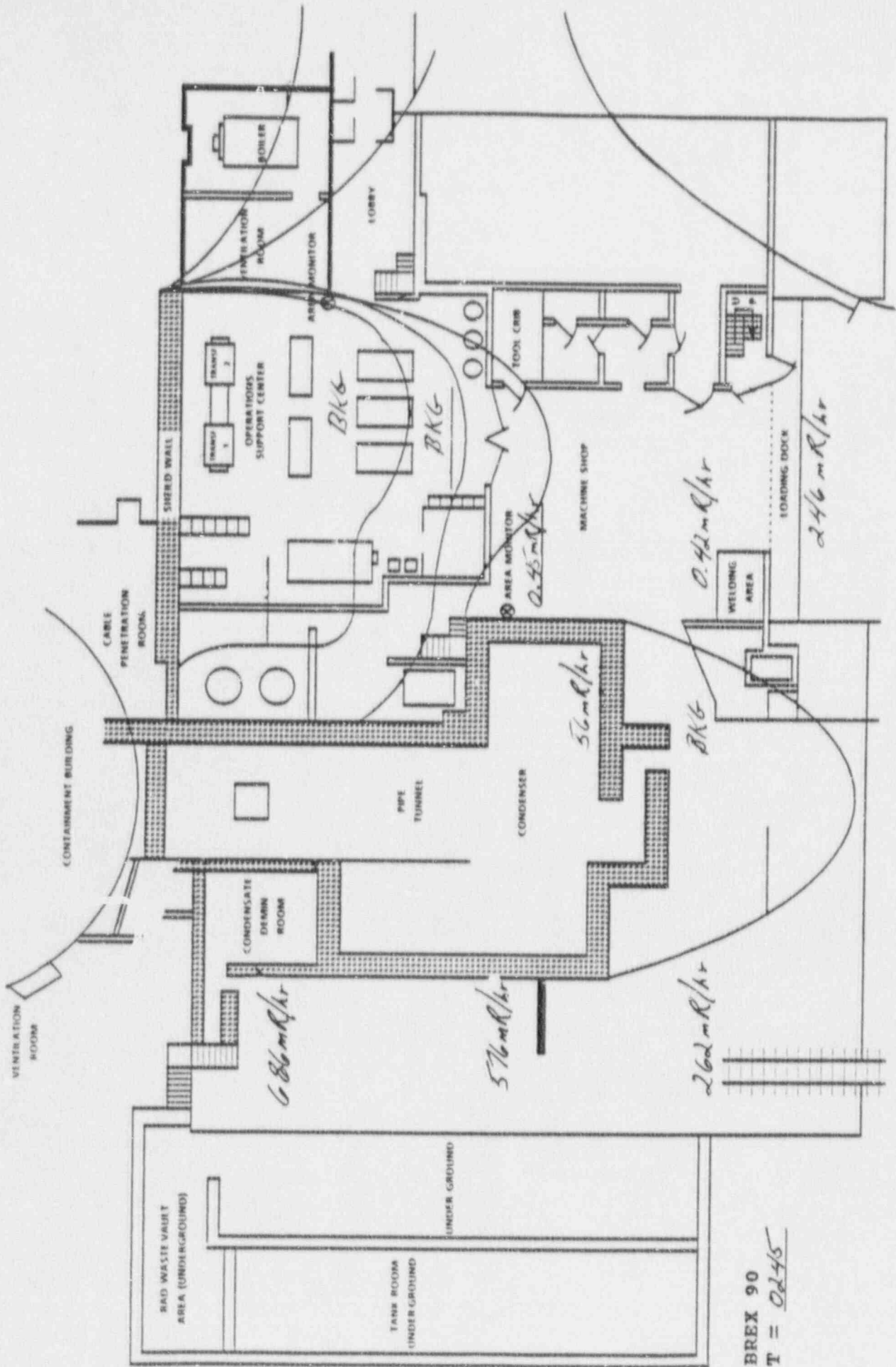




BREX 90
 T = 0230



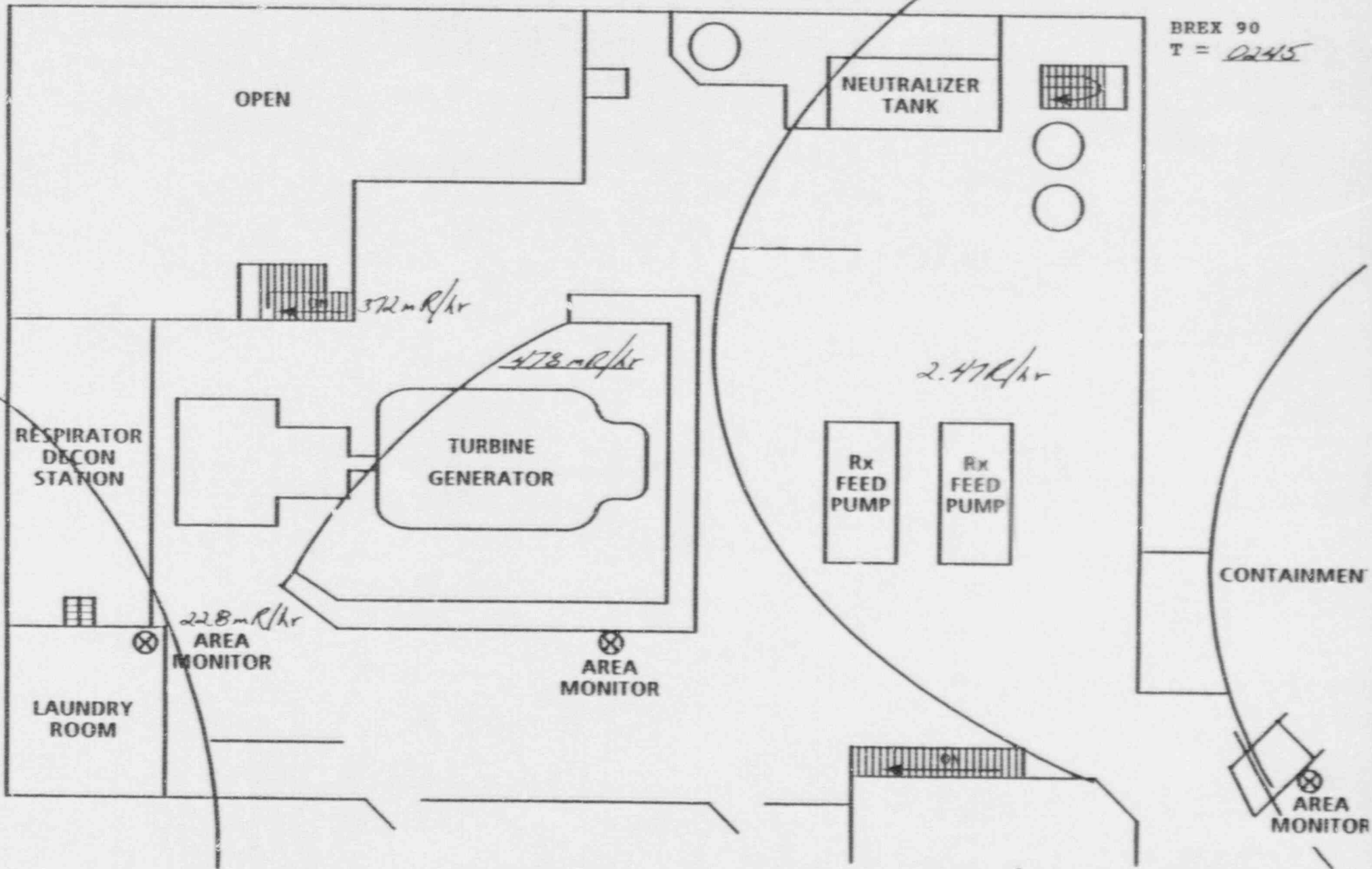
BREX 90
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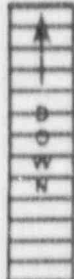
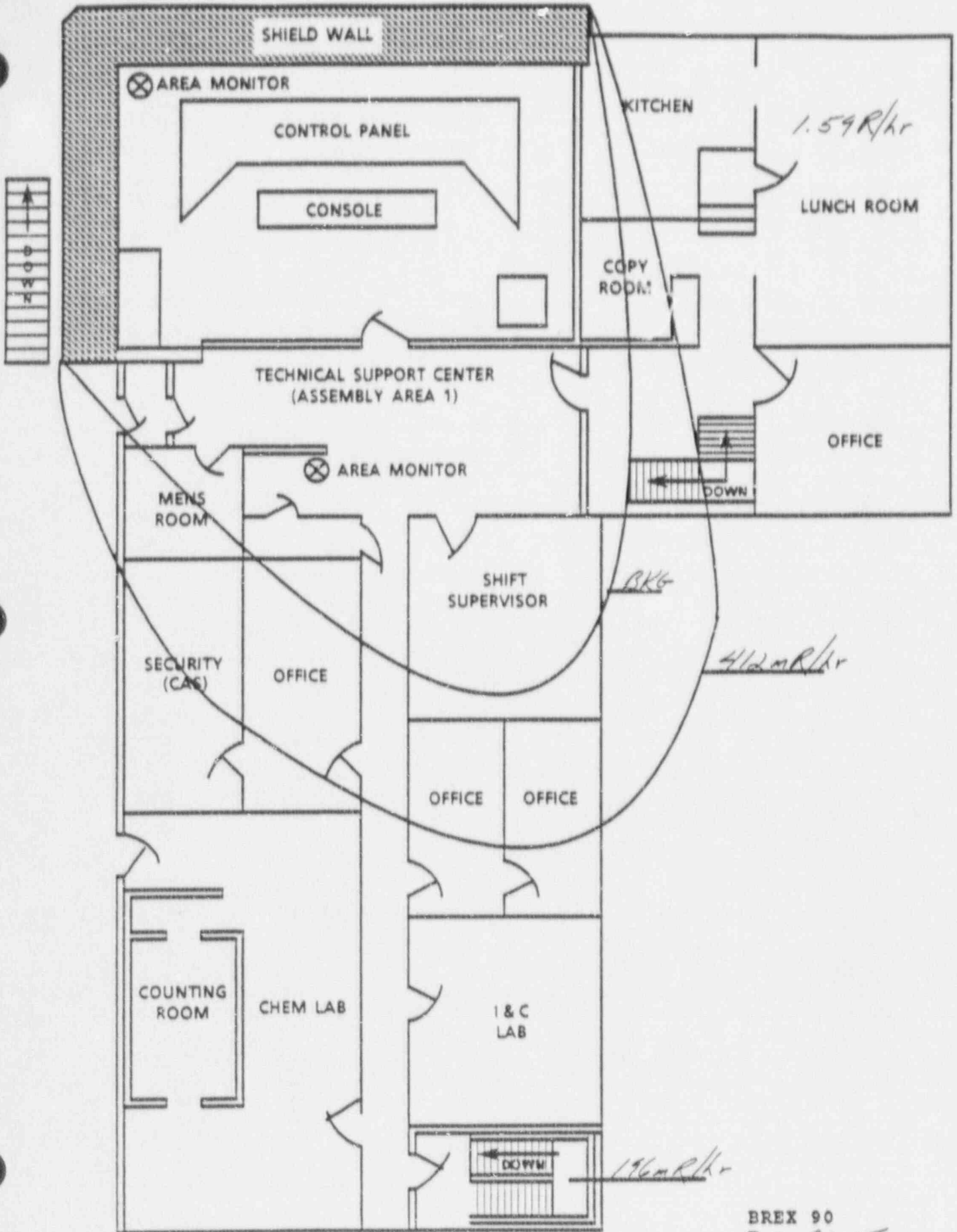


BREX 90
 T = 0245

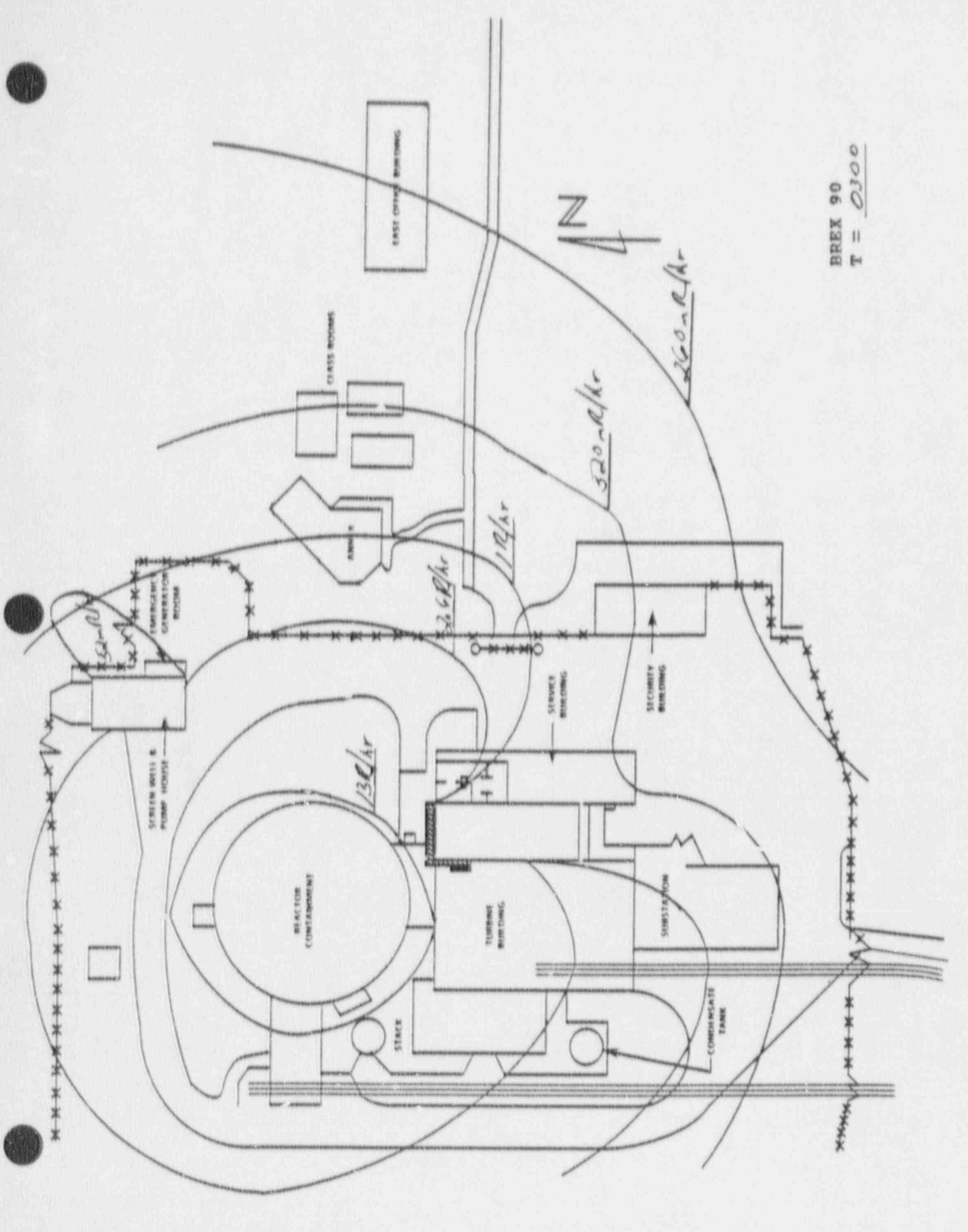
BIG ROCK POINT
TURBINE DECK

BREX 90
T = *0245*

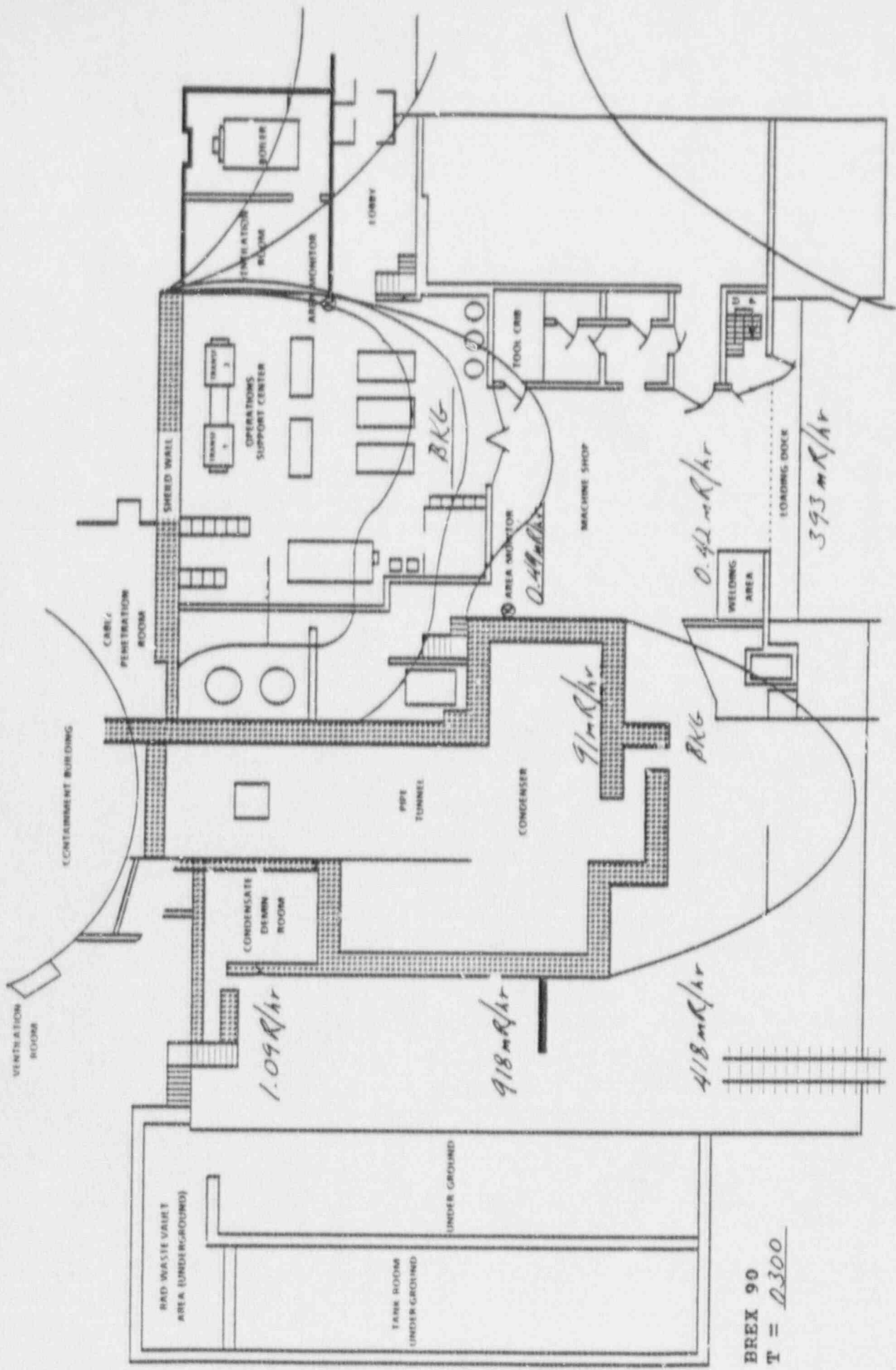




BREX 90
 T = 0245



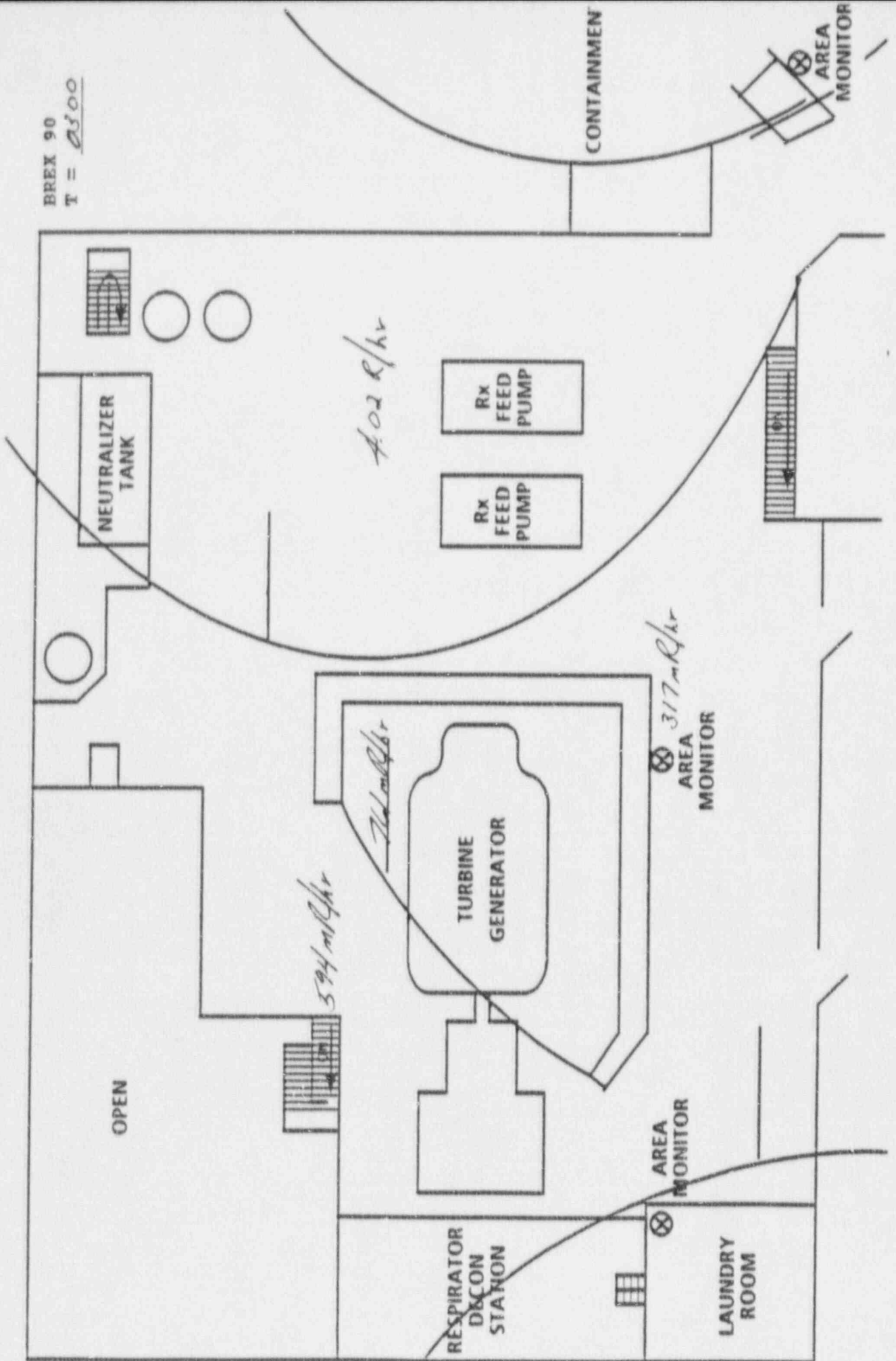
BREX 90
 T = 0300

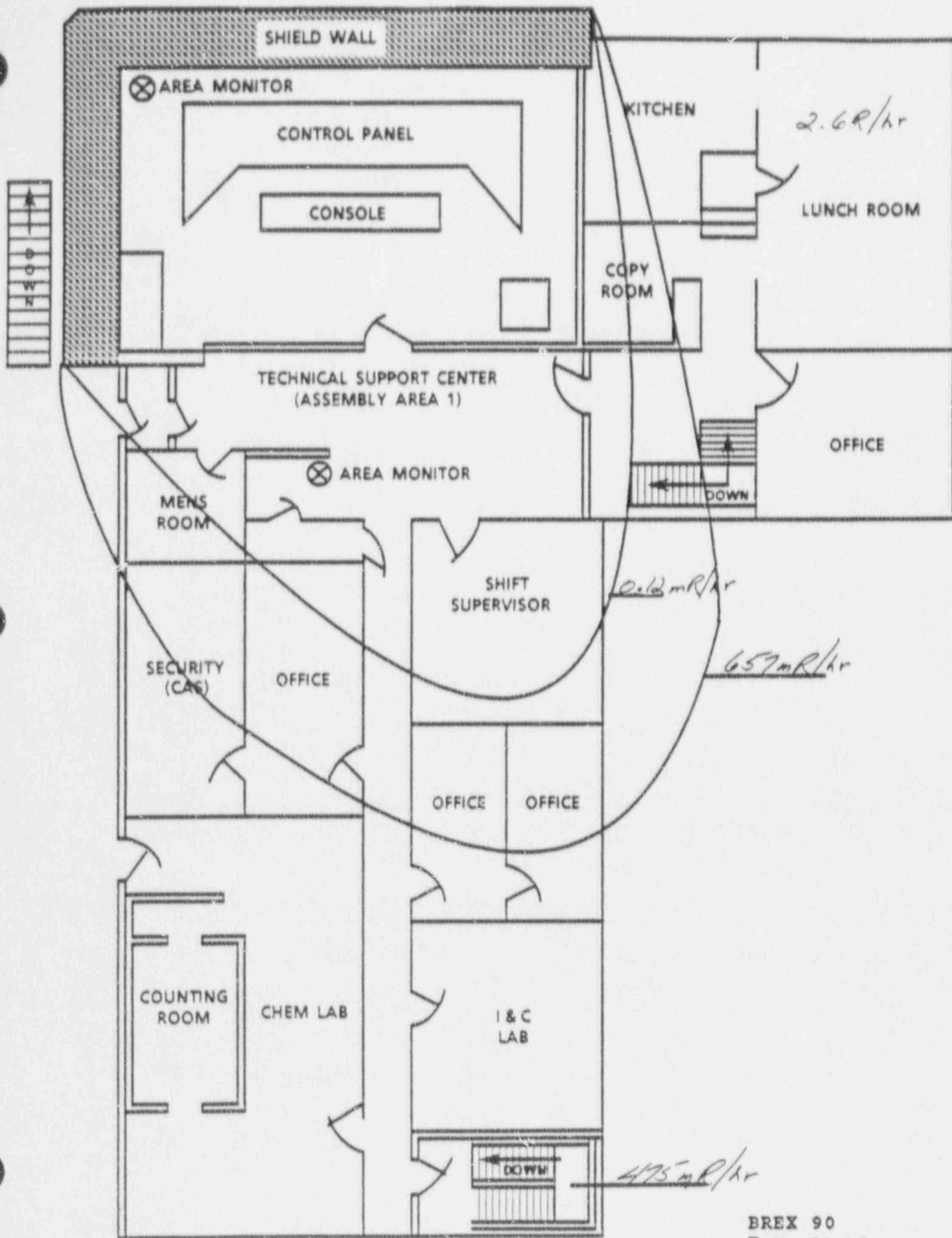


BREX 90
T = 0.300

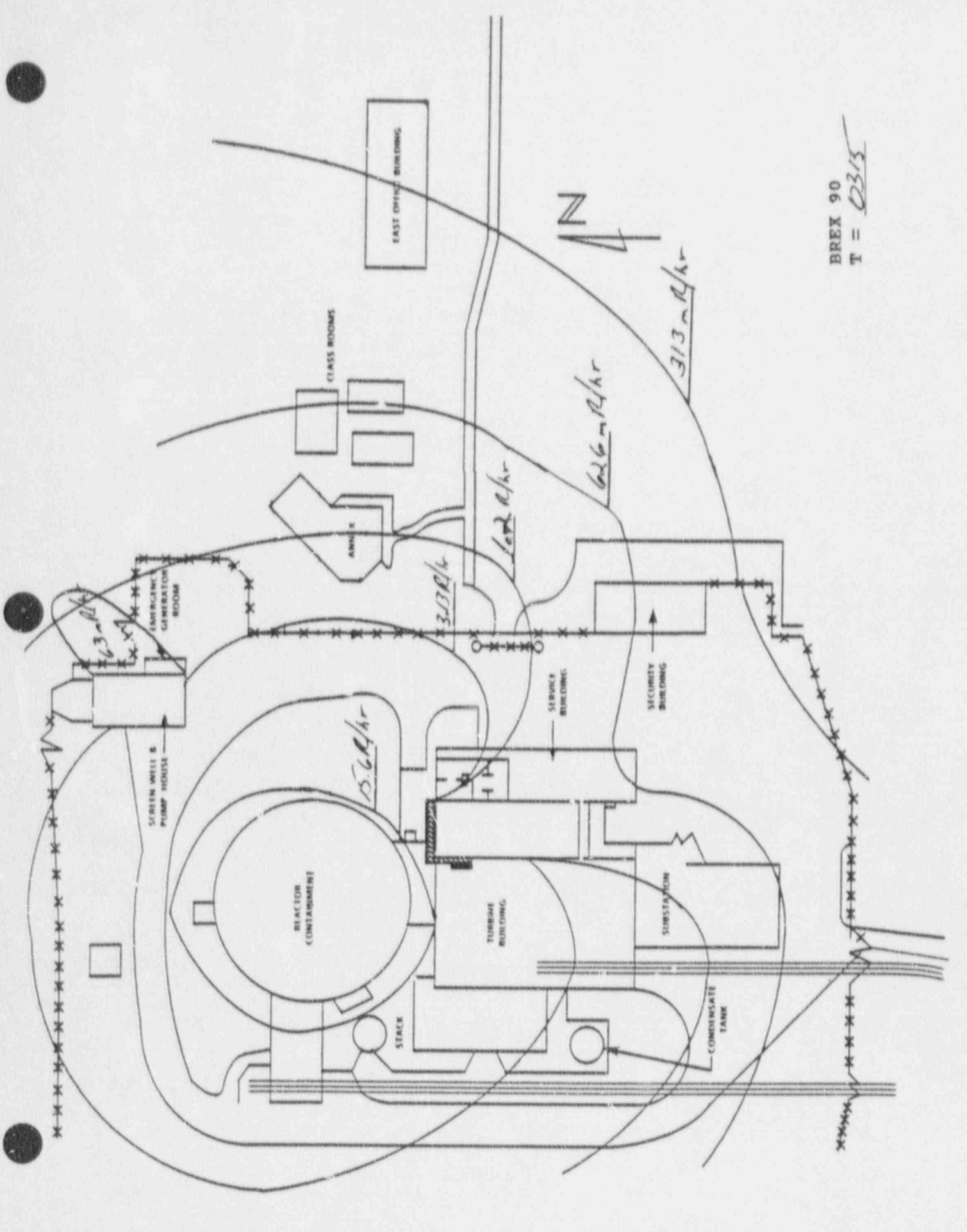
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0300

