ROBINSON NUCLEAR PROJECT

EMERGENCY PREPAREDNESS EXERCISE

MARCH 30, 1994

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CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

PLAN FOR ROBINSON ANNUAL EMERGENCY PREPAREDNESS EXERCISE

MARCH 30, 1994

CAROLINA POWER AND LIGHT COMPANY
SCENARIO PACKAGE FOR EXERCISE

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CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

1.0 INTRODUCTION

1.0 INTRODUCTION

On March 30, 1994, the annual Exercise will be conducted. This exercise will involve the partial participation of Chesterfield, Darlington and Lee Counties, and partial participation by the State of South Carolina. This participation will include partial activation of offsite Emergency Operations Centers and simulation of the Joint Information Center. The exercise will include the mobilization of personnel and resources, such that the capability to respond adequately to a simulated accident can be verified. Exercise participants will not have prior knowledge of the scenario.

This manual has been prepared to assist the exercise controllers, evaluators, and observers in the conduct and evaluation of the exercise. It contains the information and data necessary to properly conduct the exercise in an efficient and coordinated manner and is organized as follows:

Section 2.0 Objectives - this section defines the exercise objectives.

Section 3.0 Scenario - this section describes the RNPD postulated sequence of events occurring at RNPD which will require the RNPD Emergency Response Organization, some CP&L Corporate Support, and various onsite and offsite organizations to respond. Included in this section are copies of the exercise messages and pertinent data which will be utilized to control the progress of the exercise scenario.

Subsection 3.1 Messages - this subsection contains copies of the exercise messages which will be utilized to control the development of the exercise scenario.

Subsection 3.2 Plant Parameters - this subsection contains time related information concerning the postulated Plant conditions, which corresponds to the development of the exercise scenario.

Subsection 3.3 Meteorological Information - this subsection contains information and data concerning the postulated meteorological conditions to the site area which will be utilized in the development of the exercise scenario.

Subsection 3.4 Radiological Information - this subsection contains time-related information concerning radiological conditions at the various onsite and offsite monitoring locations, which corresponds to the development of the exercise scenario. Also included in this subsection is information concerning primary and secondary systems radiochemistry, containment atmosphere radiochemistry, radiological release rates, in-plant radiation levels, and onsite emergency worker exposure and contamination levels.

Section 4.0 Controller's Instructions - this section provides general instructions to the controllers in the conduct of the exercise, as well as any required special maintenance instructions.

Section 5.0 Evaluator's Instructions - this section provides general instructions and evaluation criteria to the exercise controllers for evaluating the responses of the exercise participants and the progress of the exercise.

Section 6.0 Supplementary Material - this section contains supplementary material for use by the exercise controllers during the course of the exercise, including log sheets.

Copies of this manual will be provided to exercise controllers, evaluators, and selected observers prior to the exercise.

CAROLINA POWER AND LIGHT COMPANY
PLAN FOR ANNUAL EMERGENCY PREPAREDNESS EXERCISE

MISSION AND PURPOSE OF DRILL

To