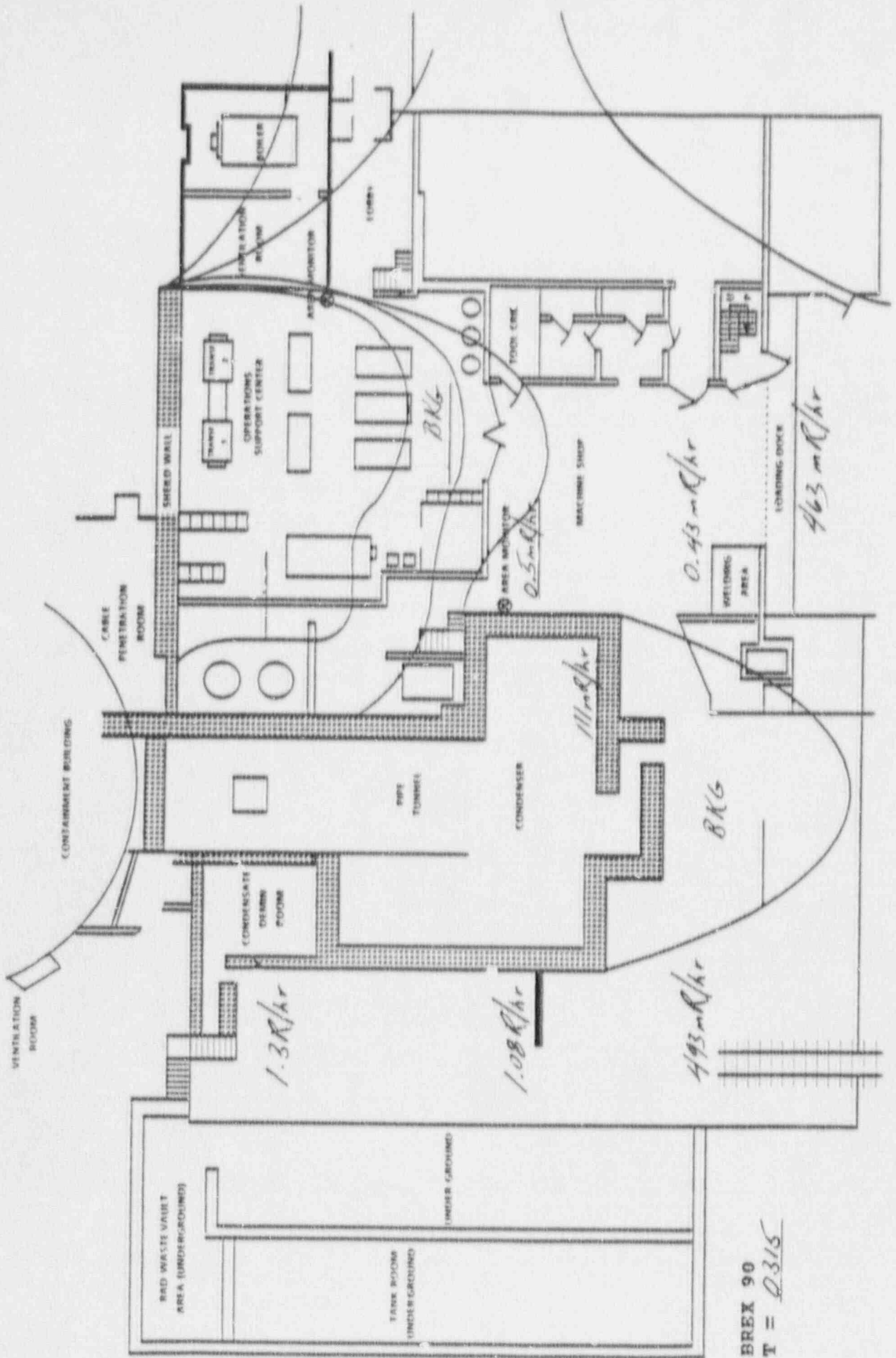




BREX 90
 T = 0300



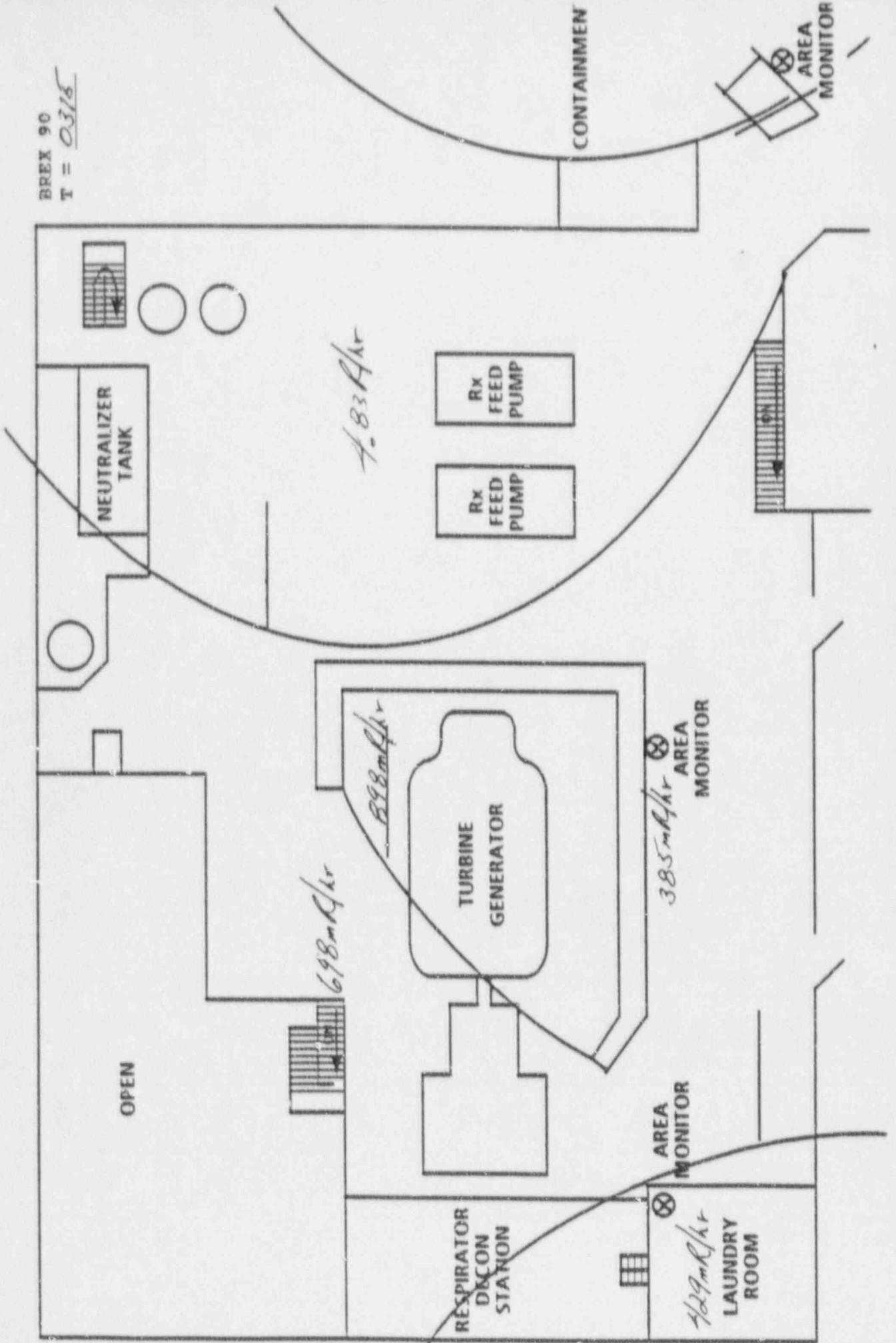
BREX 90
 T = 0315

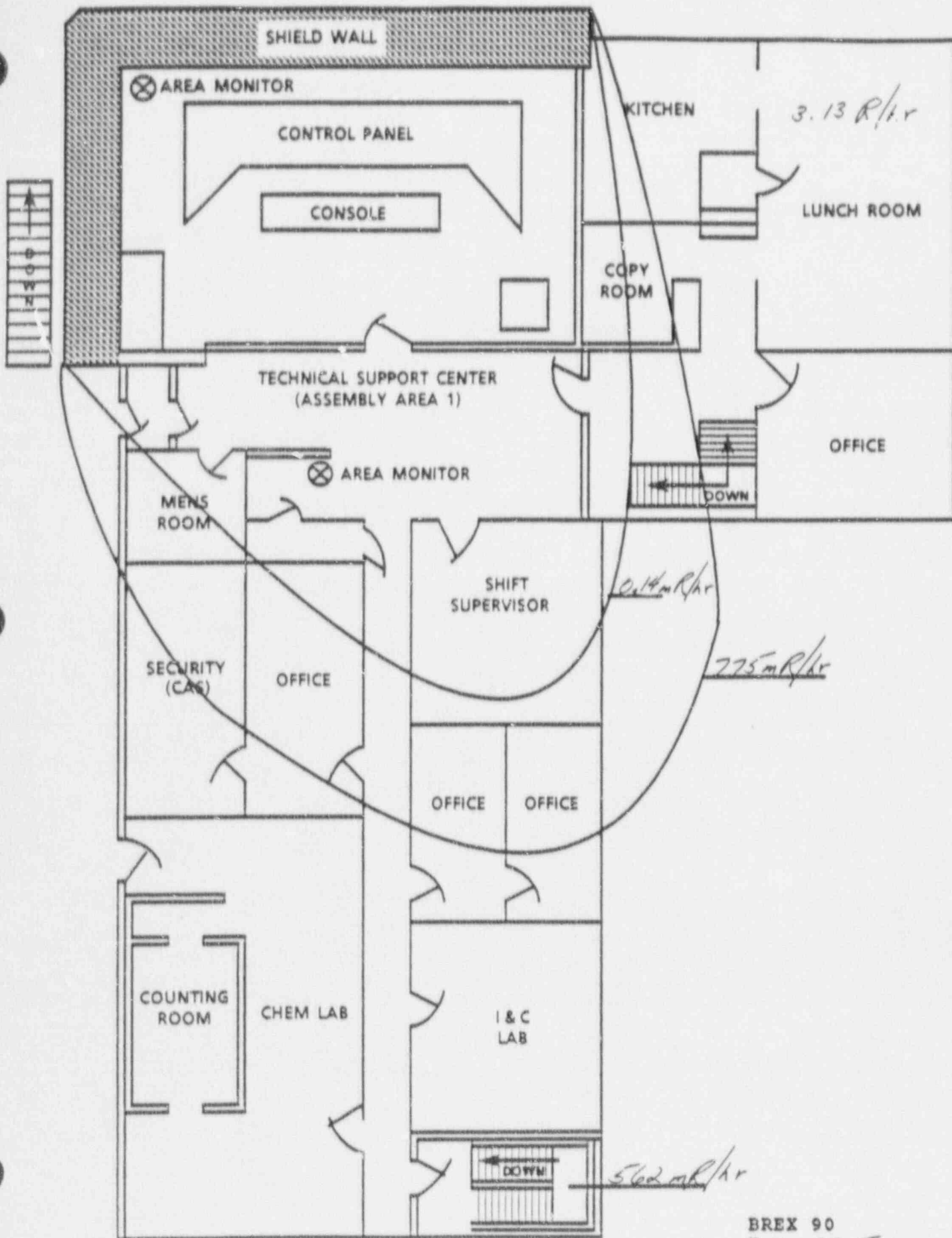


BREX 90
 T = 0.315

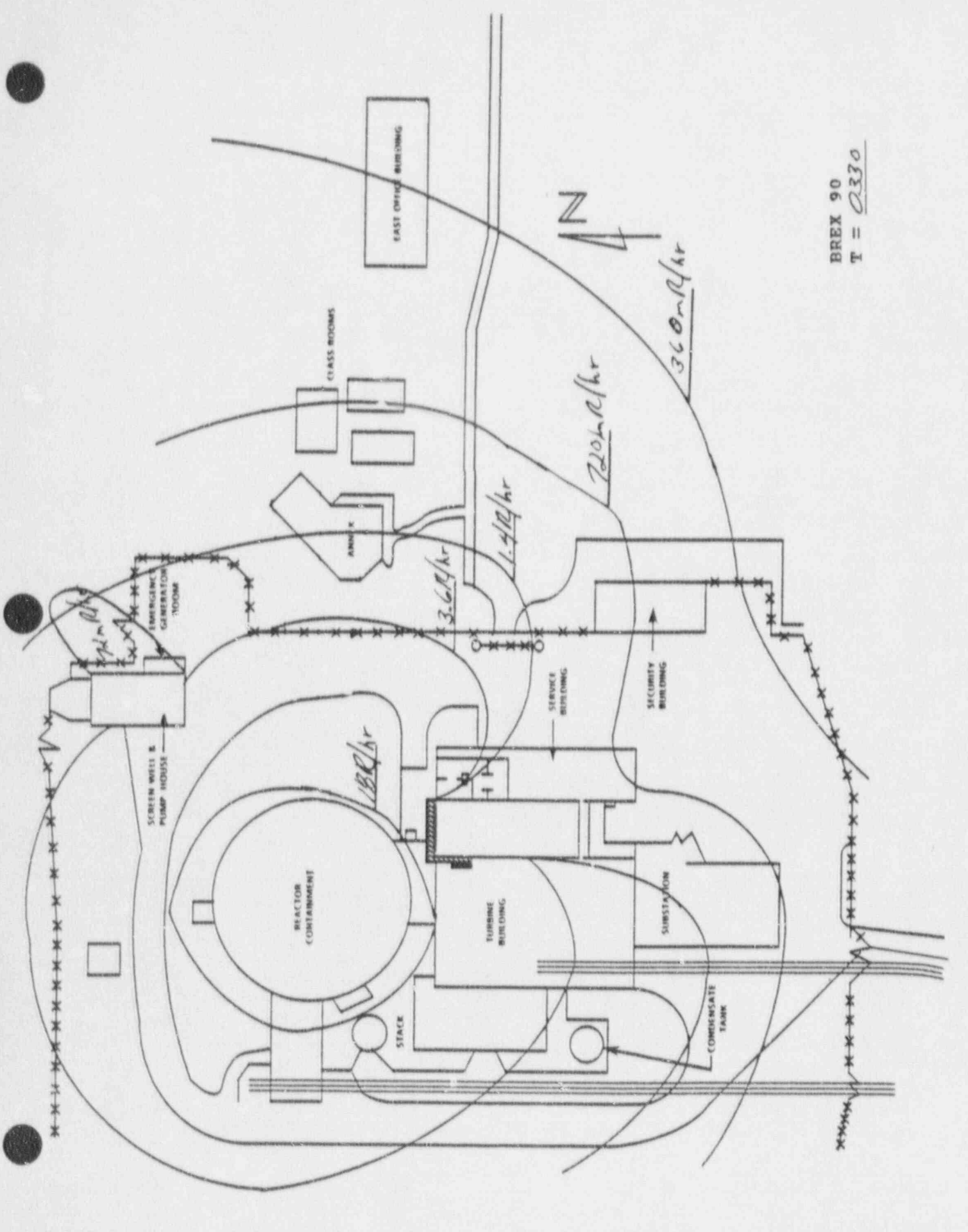
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0315

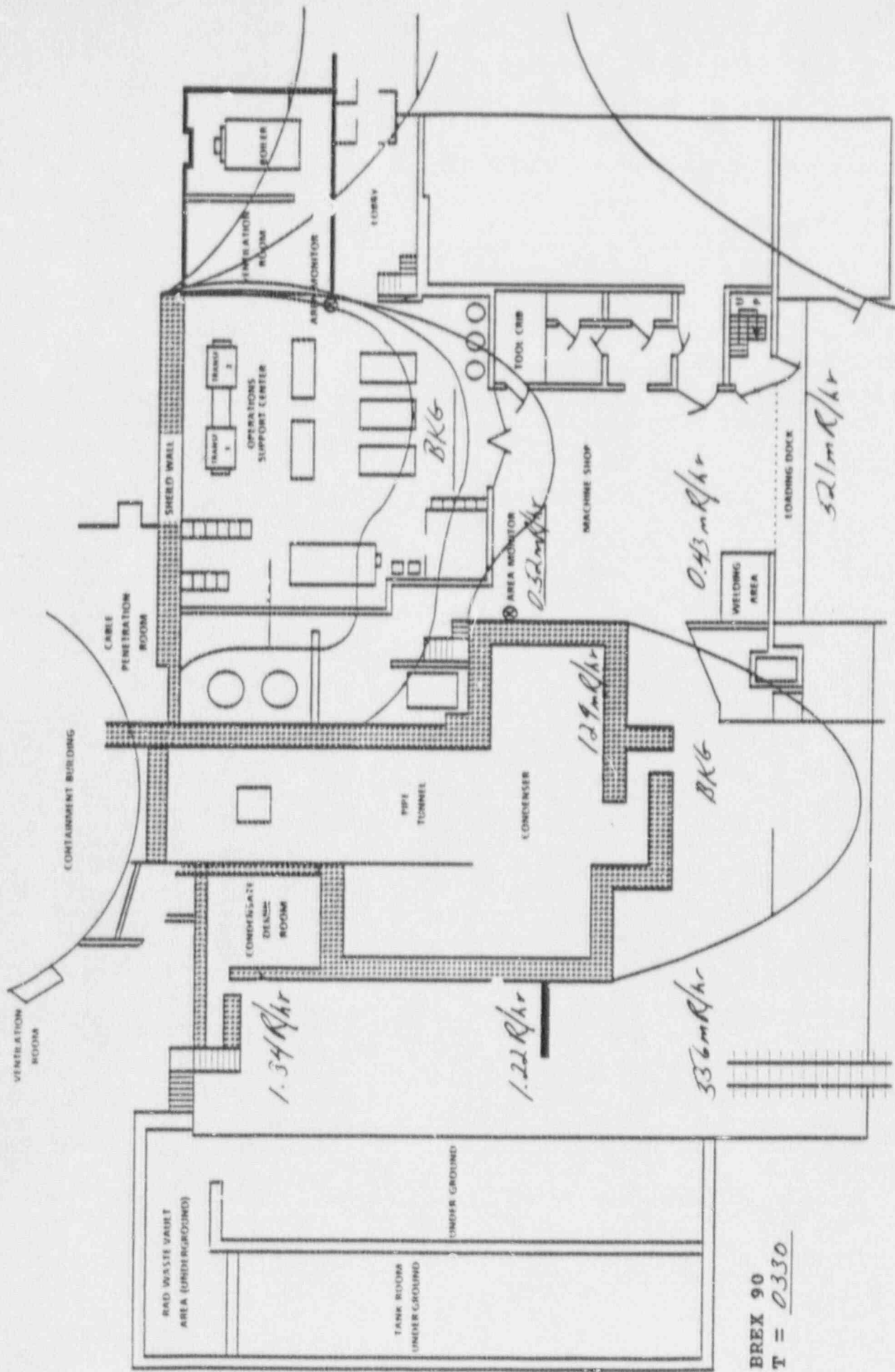




BREX 90
 T = 0315



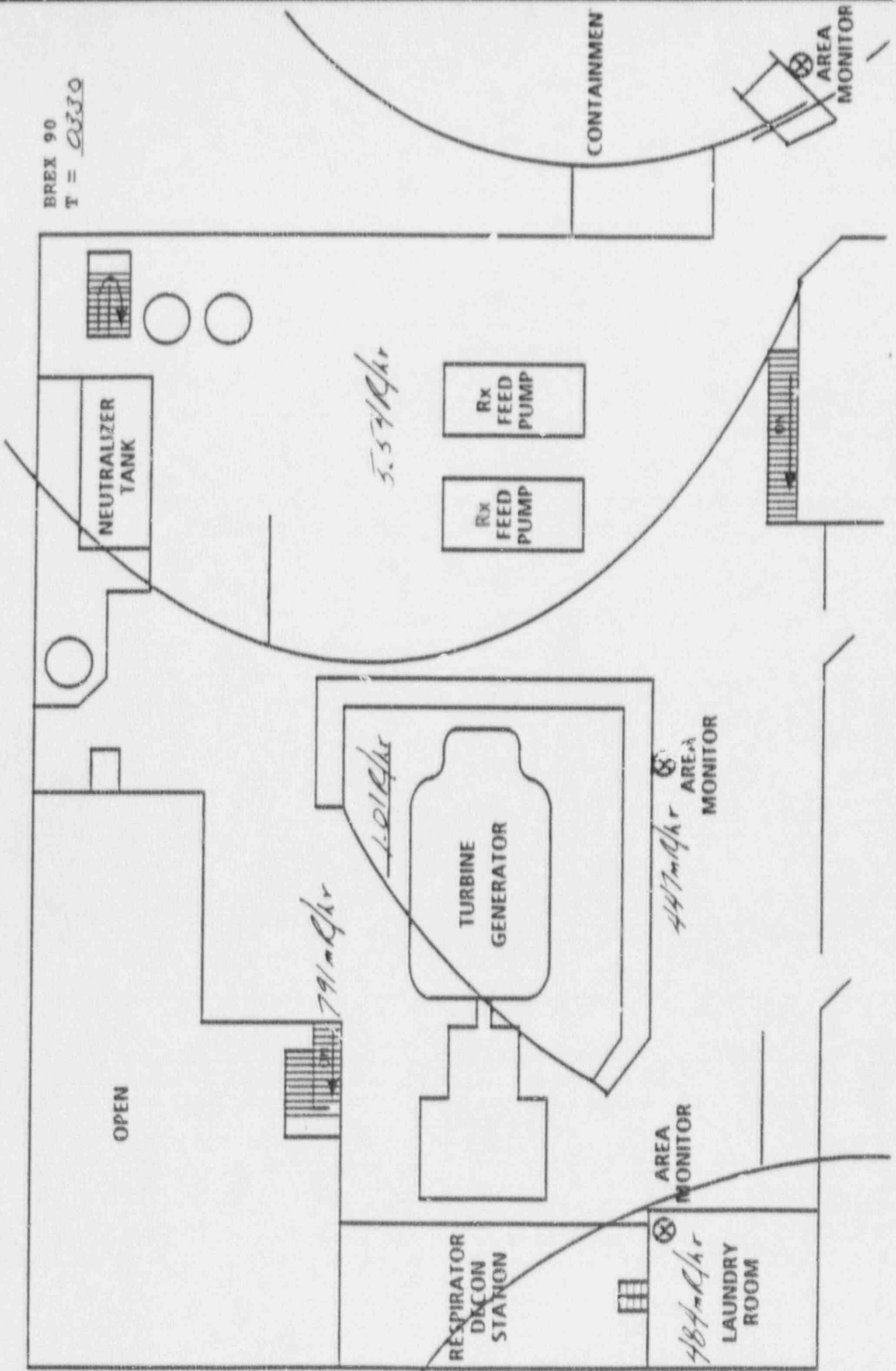
BREX 90
 T = 0330

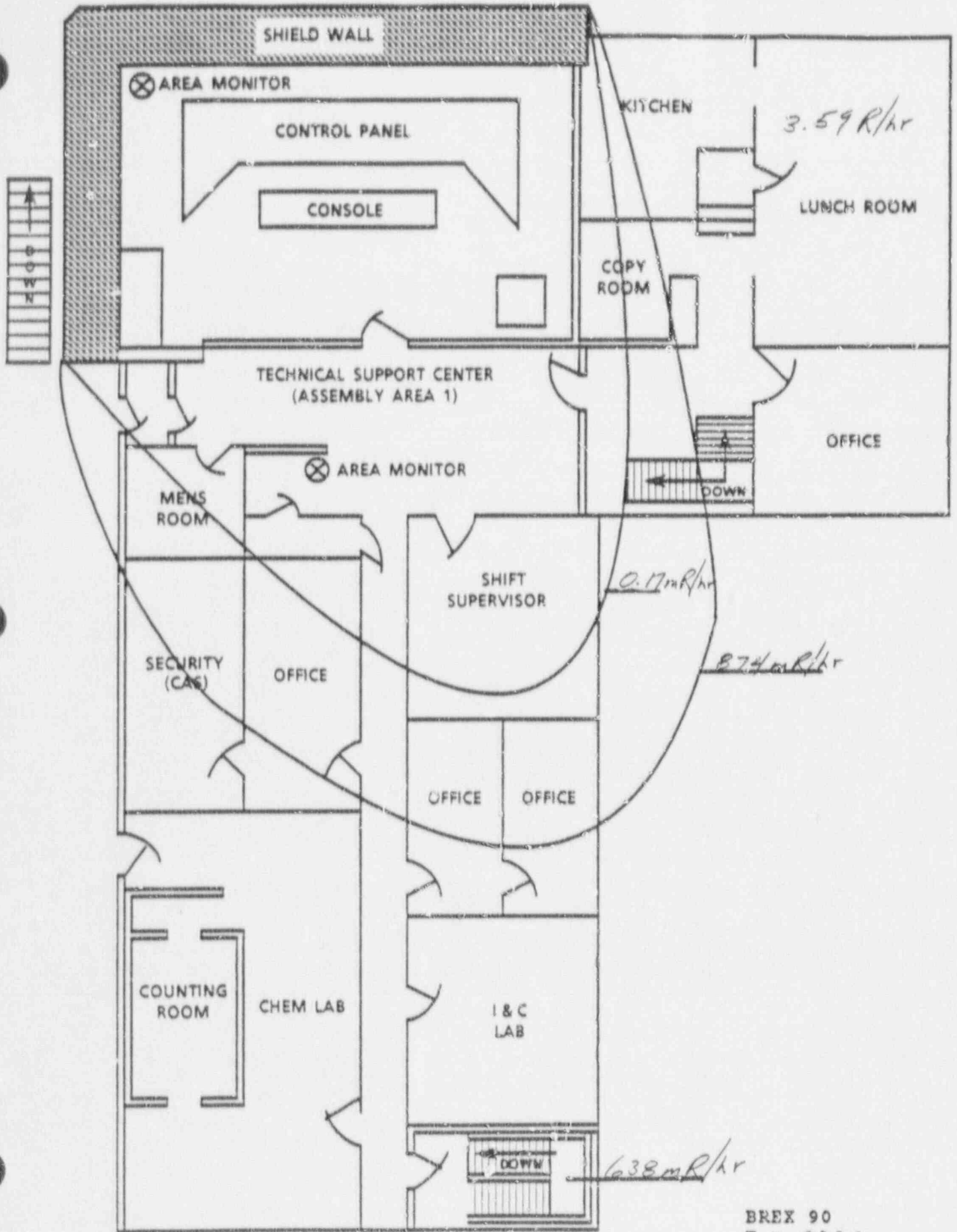


BREX 90
T = 0.330

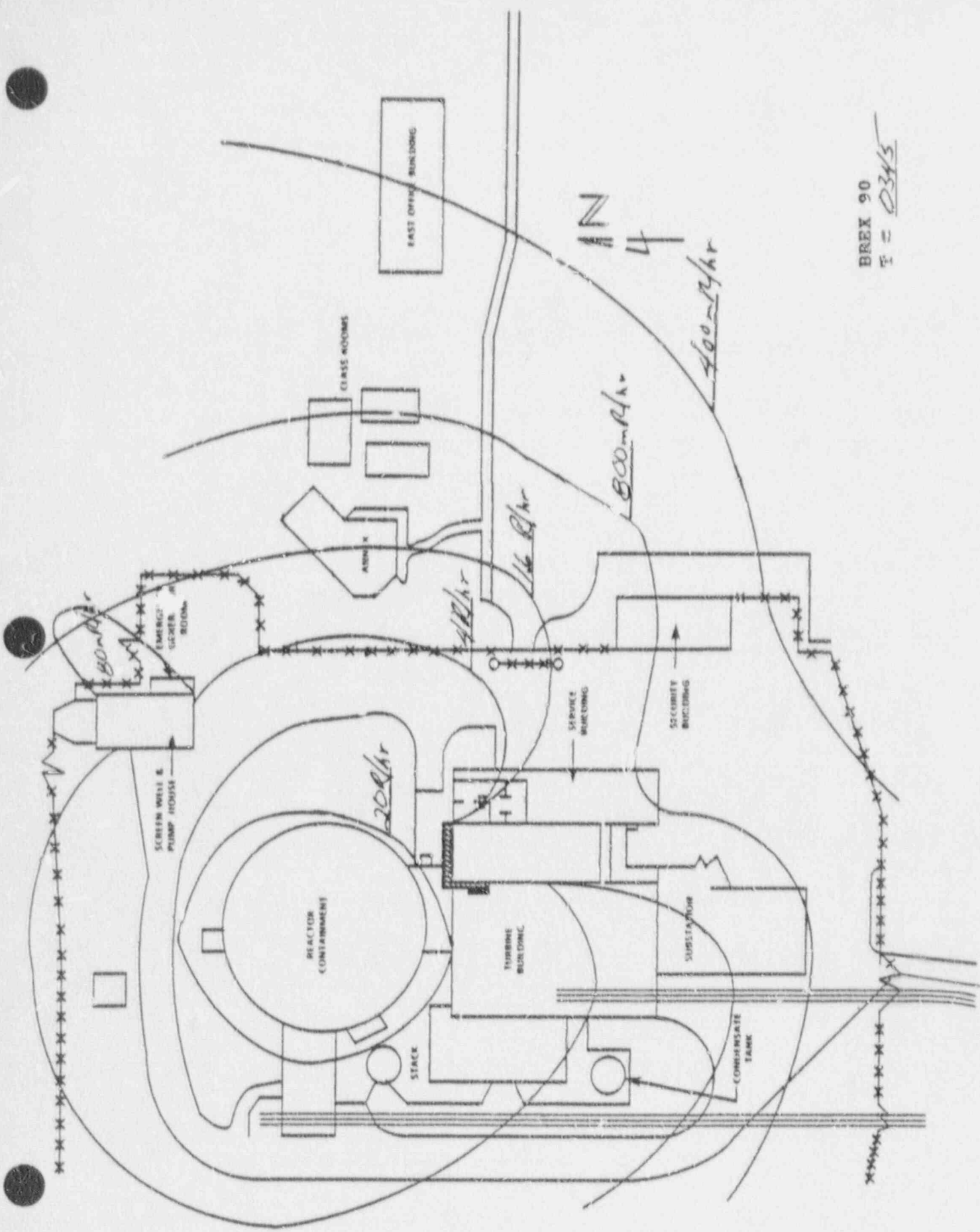
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0330

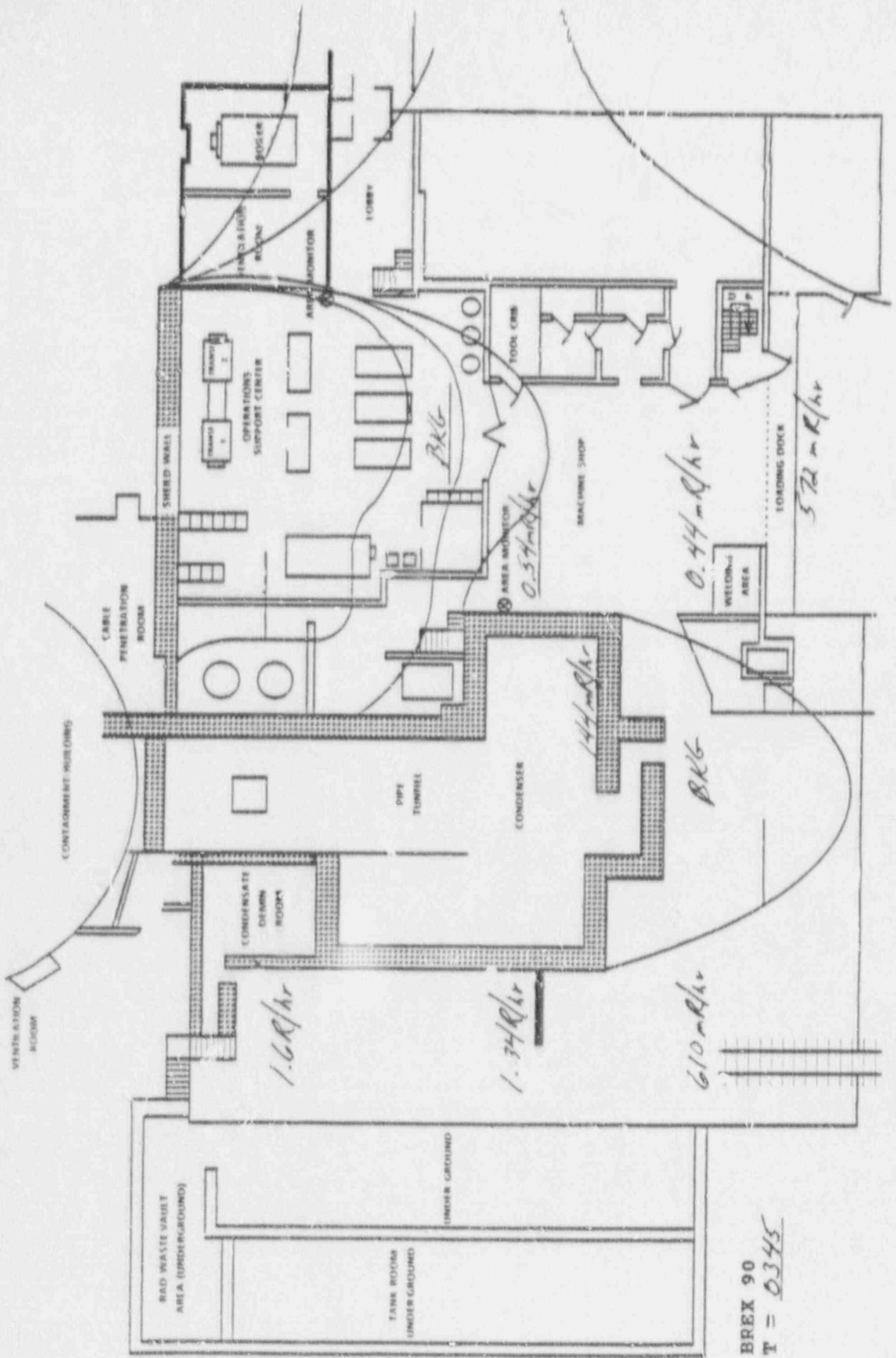




BREX 90
 T = 0330



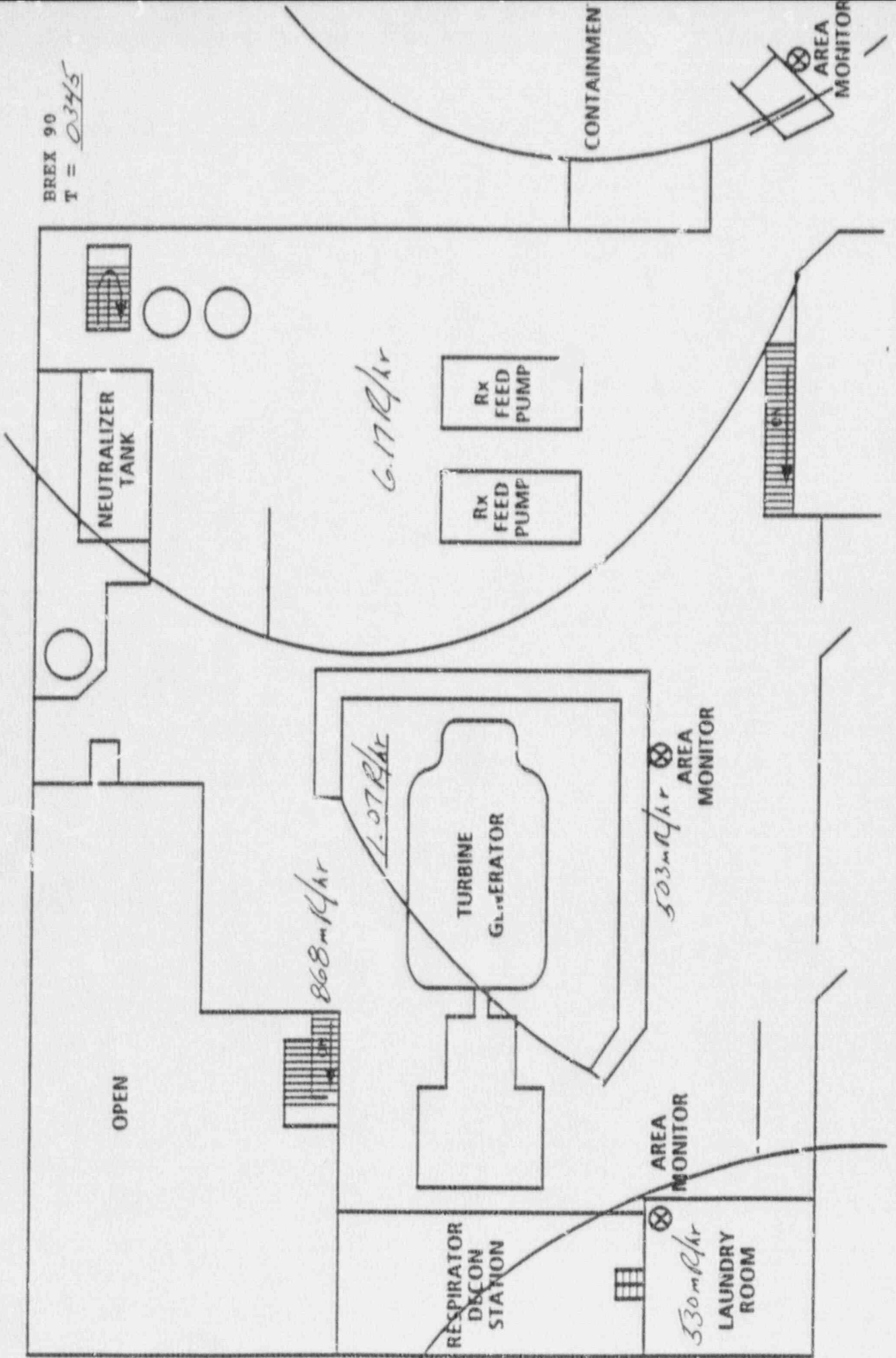
BREX 90
 T = 0345

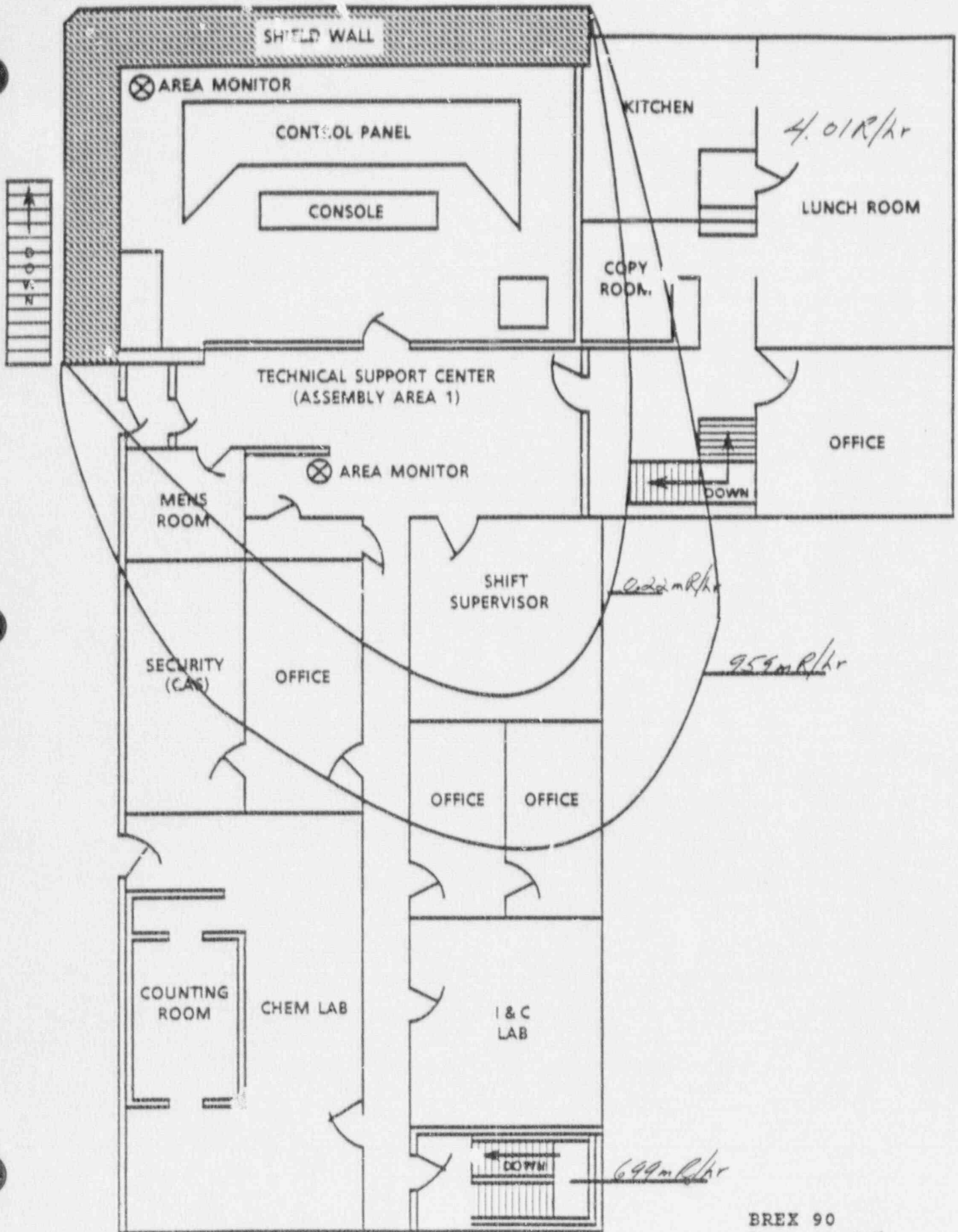


BREX 90
T = 0345

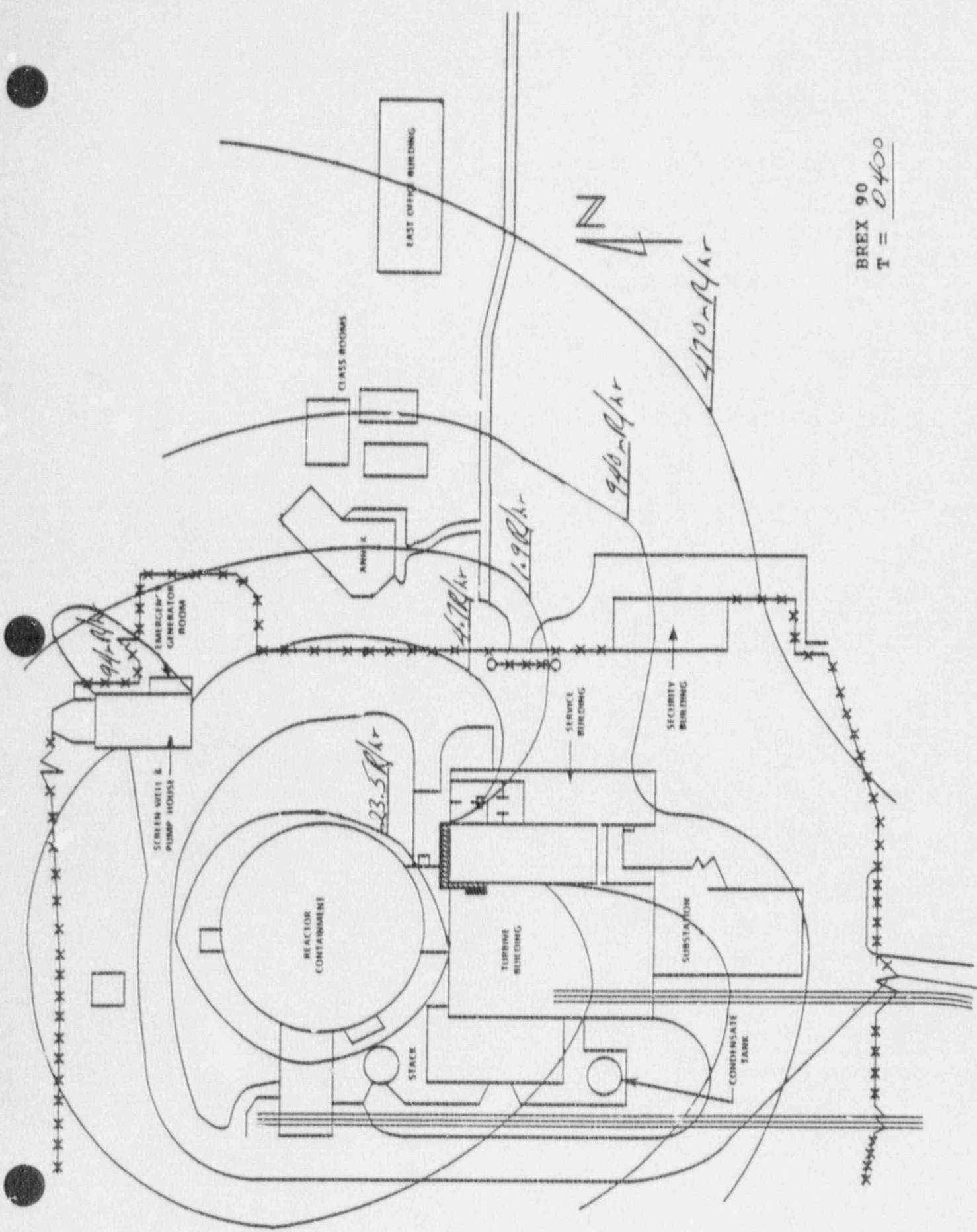
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0345

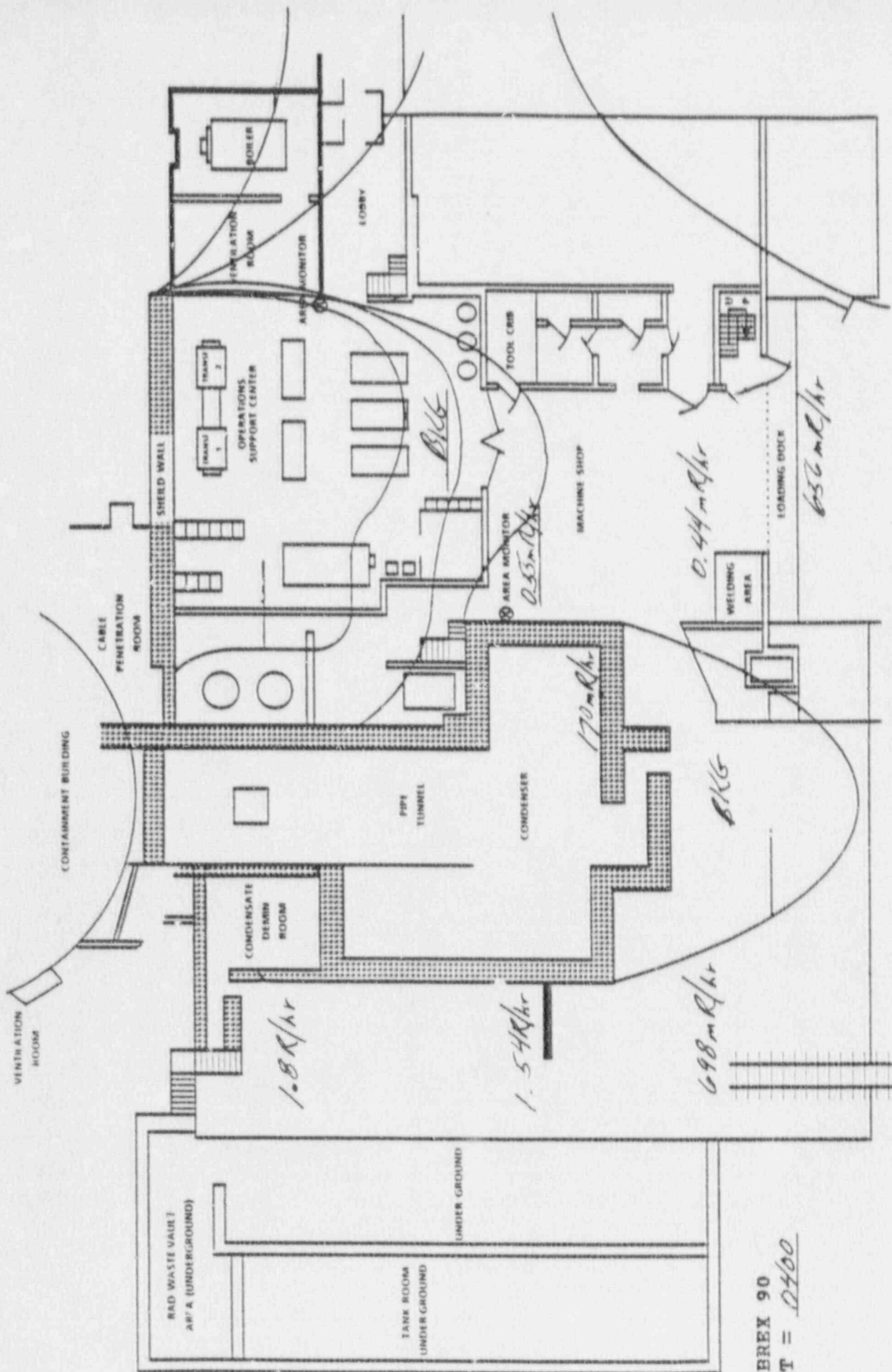




BREX 90
 T = 0345



BREX 90
 T = 0400



VENTILATION ROOM

CONTAINMENT BUILDING

CABLE PENETRATION ROOM

SHIELD WALL

OPERATIONS SUPPORT CENTER

EVAPORATION ROOM

BOILER

LOBBY

AREA MONITOR

AREA MONITOR

TOOL CRIB

MACHINE SHOP

WELDING AREA

LOADING DOCK

CONDENSATE DEMIN ROOM

PIPE TUNNEL

CONDENSER

RAD WASTE VAULT
ART A (UNDERGROUND)

TANK ROOM
UNDERGROUND

UNDERGROUND

BREX 90
T = 0400

1.8 m³/hr

1.54 m³/hr

698 m³/hr

170 m³/hr

0.44 m³/hr

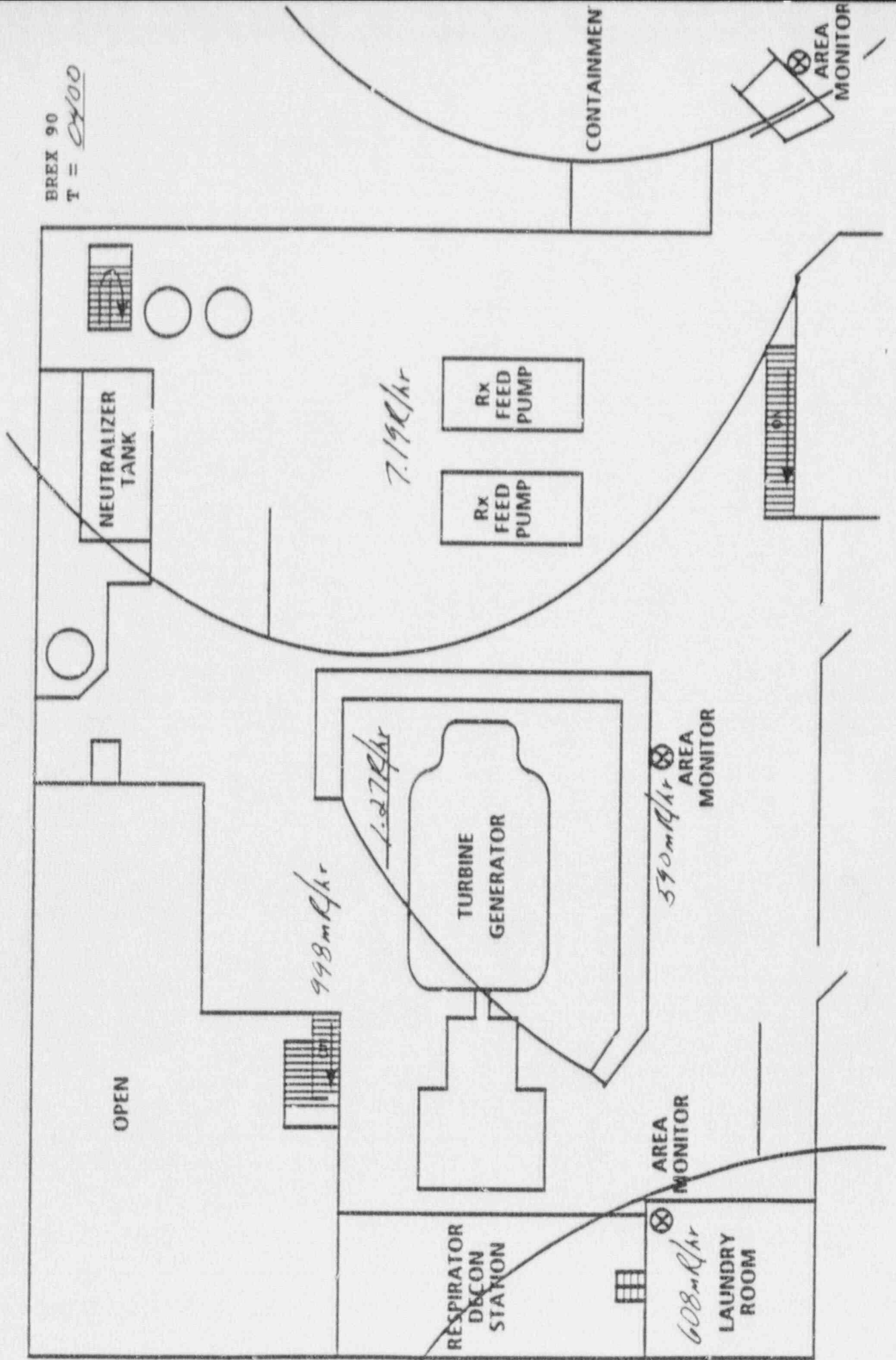
0.55 m³/hr

656 m³/hr

BKG

BKG

BIG ROCK POINT
TURBINE DECK



BREX 90
T = 0400

CONTAINMENT

AREA MONITOR

NEUTRALIZER TANK

Rx FEED PUMP

Rx FEED PUMP

7.19R/hr

TURBINE GENERATOR

1.27R/hr

AREA MONITOR

590mR/hr

OPEN

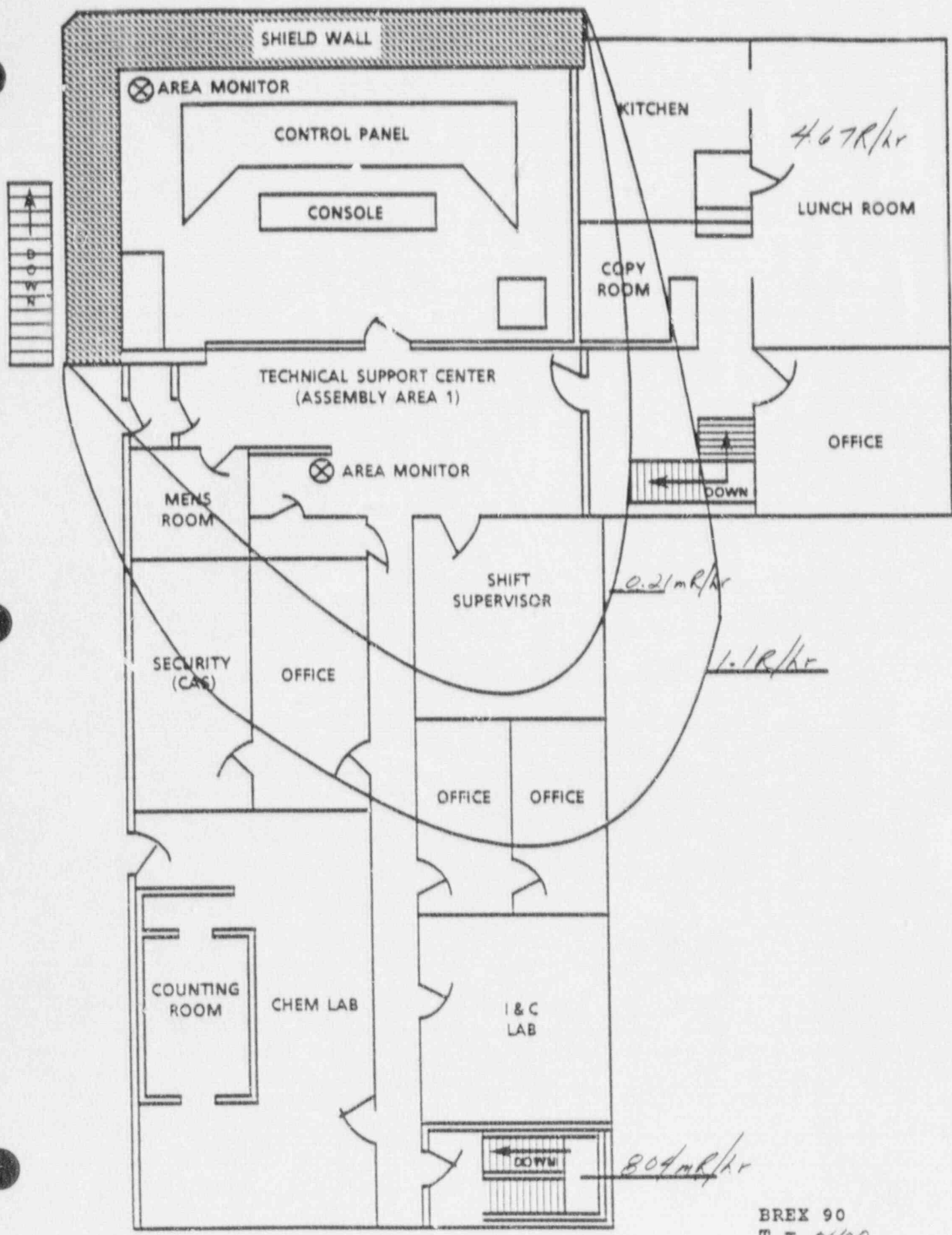
998mR/hr

AREA MONITOR

RESPIRATOR DECON STATION

608mR/hr

LAUNDRY ROOM



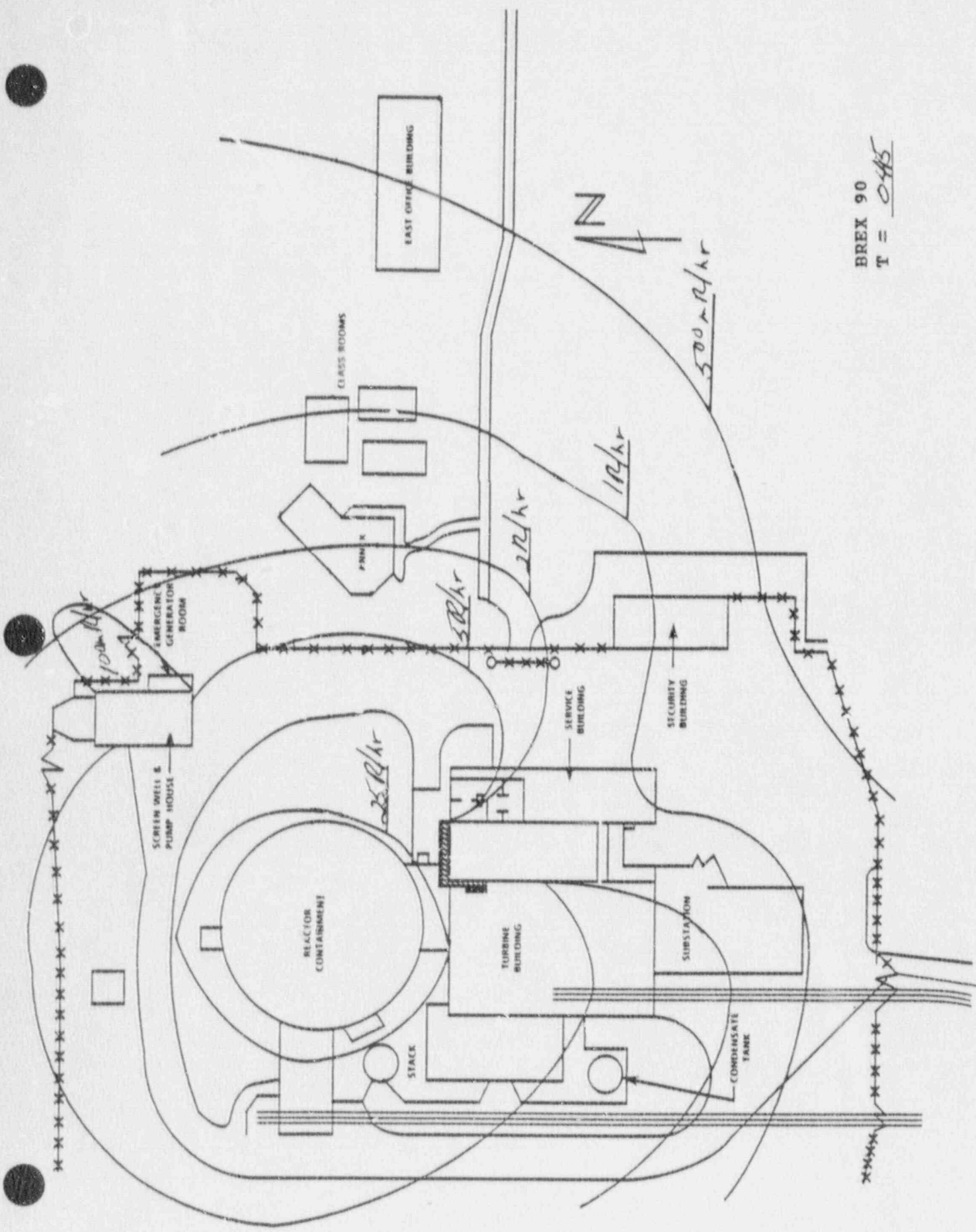
467R/hr

0.21mR/hr

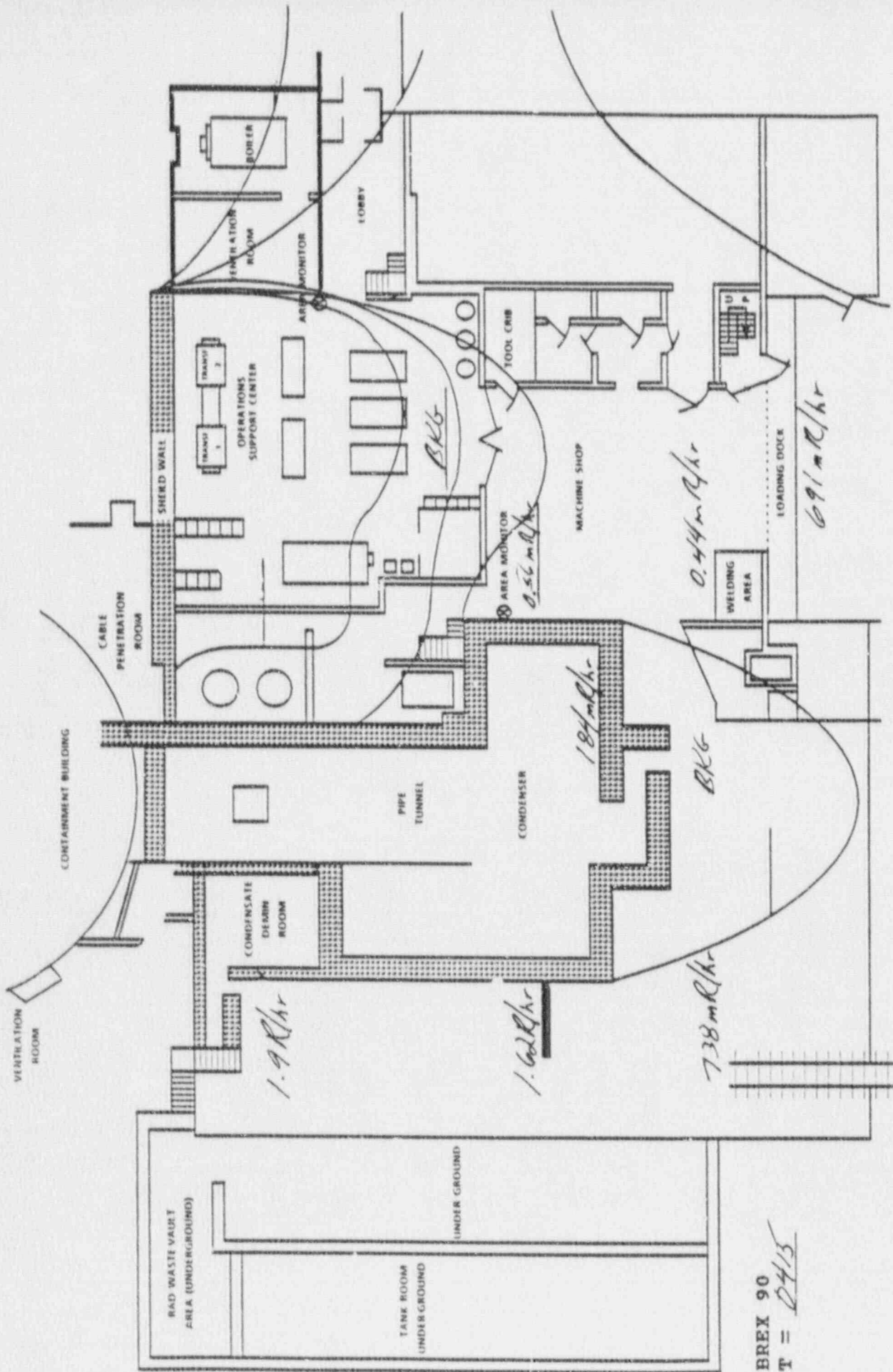
1.1R/hr

804mR/hr

BREX 90
T = 0400

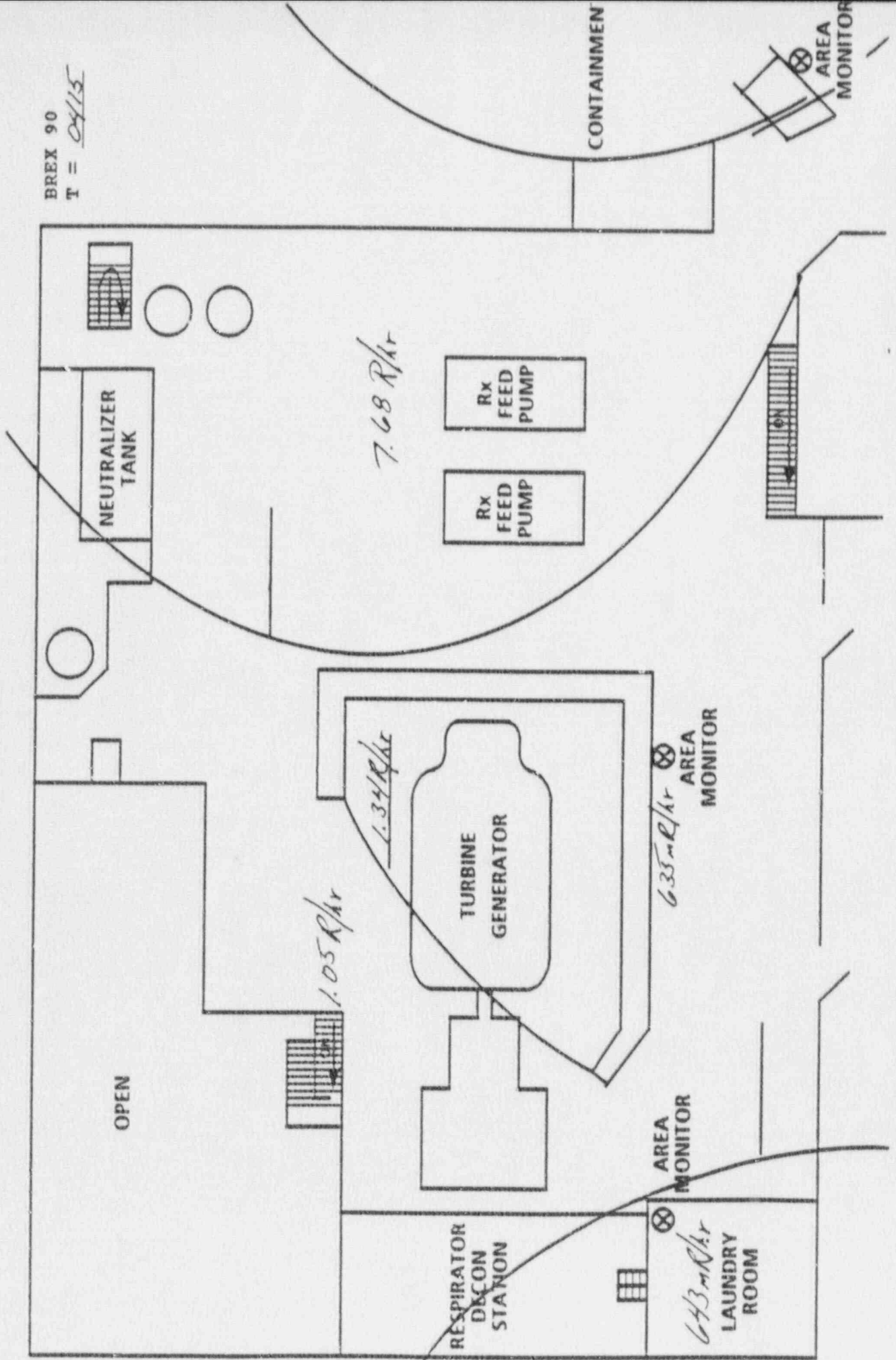


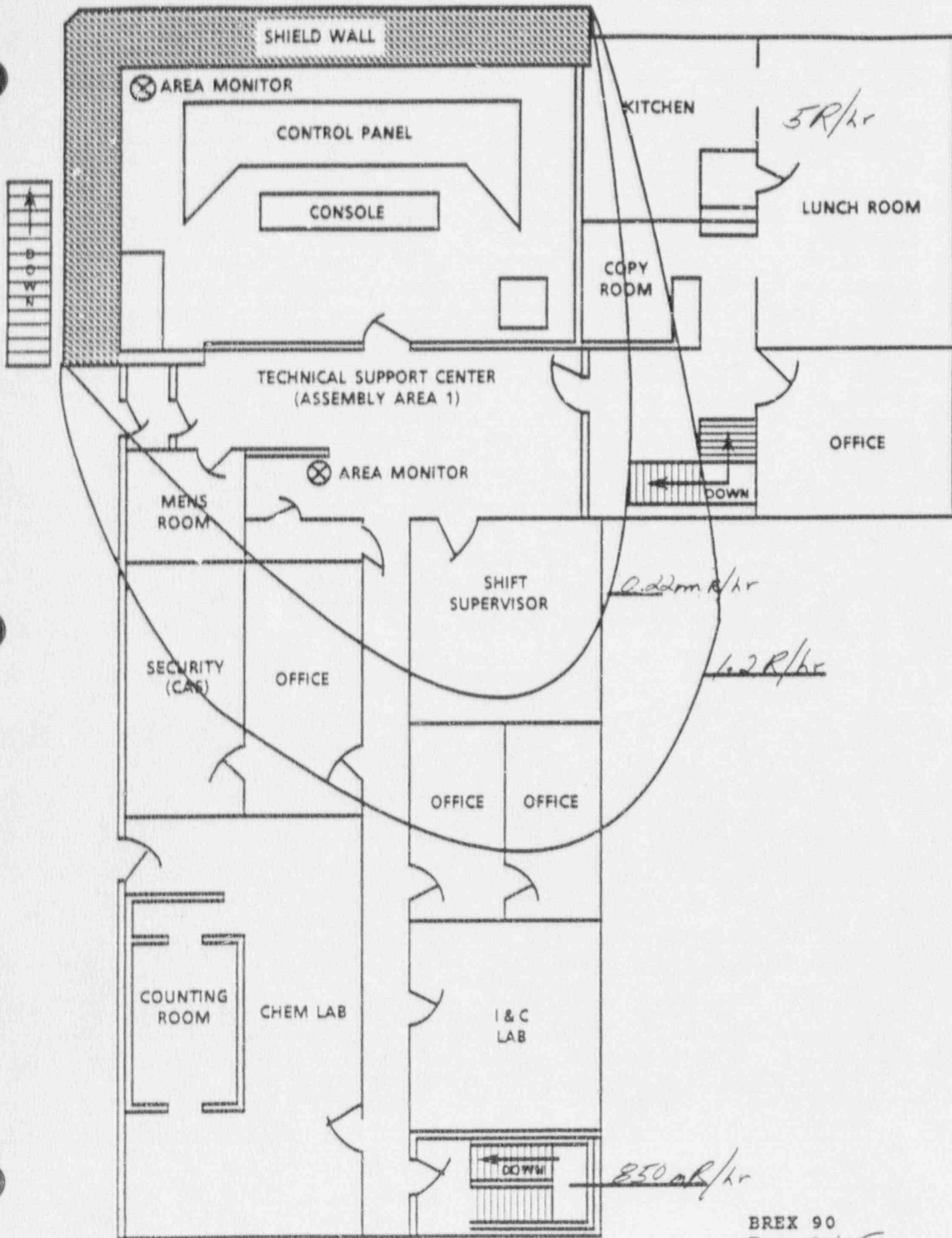
BREX 90
 T = 045



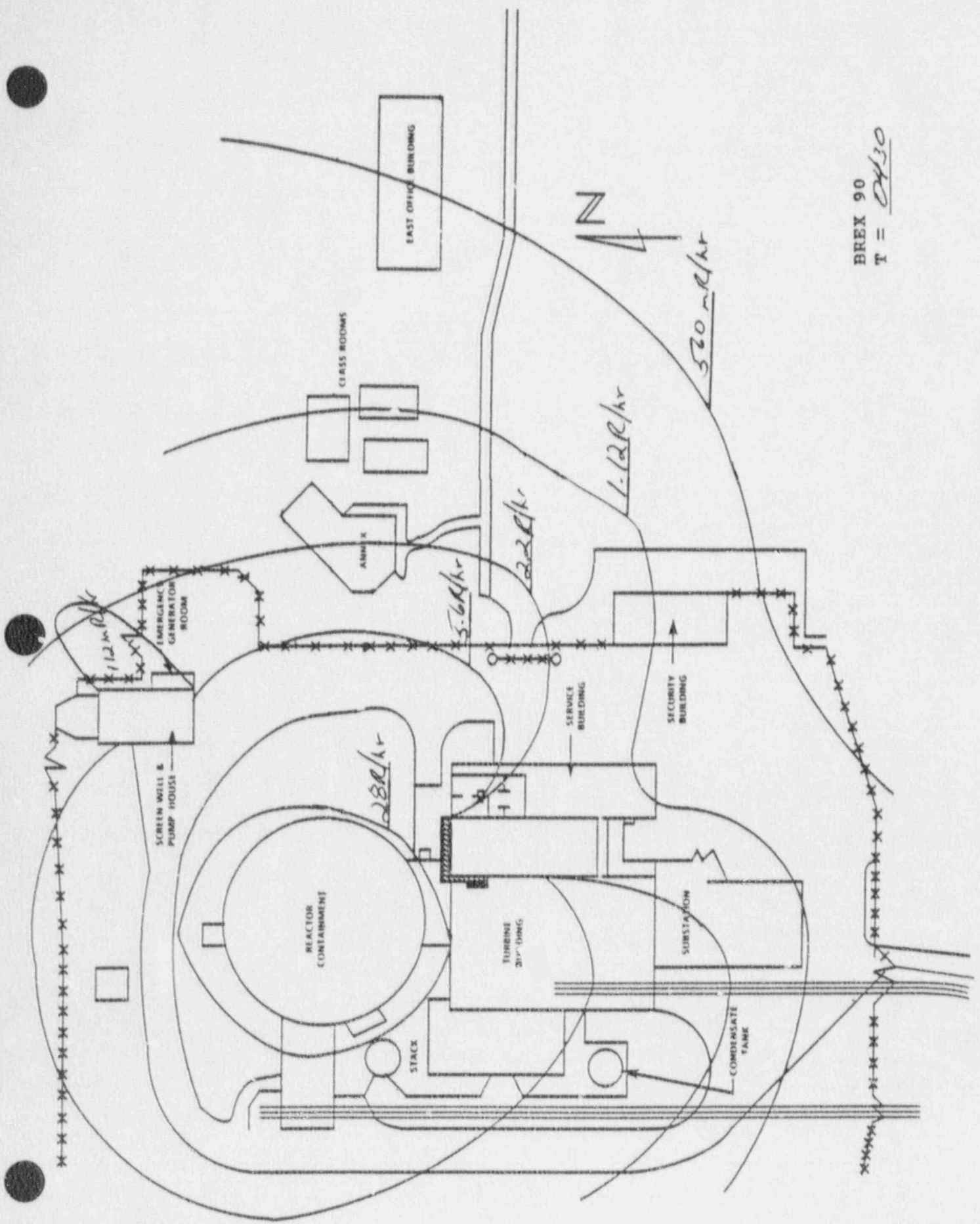
BREX 90
T = 24/5

BIG ROCK POINT
TURBINE DECK

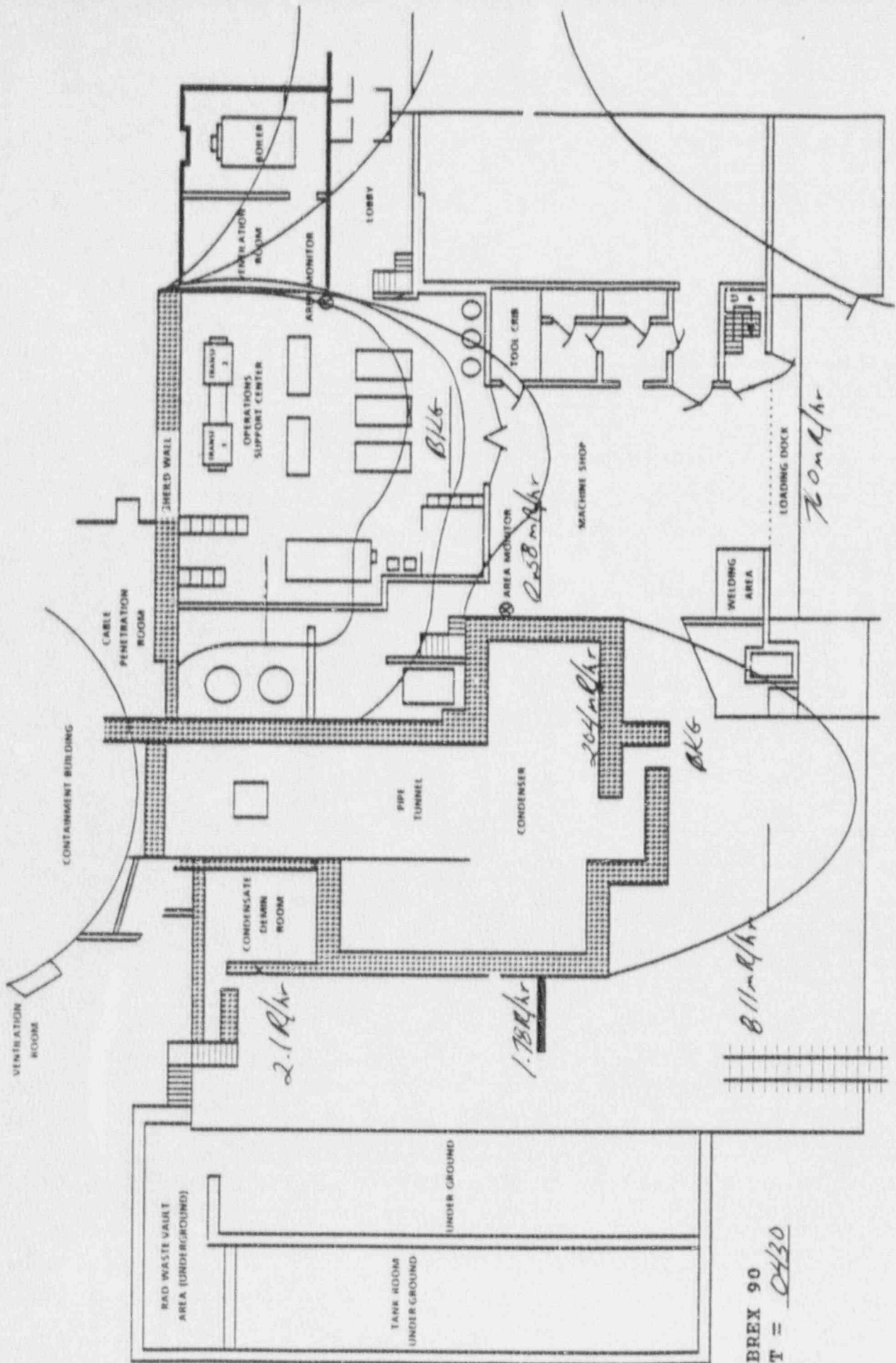




BREX 90
 T = 0415



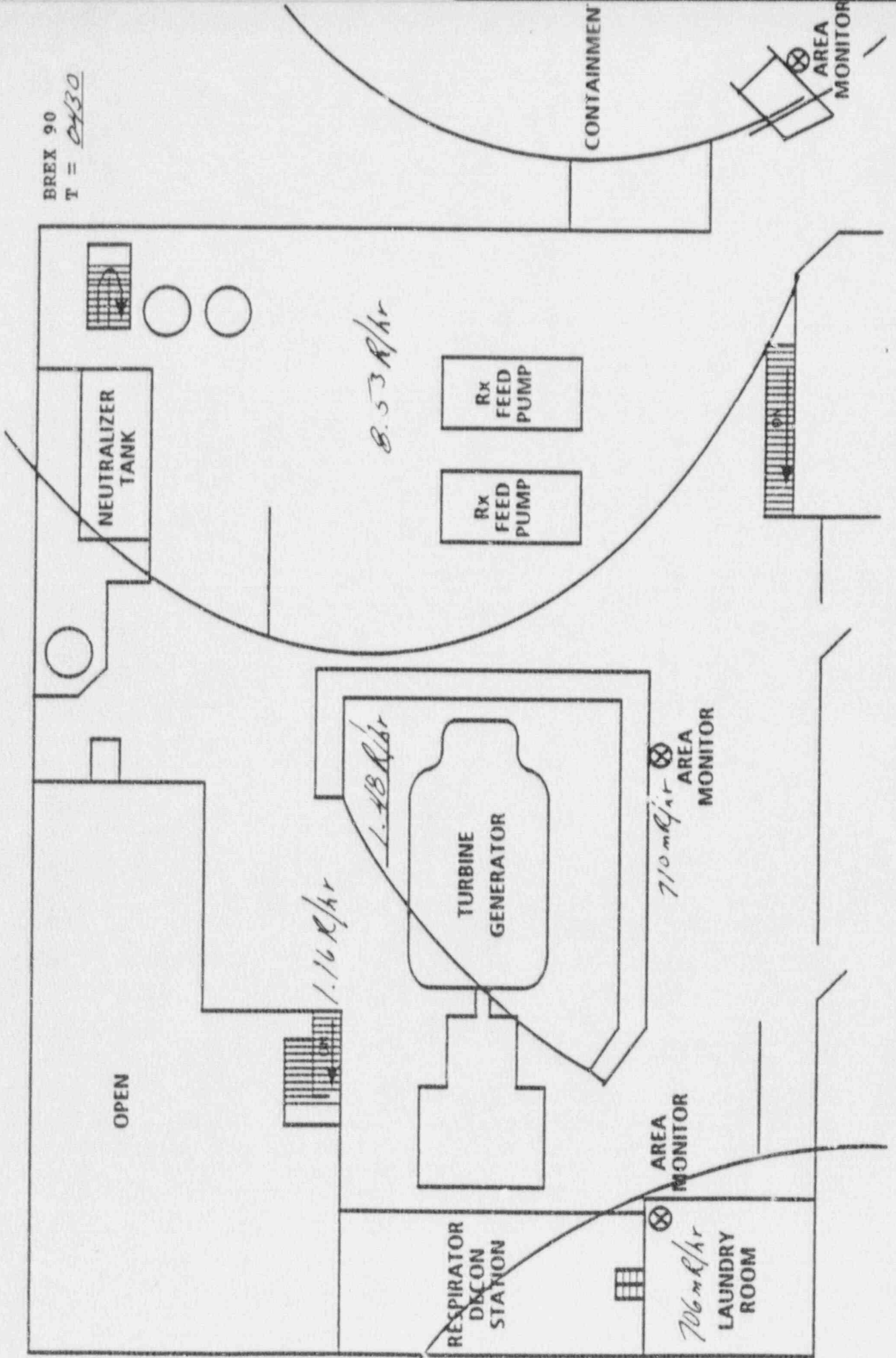
BREX 90
 T = 0430

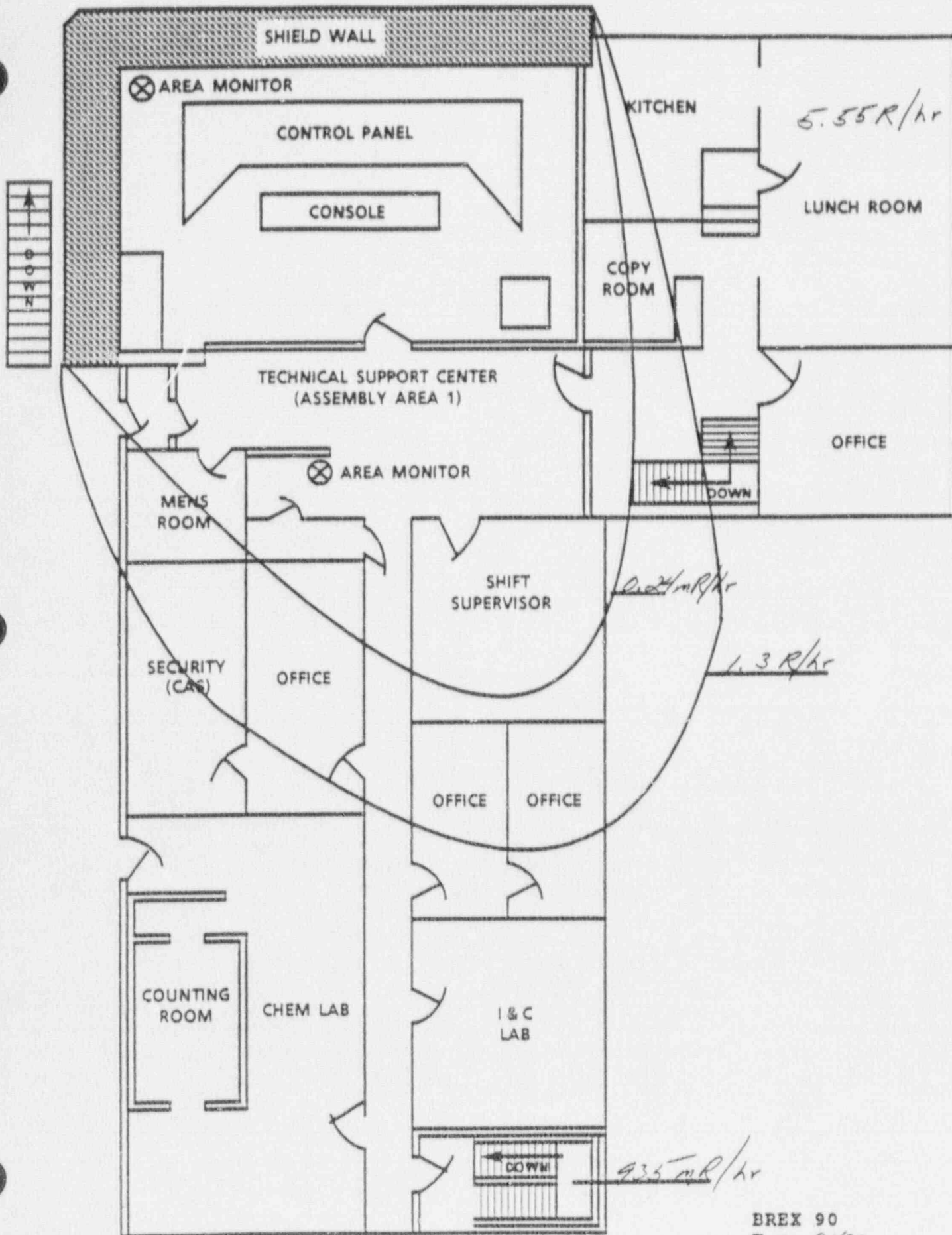


BREX 90
T = 0430

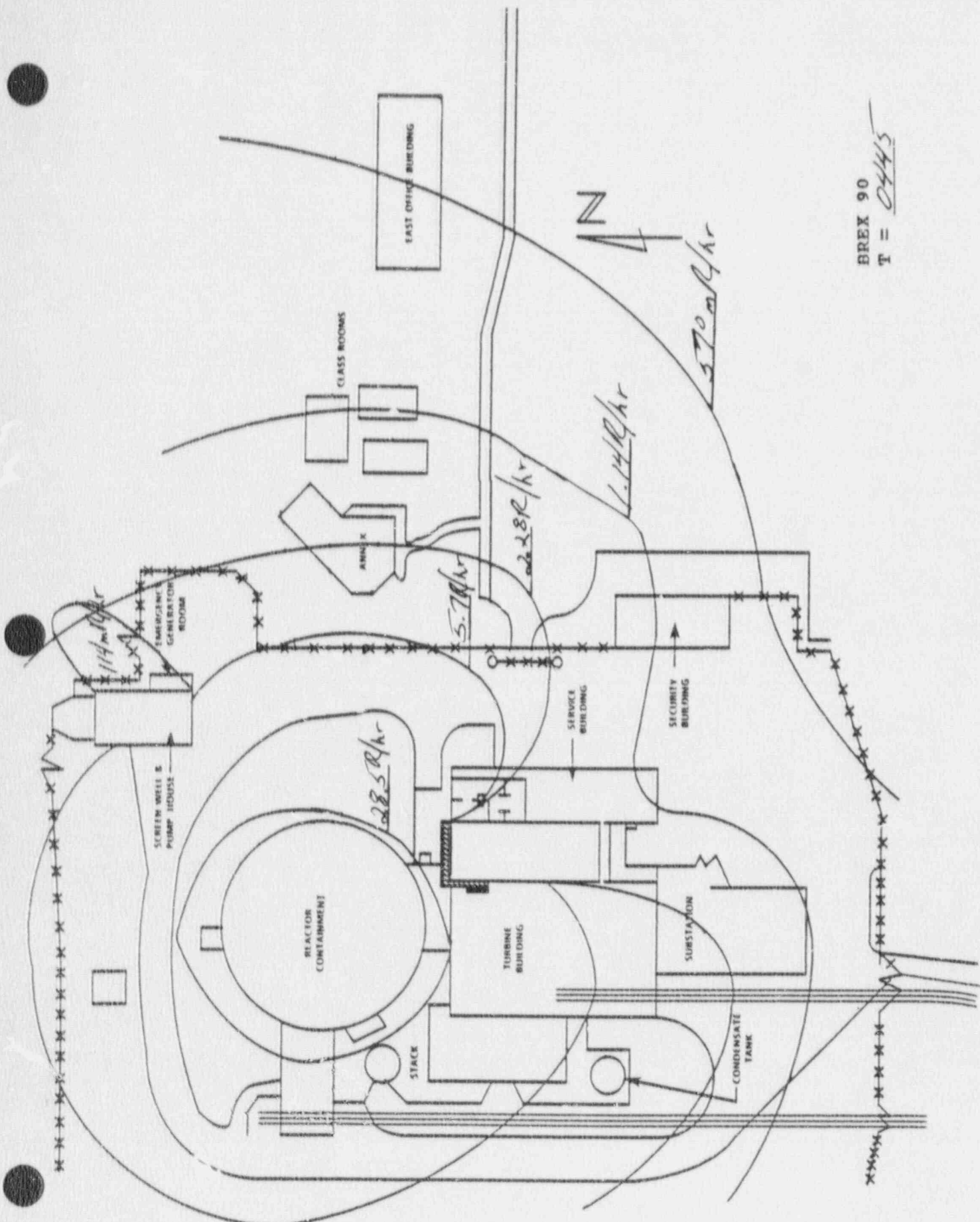
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0430

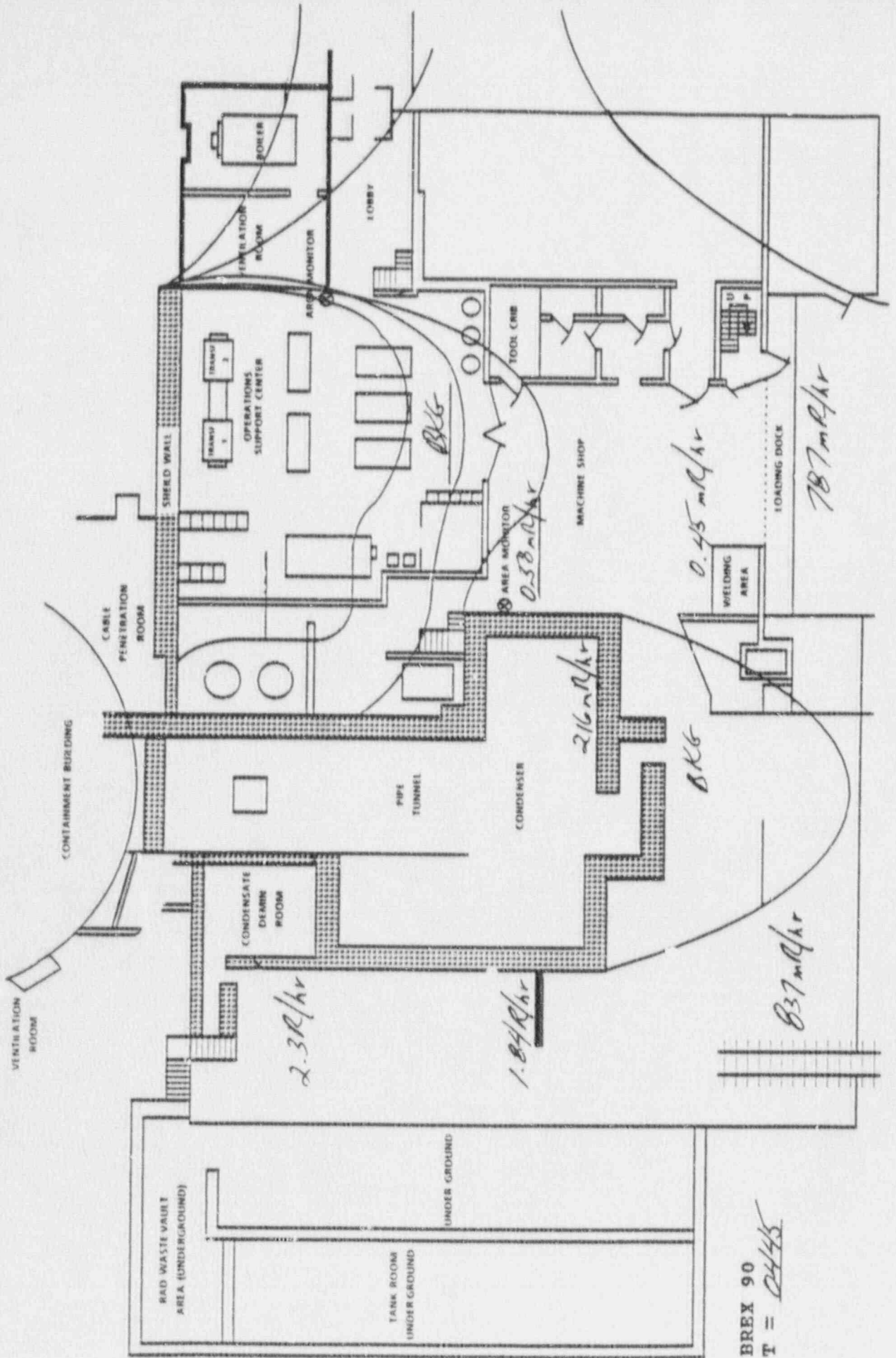




BREX 90
 T = 0430

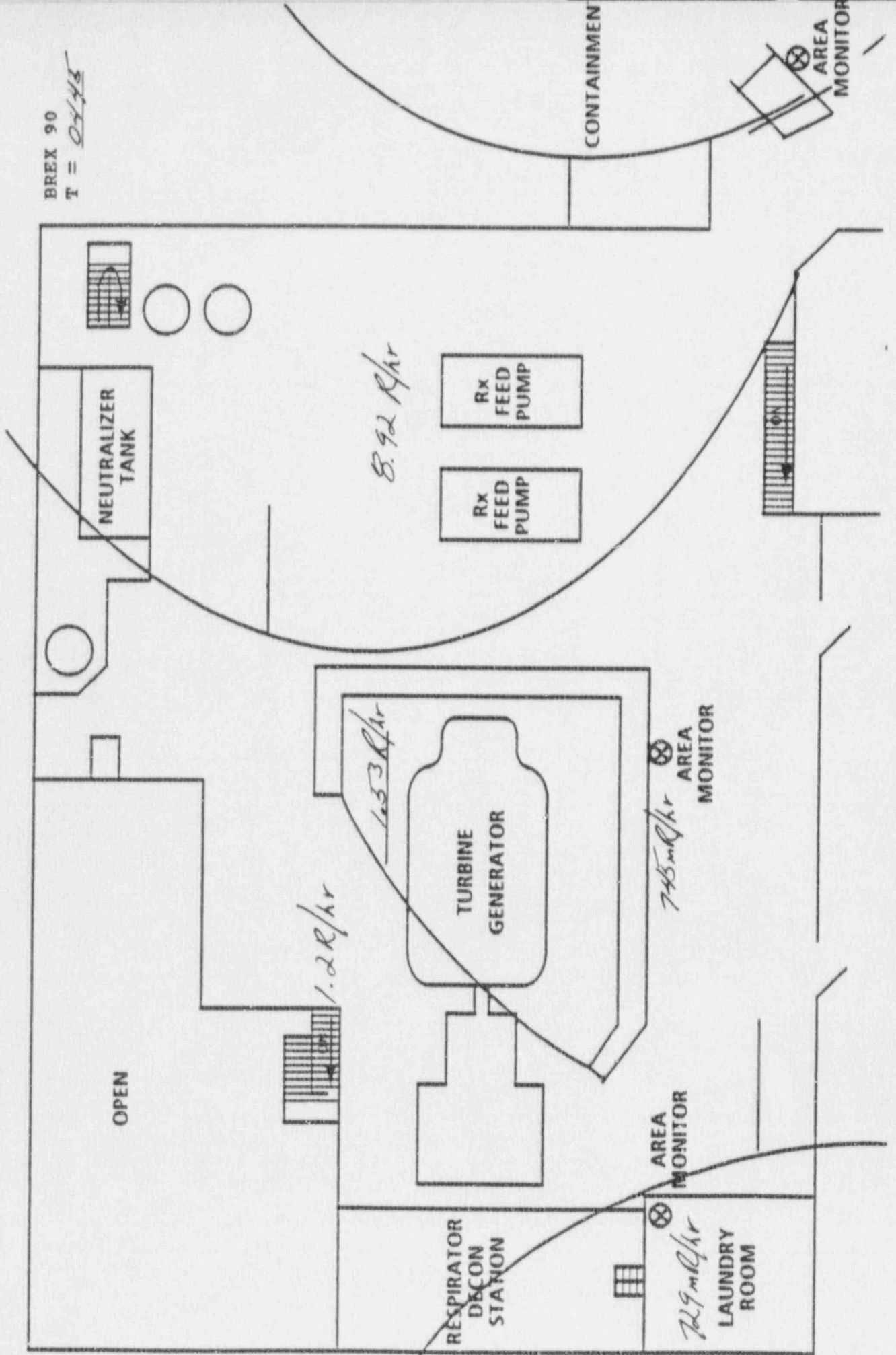


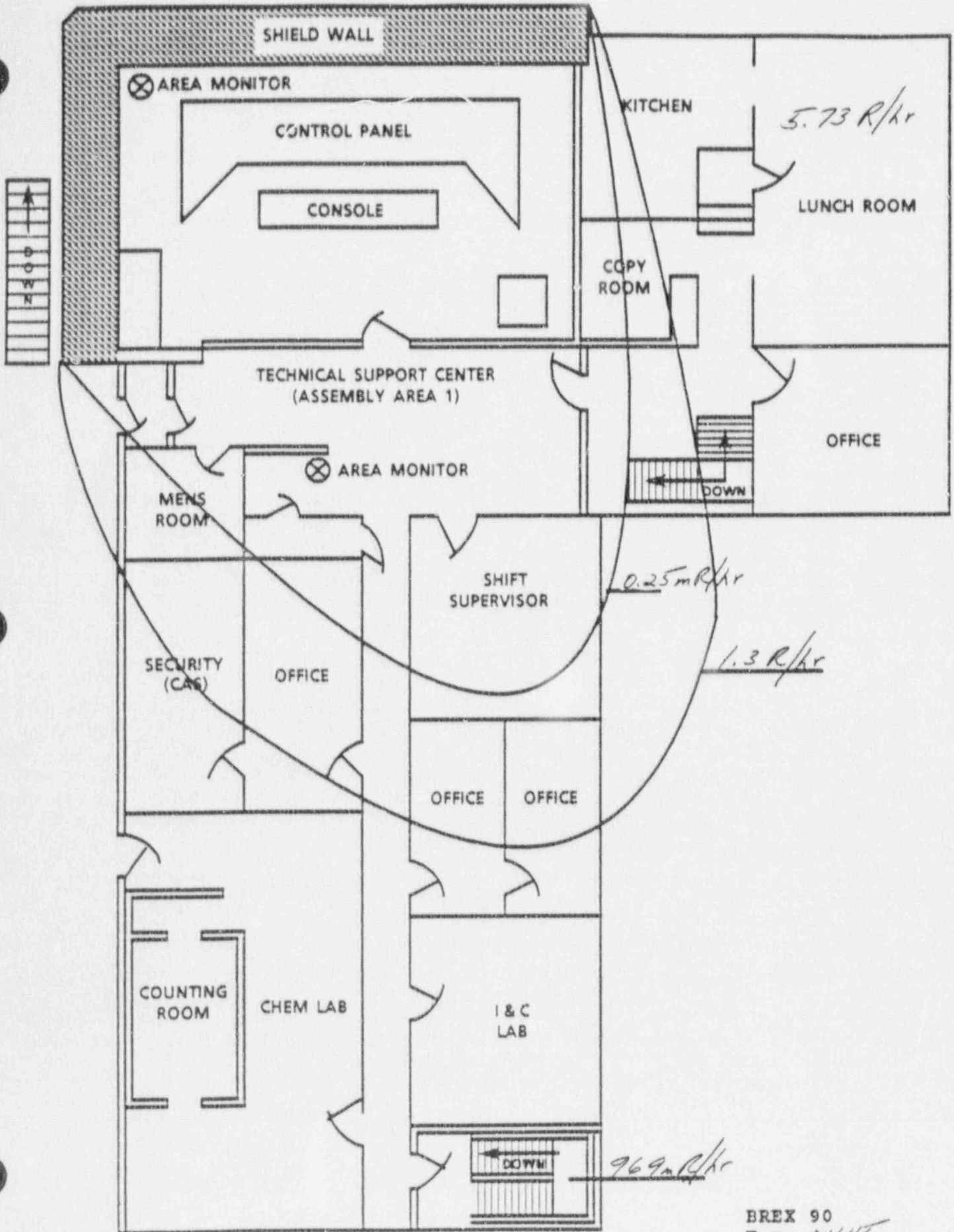
BREX 90
 T = 0445



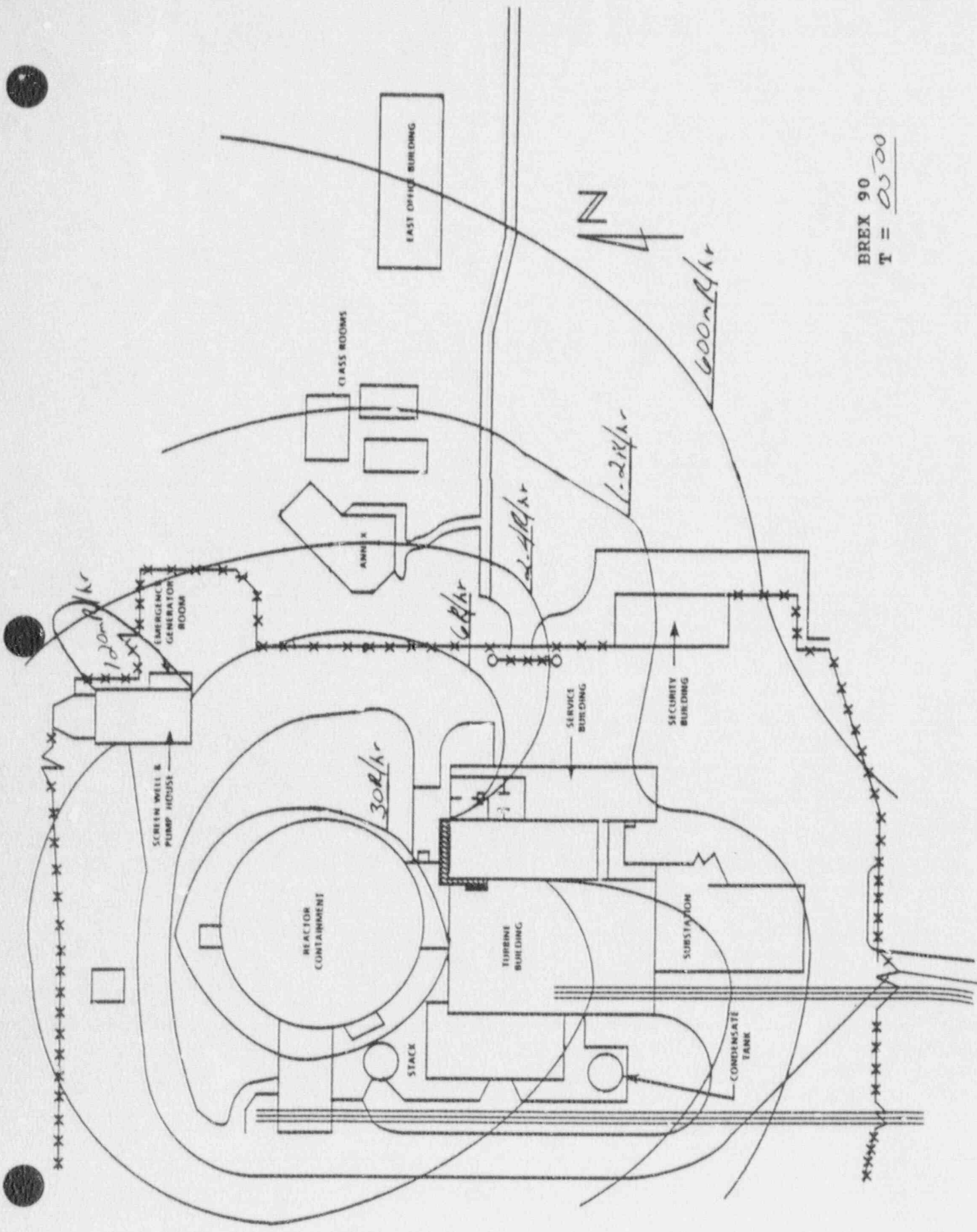
BREX 90
T = 0445

BIG ROCK POINT
TURBINE DECK

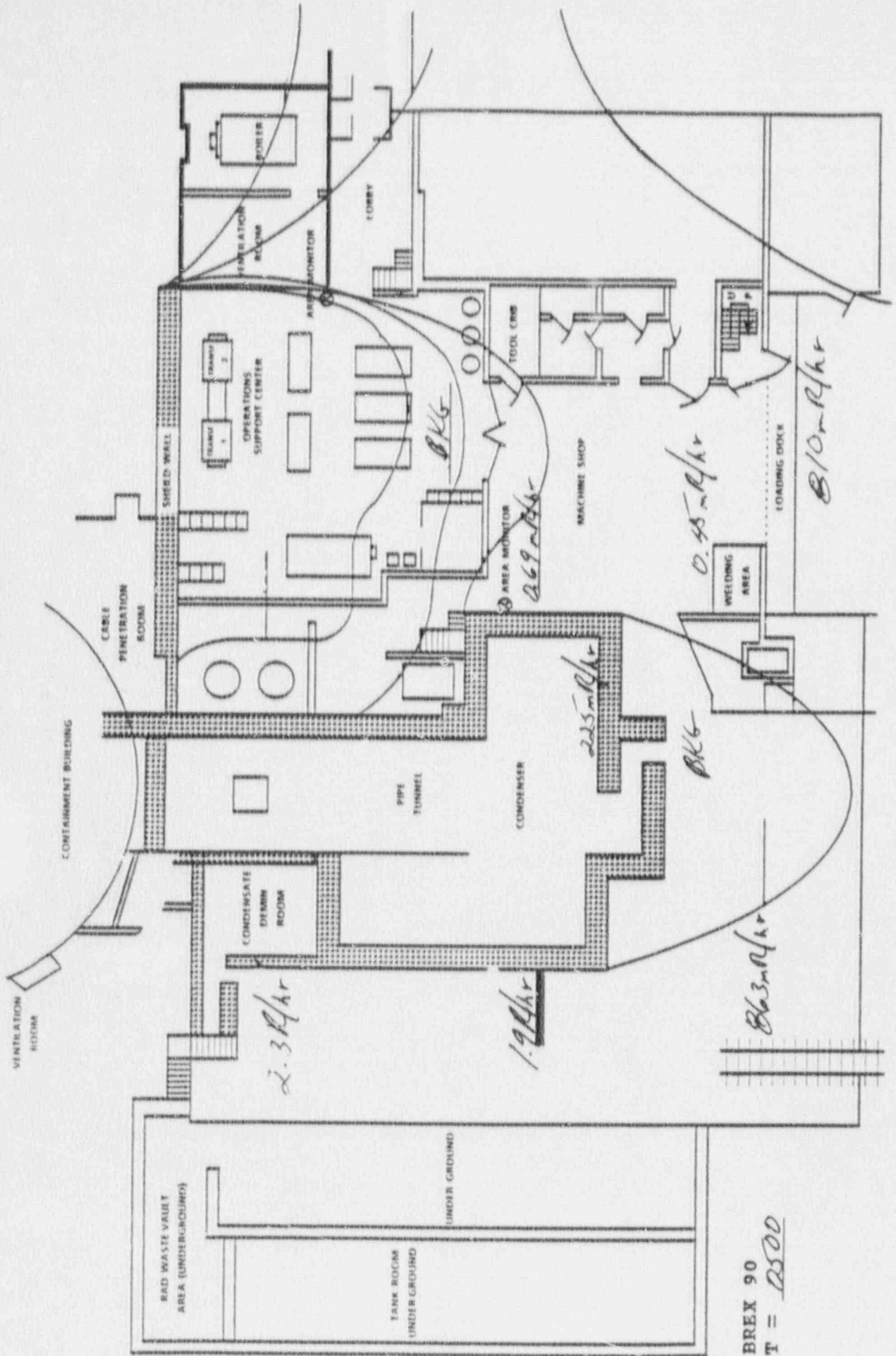




BREX 90
 T = 0445



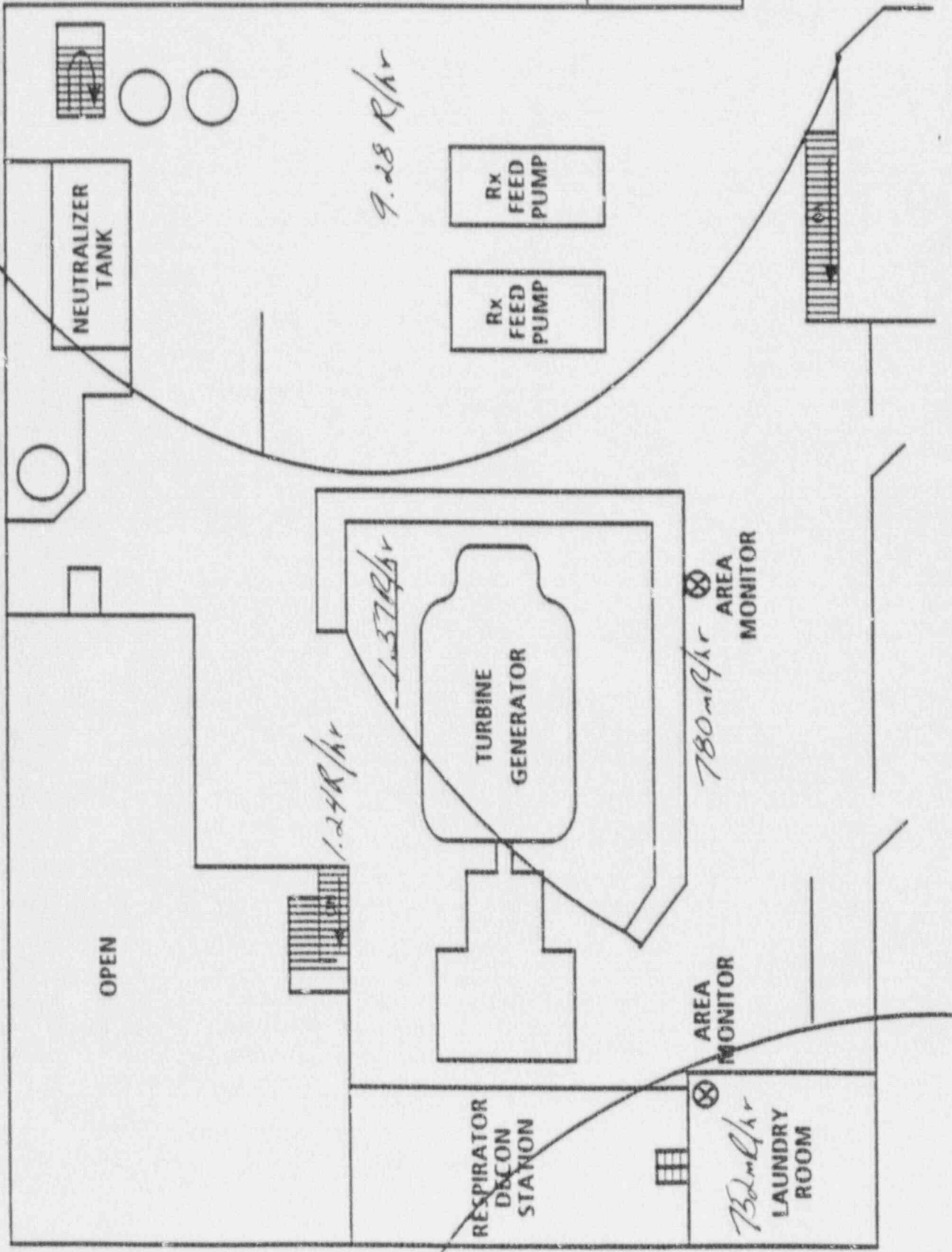
BREX 90
 T = 0500

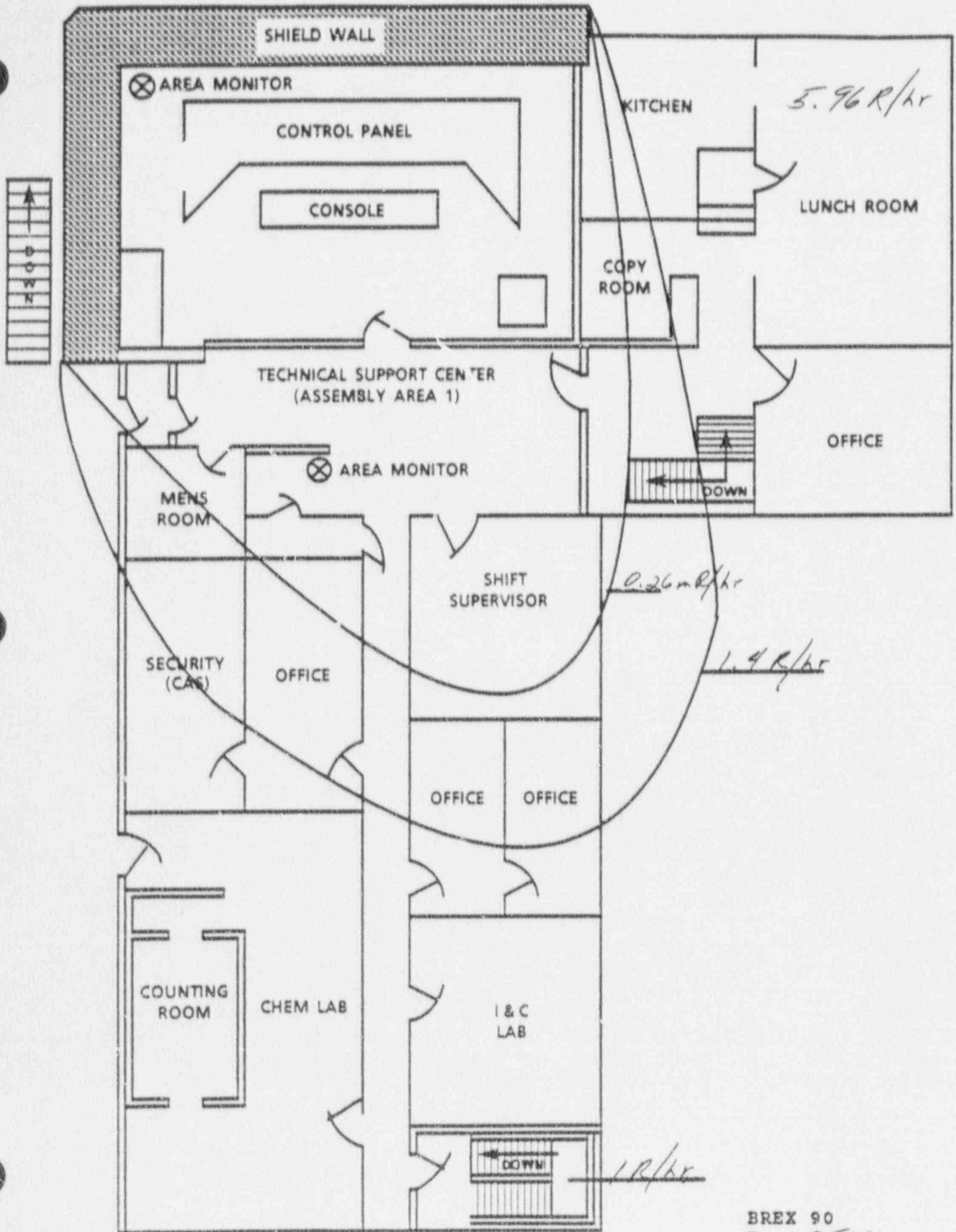


BREX 90
T = 2500

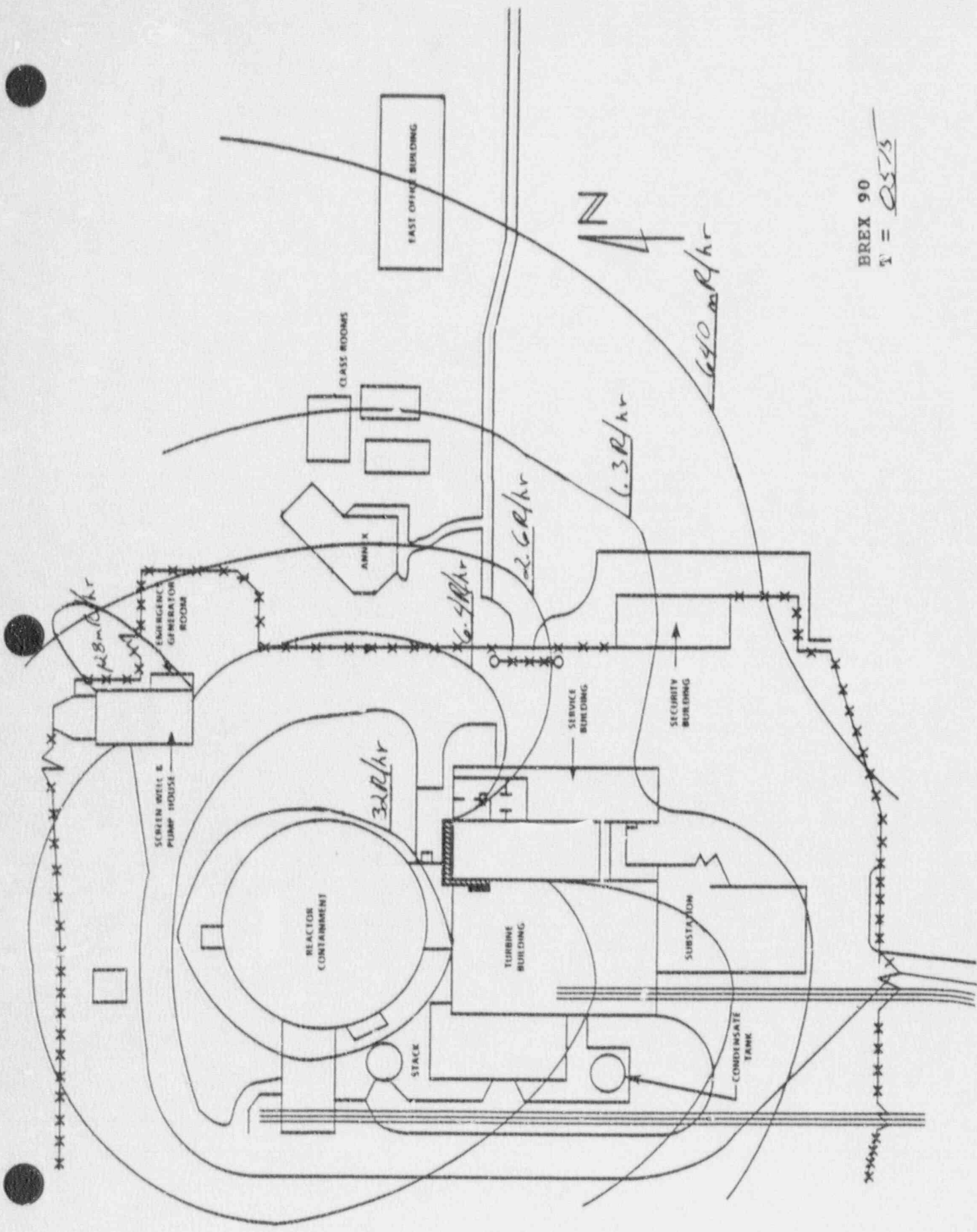
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0500

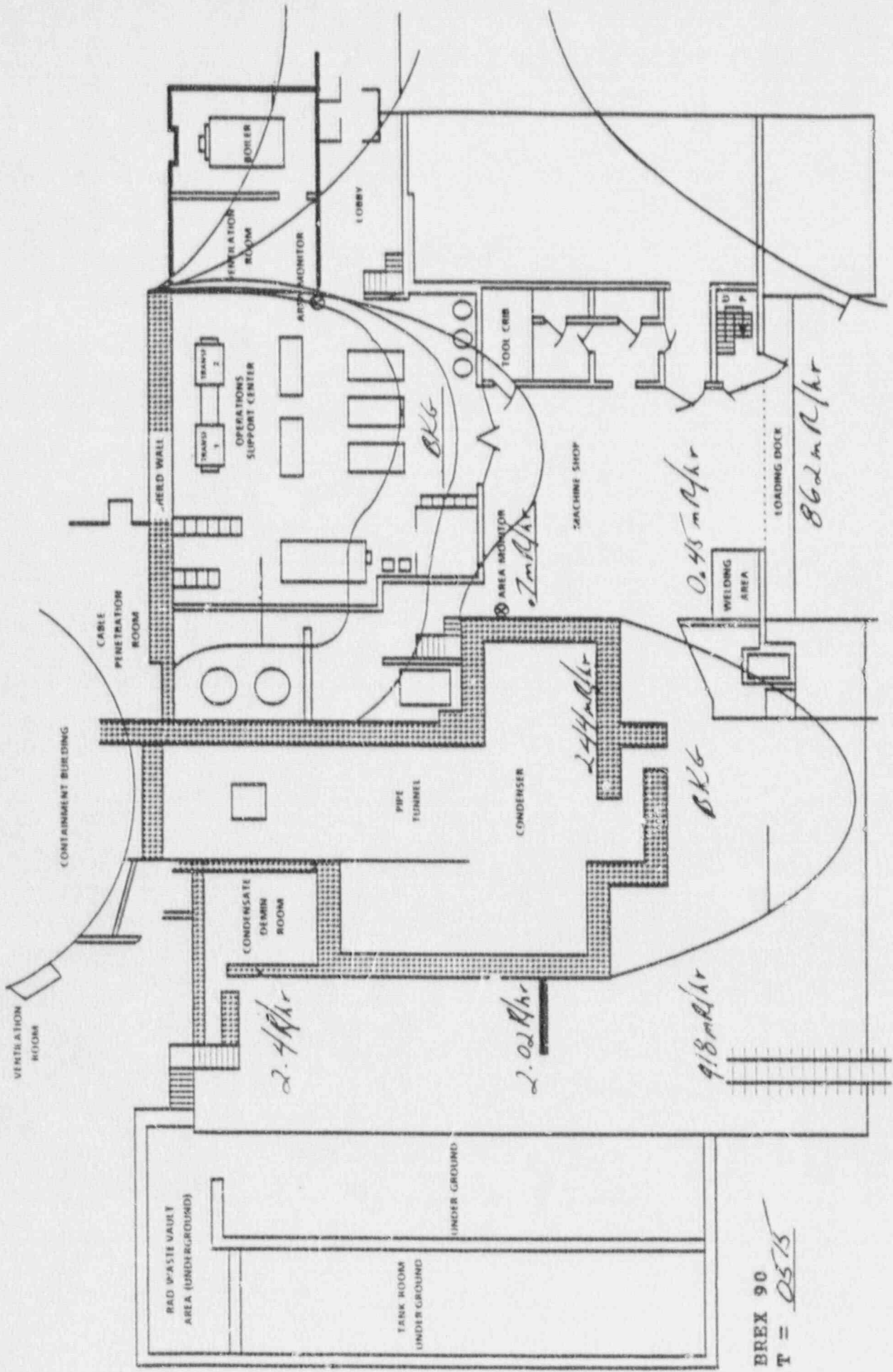




BREX 90
 T = 0500



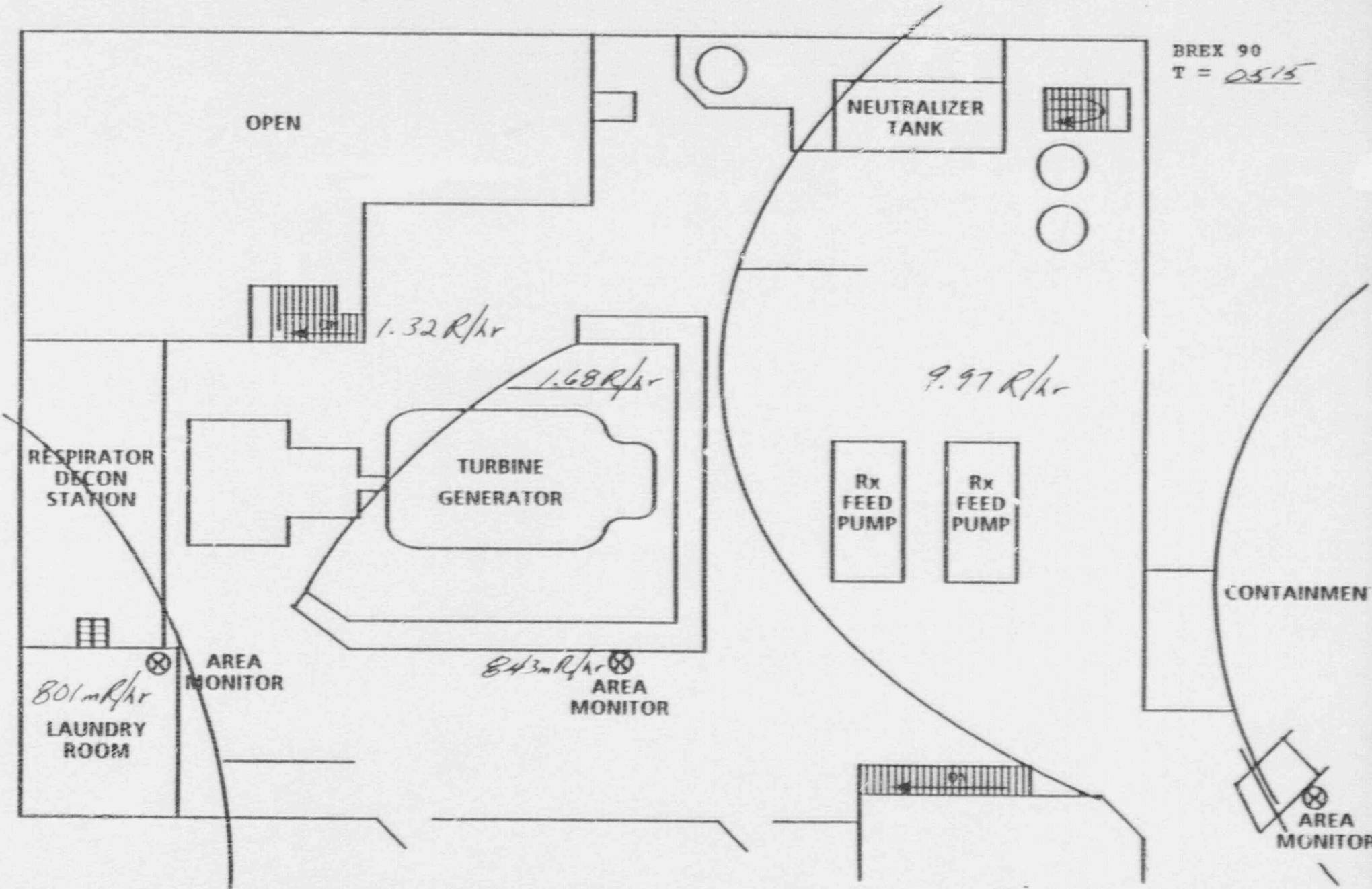
BREX 90
 T = 0575

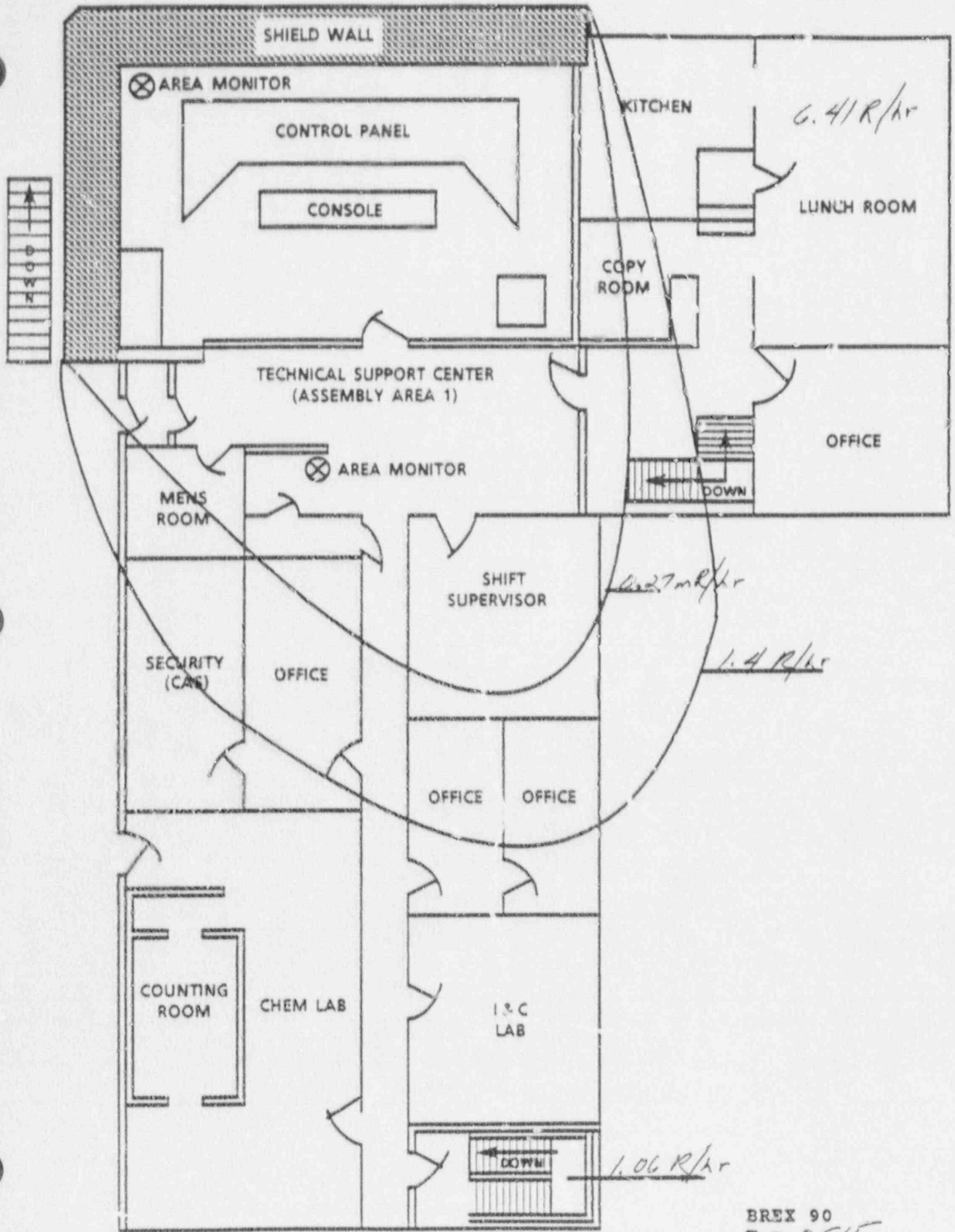


BREX 90
T = 0515

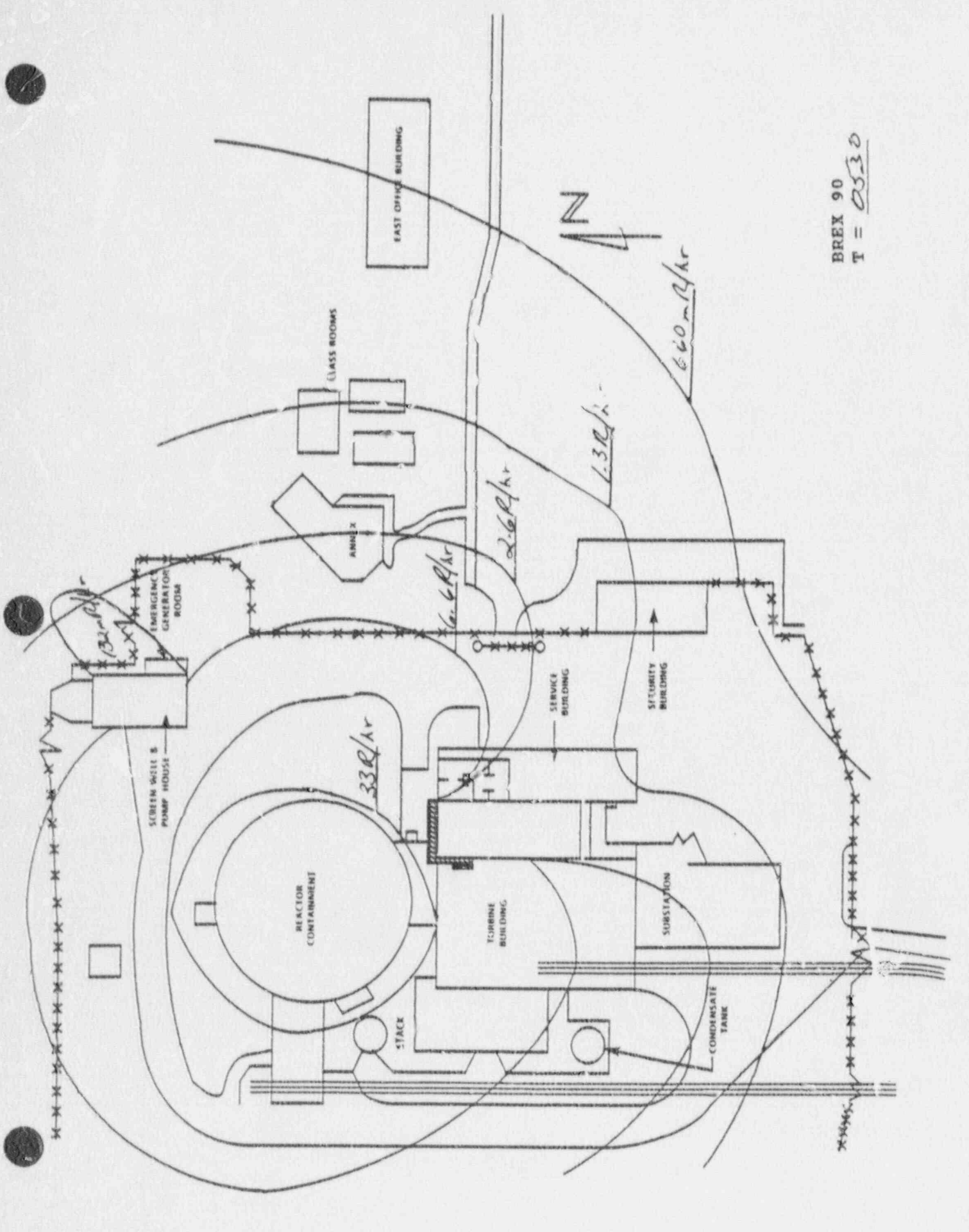
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0515

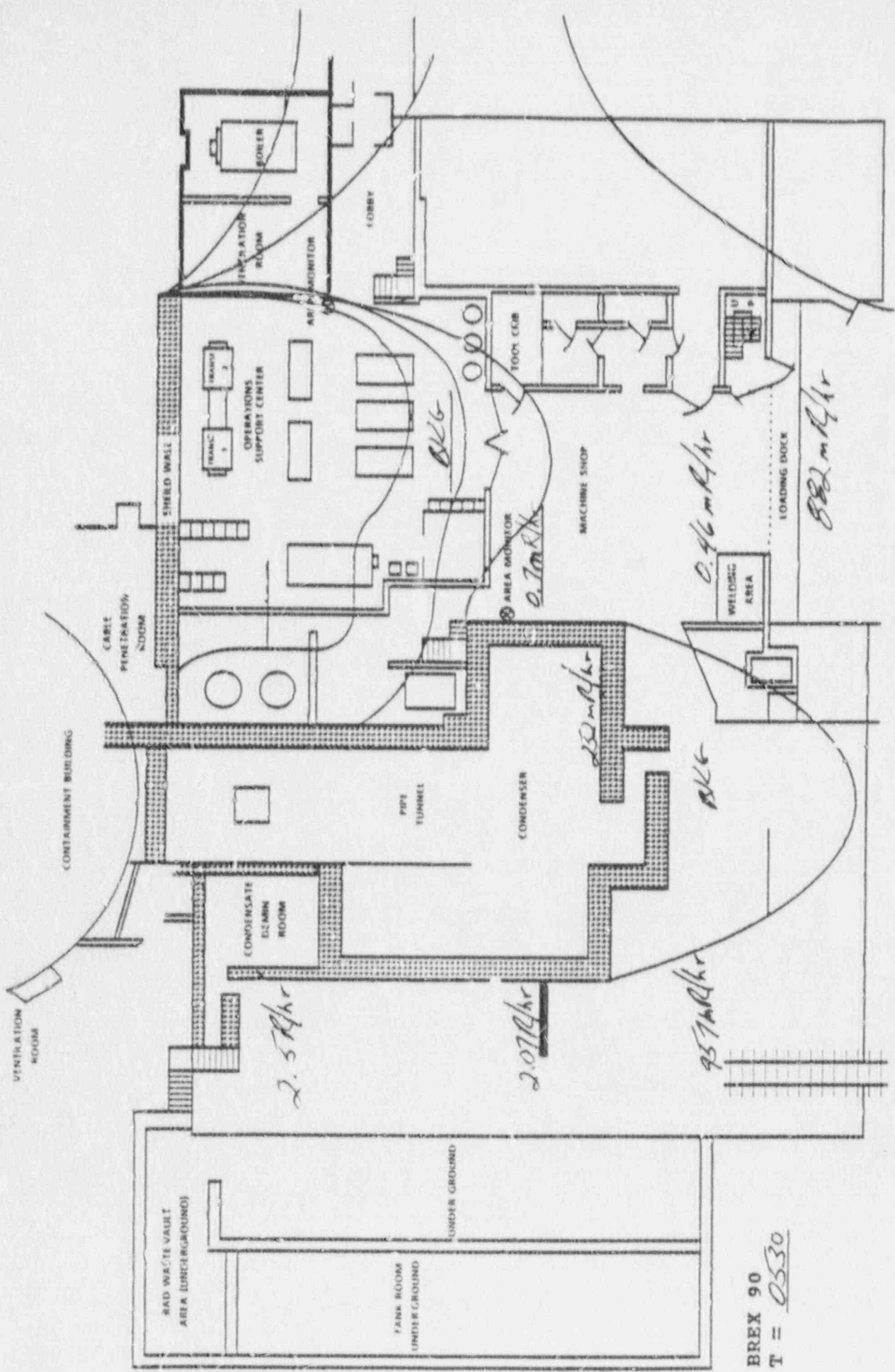




BREX 90
 T = 0.515



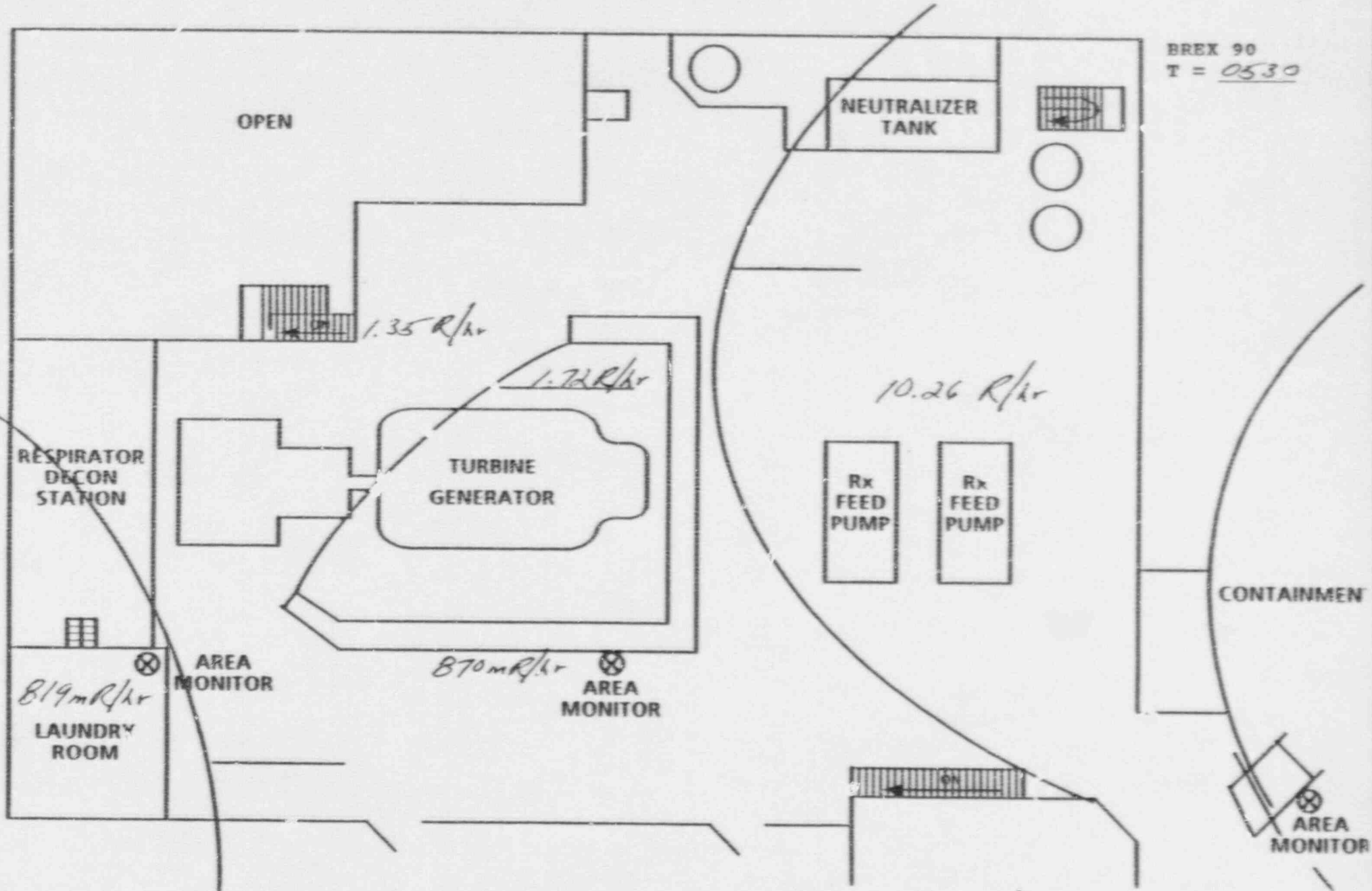
BREX 90
 T = 0530

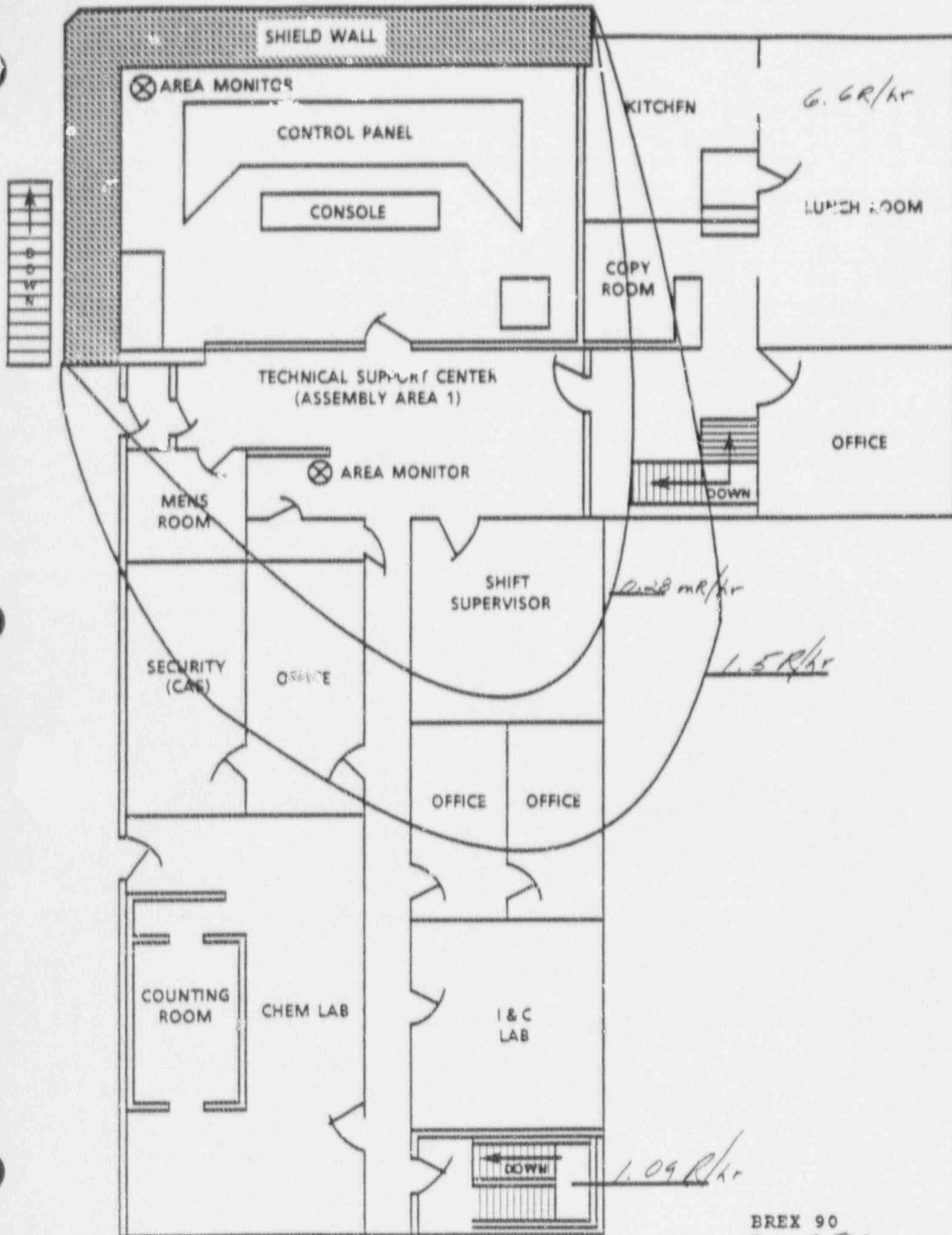


BREX 90
T = 0530

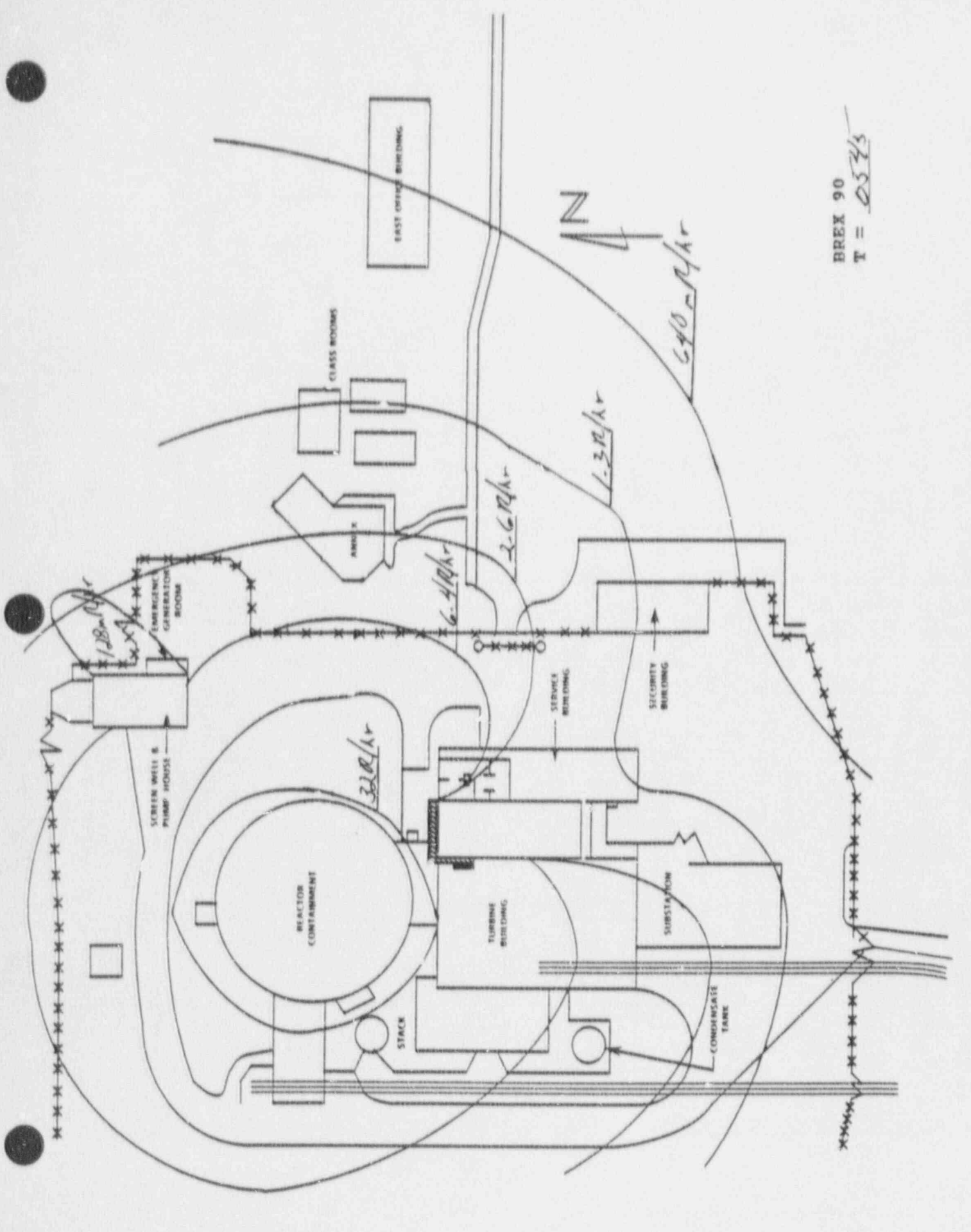
BIG ROCK POINT
TURBINE DECK

BREX 90
T = 0530

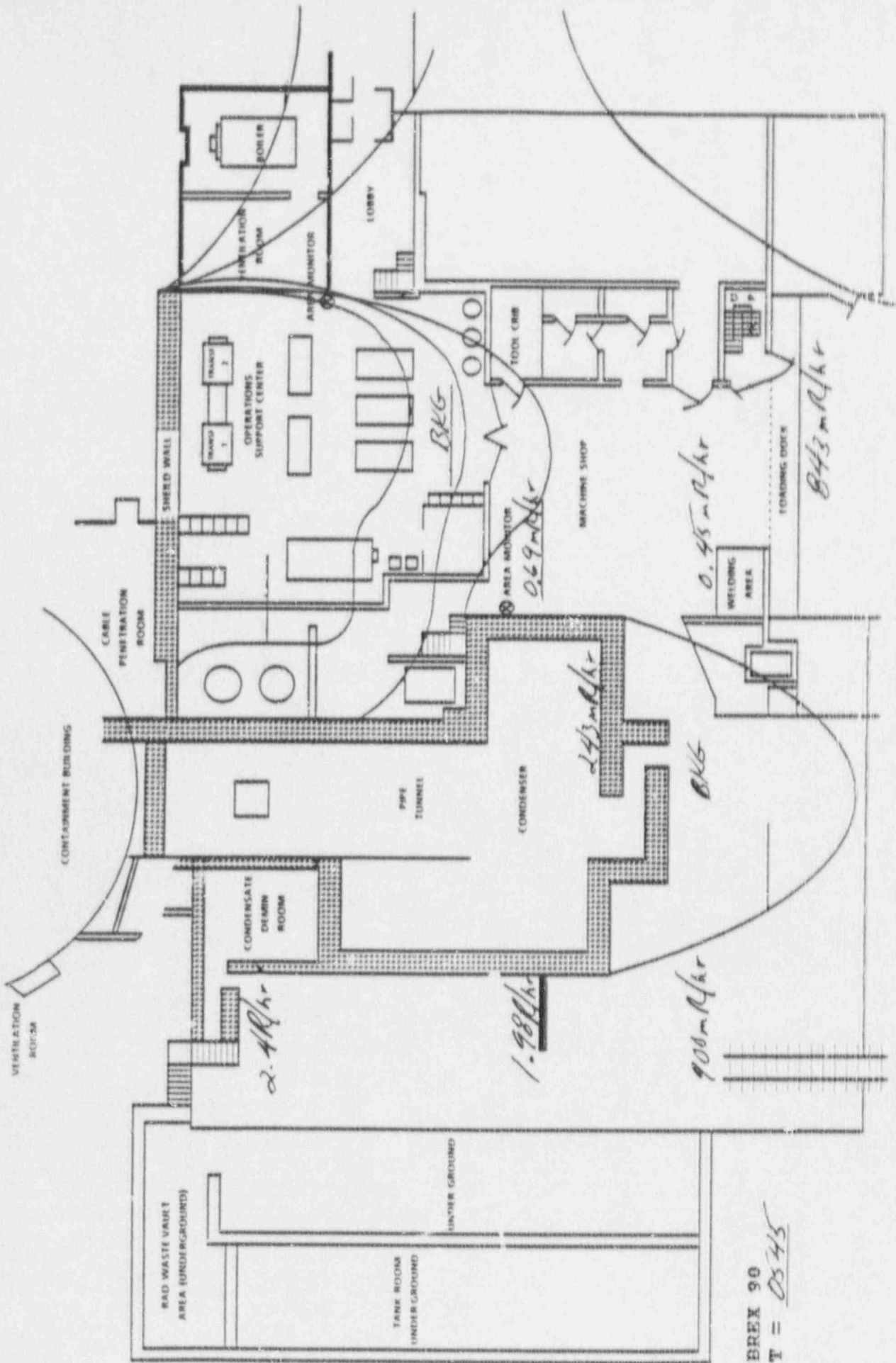




BREX 90
 T = 0530



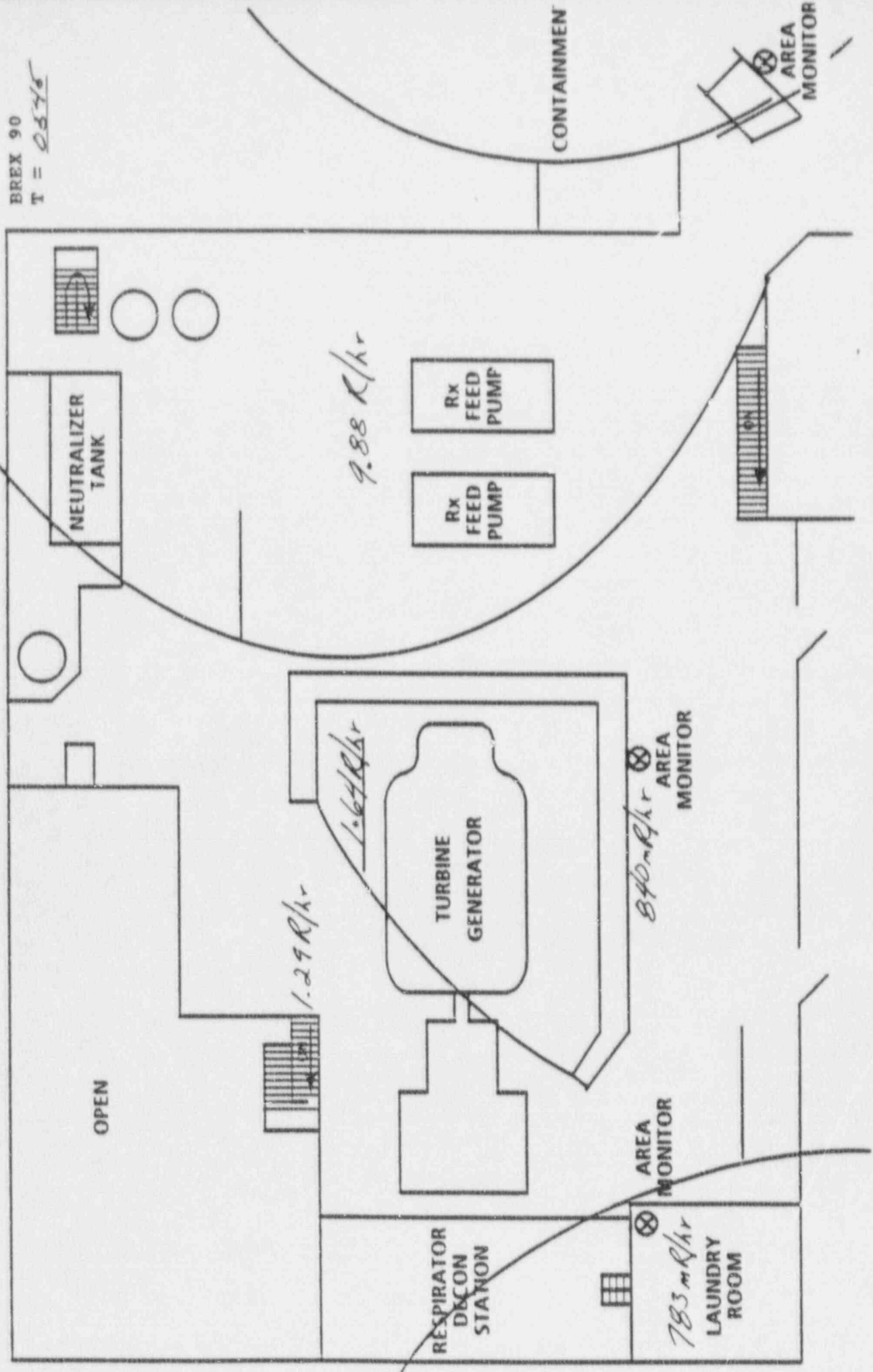
BREX 90
T = 0533

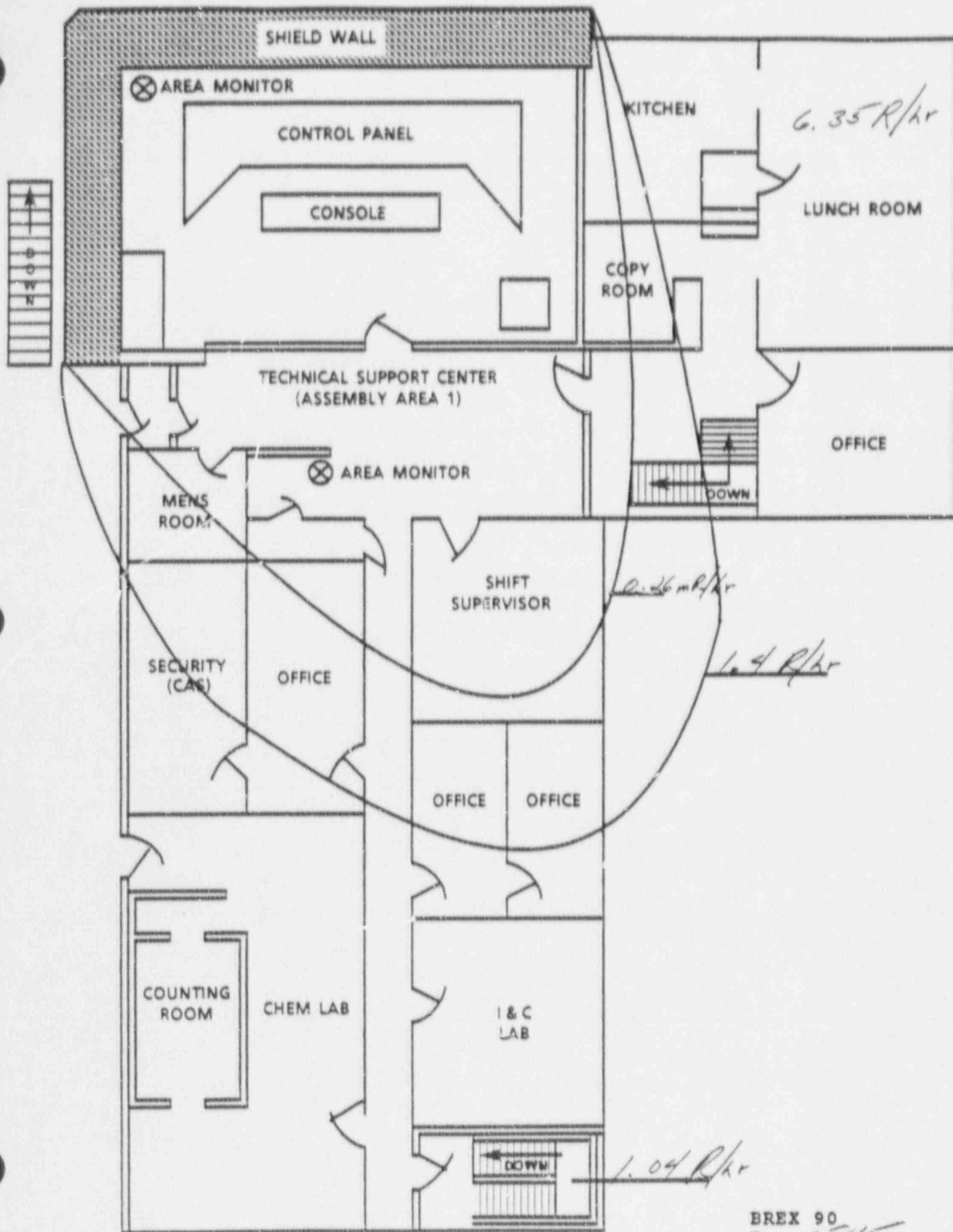


BREX 90
T = 0545

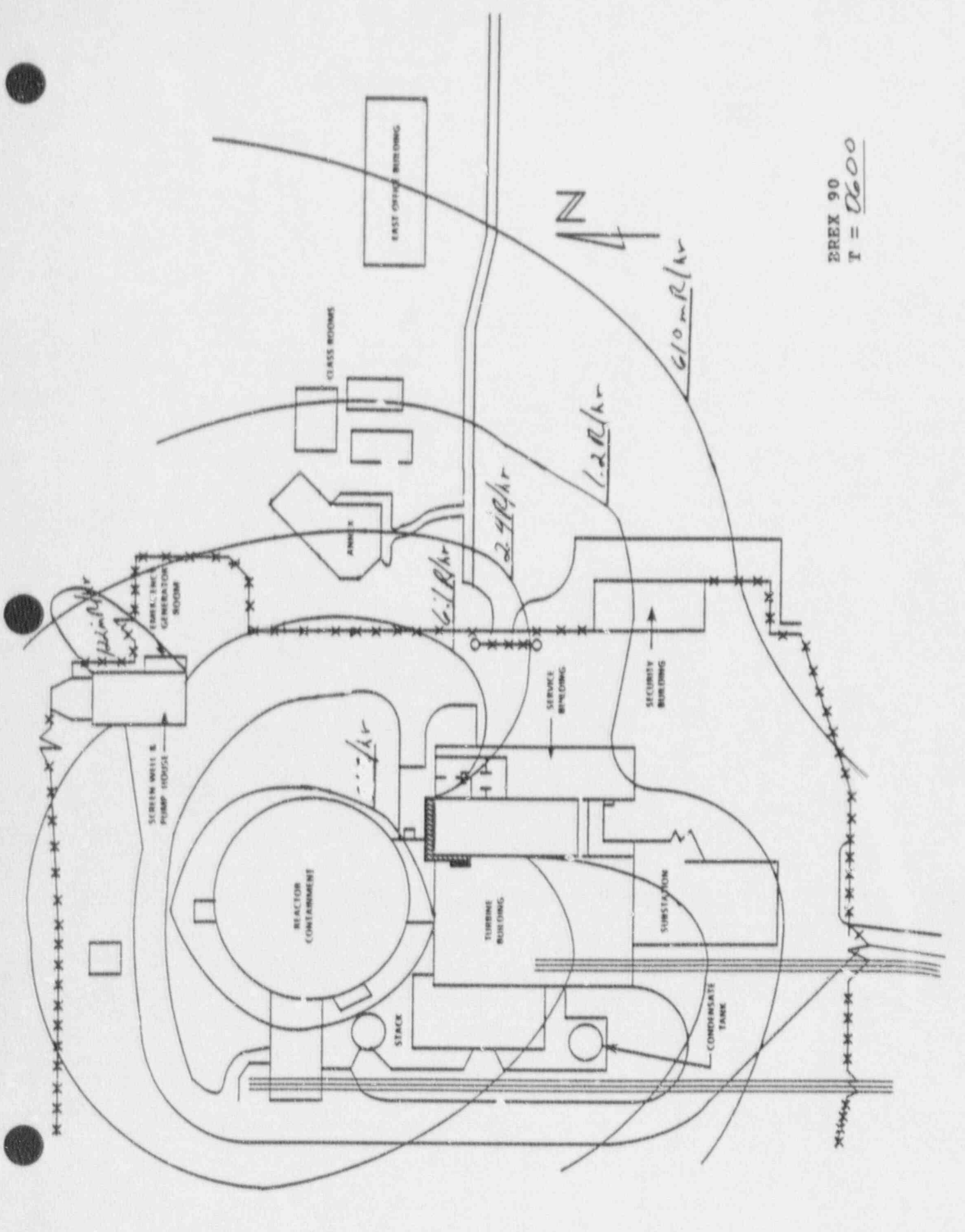
BIG ROCK POINT TURBINE DECK

BREX 90
T = 0.546

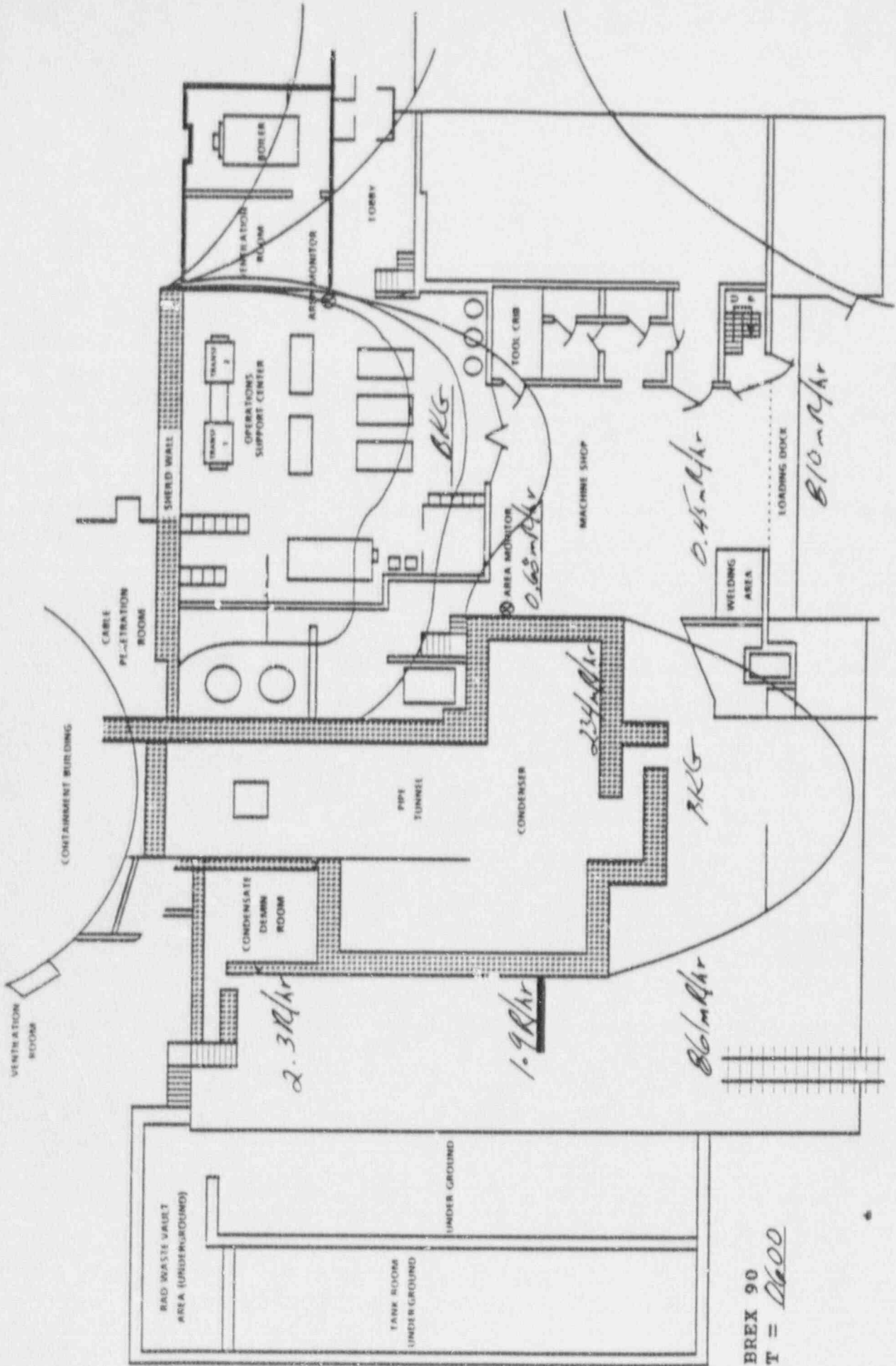




BREX 90
 T = 0545

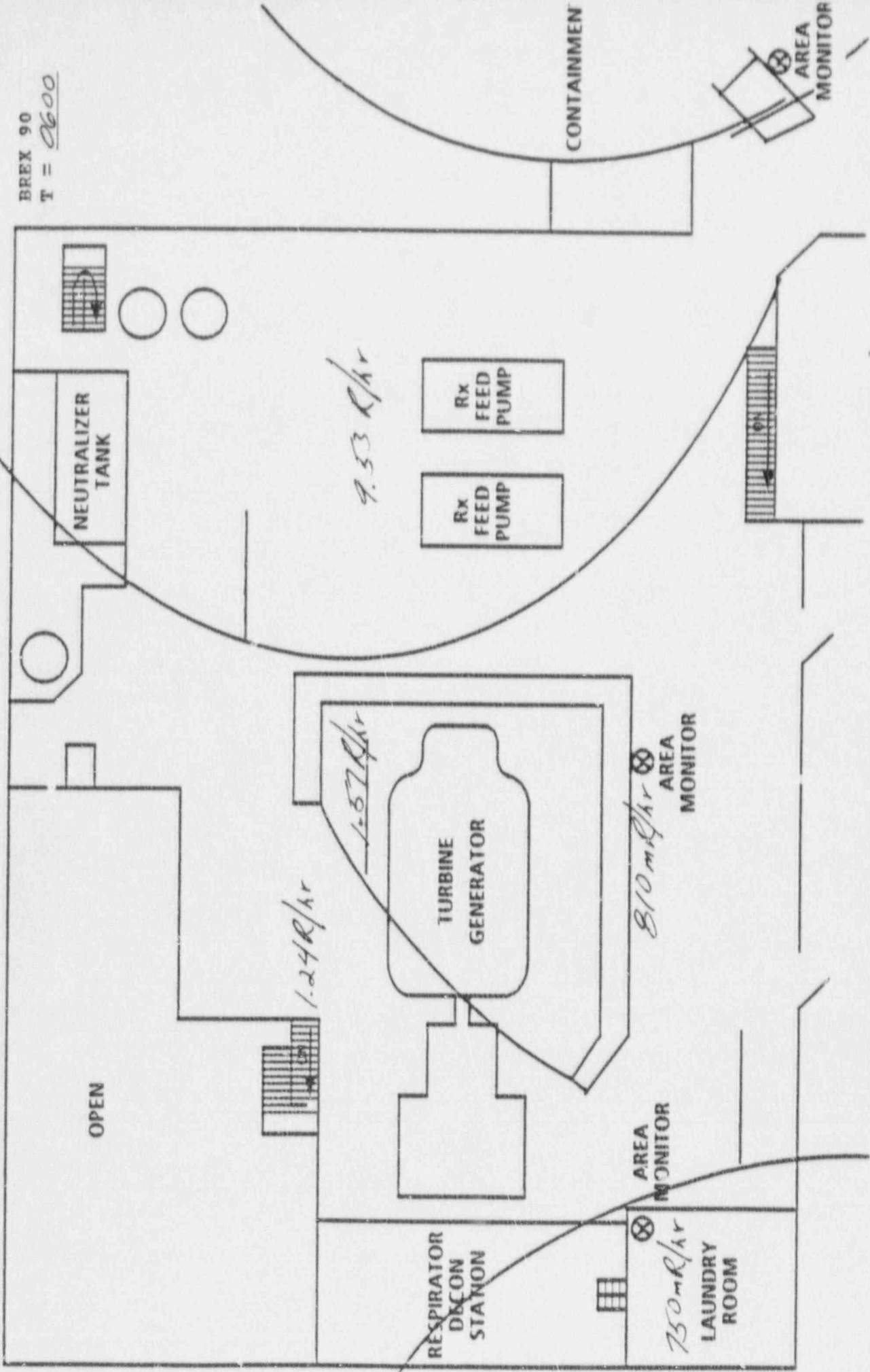


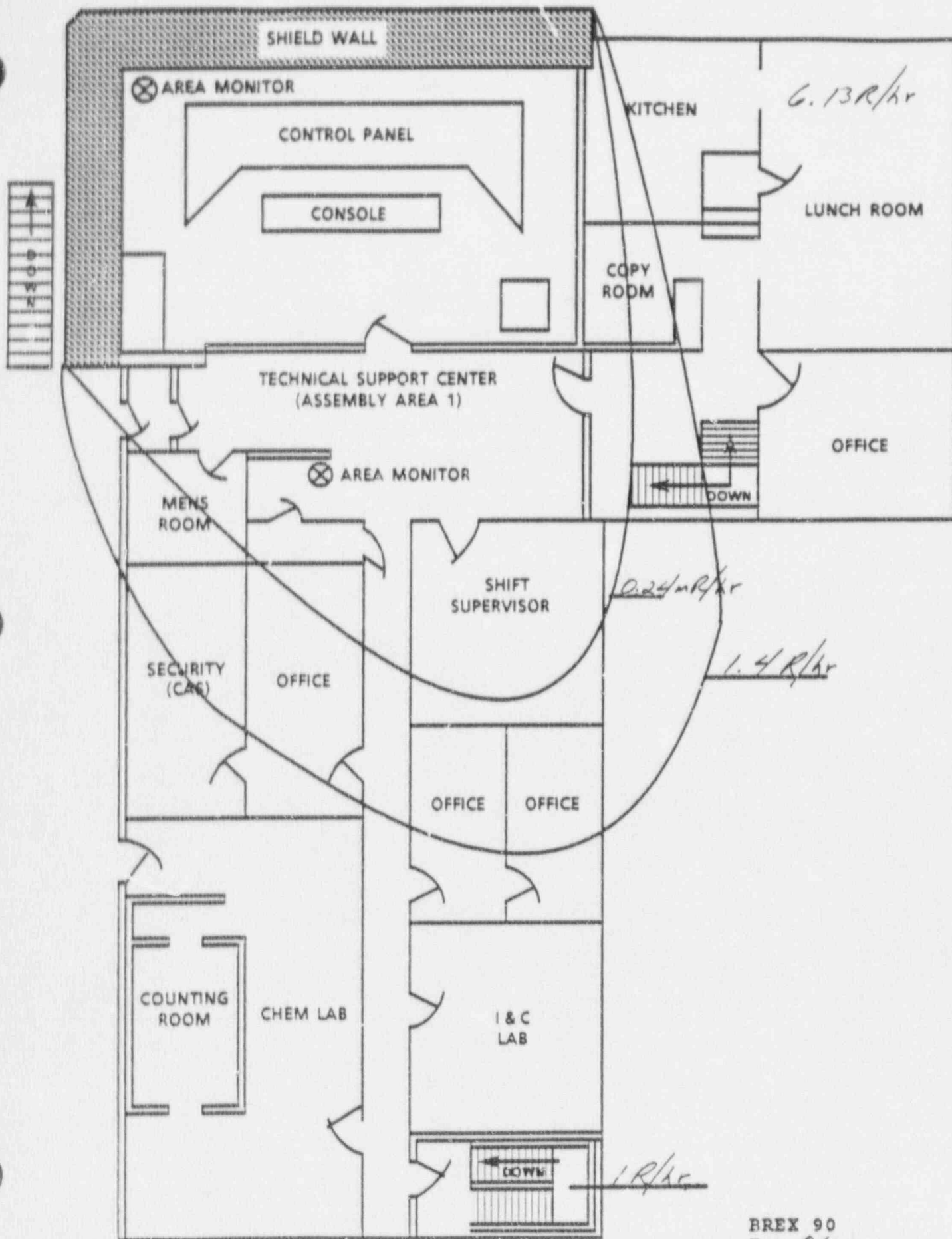
EREX 90
 T = 0600



BREX 90
T = 2600

BIG ROCK POINT
TURBINE DECK





BREX 90
 T = 0600

POST ACCIDENT SAMPLE DATA

BREX-90

POST-ACCIDENT SAMPLING

Precautions and Limitations

Post-Accident Sampling through the Core Spray Heat Exchanger would not occur using the operating parameters set forth in the previous scenario conditions. There would be an insufficient quantity of water in containment to start recirculation through the core spray heat exchangers. Therefore, this data has been developed independently with an estimated 3% core damage and 8 hours after shutdown.

NUCLIDE IDENTIFICATION SYSTEM (JUN 87)
SUMMARY OF NUCLIDE ACTIVITY

Total Lines in Spectrum 145
Lines Not listed in Library: 20
Identified in Summary Report: 20

Activation Product

<u>Nuclide</u>	<u>SBHR</u>	<u>Half-Life</u>	<u>Decay</u>	<u>UCI/Unit</u>	<u>1-Sigma Error</u>	<u>% Error</u>
CR-51	AP	27.70D	1.003	3.3E-3	1.391E-4	5.51
CO-60	AP	5.27Y	1.000	9.832E-5	1.746E-5	17.76
NA-24	AP	15.00H	1.156	2.476E-3	4.548E-5	2.71
MN-56	AP	2.58H	2.326	1.732E-3	5.224E-5	4.77

Halogen Fission Product

<u>Nuclide</u>	<u>SBHR</u>	<u>Half-Life</u>	<u>Decay</u>	<u>UCI/Unit</u>	<u>1-Sigma Error</u>	<u>% Error</u>
I-133	HFP	20.80H	1.110	7.900E-8	2.637E-5	2.31
I-134	HFP	6.61H	1.390	4.752E 0	1.305E-4	5.09
I-131	HFP	8.04D	1.390	1.600E+1	1.488E-5	17.15
I-132	HFP	2.30H	2.578	9.352E-1	8.102E-5	3.01
I-134	HFP	52.60M	11.977	2.320E-2	4.067E-2	7.01

Fission Product

<u>Nuclide</u>	<u>SBHR</u>	<u>Half-Life</u>	<u>Decay</u>	<u>UCI/Unit</u>	<u>1-Sigma Error</u>	<u>% Error</u>
SR-92	FP	2.71H	2.234	2.765E+4	6.98E-5	4.36
MO-99	FP	66.00H	1.034	2.048E-2	3.091E-5	0.63
CS-136	FP	13.00D	1.004	3.755E-3	5.22E-5	4.77
BA-140	FP	12.80D	1.003	1.985E-1	2.637E-5	2.31
LA-140	FP	40.23H	1.014	2.133E-1	4.067E-2	7.01
CE-141	FP	32.53D	1.002	2.103E-1	1.746E-5	17.76
CS-134	FP	2.90H	2.415	8.302E-3	1.305E-4	5.09
CS-137	FP	30.20Y	1.000	8.400E+0	8.102E-5	17.15
CS-138	FP	32.2M	1.000	4.828E-4	4.548E-5	2.71
ZR-95	FP	65.50D	1.005	1.984E-1	1.391E-4	5.51
NB-95	FP	87.00H	2.513	2.815E-1	1.488E-5	17.15

BREX-90

POST-ACCIDENT SAMPLING

Area Monitors

1. PERSONNEL LOCK	OSH
2. SPENT FUEL STRG	OSH
3. COND ACCESS AREA	0.1
4. OFFICE CORRIDOR	0.2
5. AIR CMPRSSR RM	.003
6. NEW FUEL STRG	OSH
7. EM. COND.	OSH
VENT WEST	
8. COND DEMIN ENTR	OSH
9. SHOP	0.1
10 CONTROL RM	.06
11 SPHERE 607	OSH
12 SPHERE 582	OSH
13 CONDENSER	OSH
14 LAUNDRY RM	OSH
15 EXHAUST PLENUM	OSH
16 LOCKER RM	.06
17 TRB SHIELD WALL	OSH
18 RADWASTE VLT	0.2
20 EM. COND.	OSH
VENT EAST	
HIGH RANGE GAMMA MONITORS	45 R/hr

BREX-90

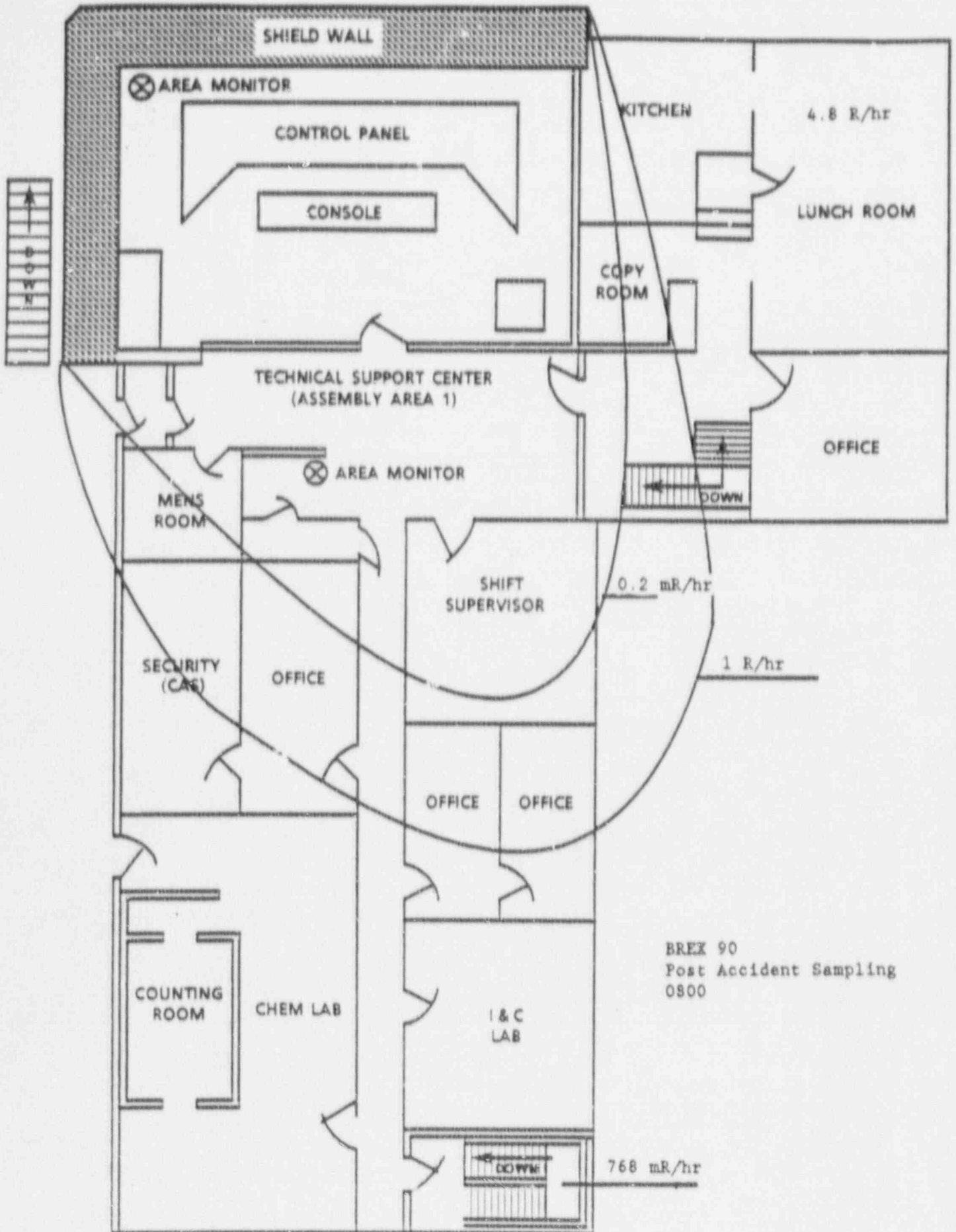
*****04-DEC-90*****

Post-Accident Sampling

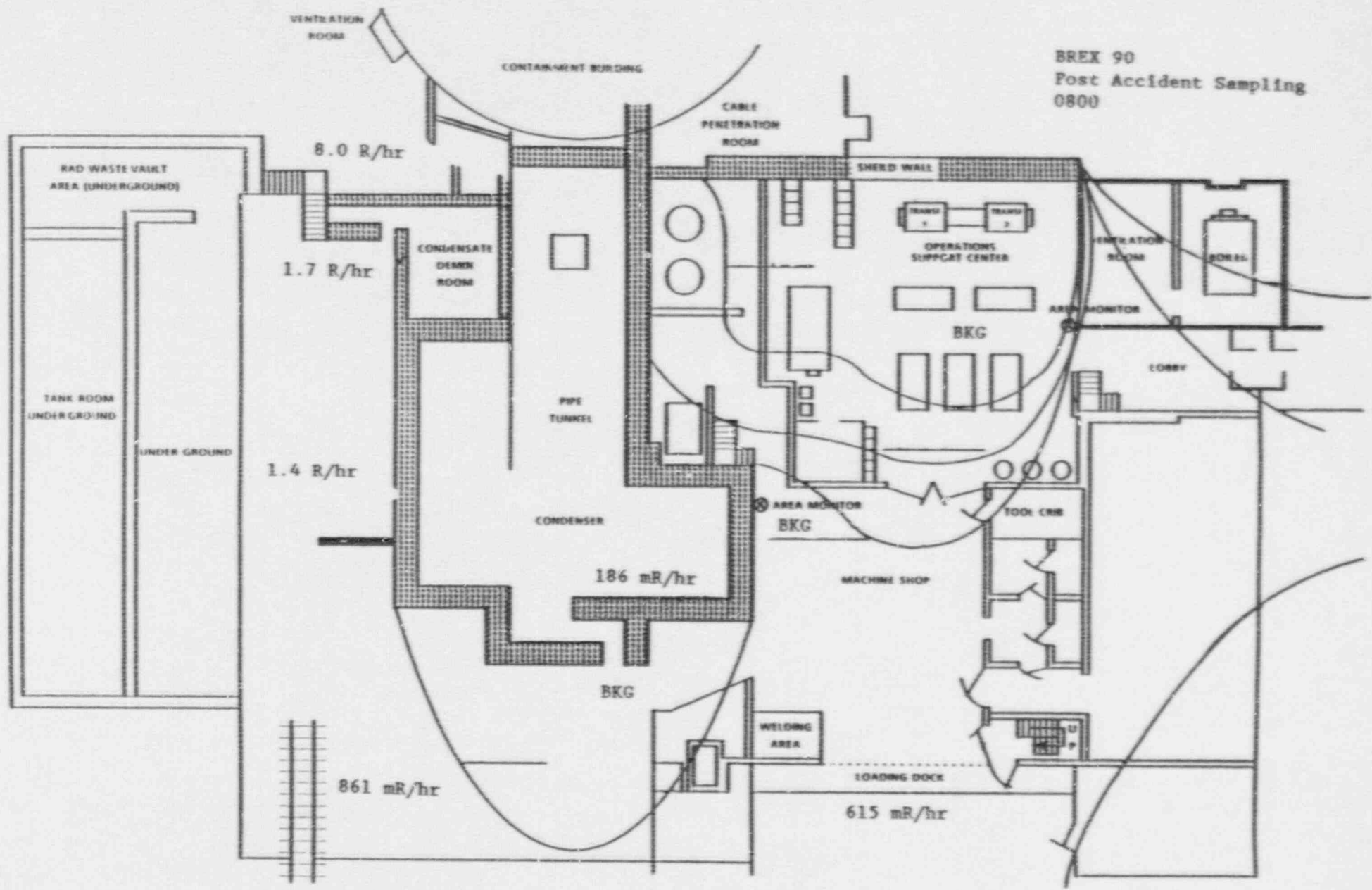
Sample Collection Start Date: 04-DEC-90 00:00:00
Sample Collection End Date: 04-DEC-90 00:00:00
Sample Identification: NA
Type of Sample: NA Units: Milliliters
Sample Quantity: ---- Reactor No: 1
Percent Yield: 100.00000 Operator's Initials: _____
Efficiency File Name : EFF .RWI 12

*
Acquire Date: 04-Dec-90 00:00:00 * FWHM (1332): 1.900
Preslt Time (Live): 1000 sec * Sensitivity: 5.000
Elapsed Real Time: 1007 sec * Shape Parameter : 10%
Elapsed Live Time: 1000 sec * NBR Iterations: 10
*

*
Detector: 1GD no 1 * Library: LIB .L1Q
Calib Date: 00-XXX-?? * Energy Tolerance: 1.300 kV
KeV/Chnl: 0.5001560 * Half-Life Ratio: 8.00
Offs1t: -0.2113142 keV * Abundance Limit: 75.00%
Q Coeff: -2.983E-08 keV/C**2 *
*



BREX 90
 Post Accident Sampling
 0800



BIG ROCK POINT TURBINE DECK

BREX 90
Post Accident Sampling
0800

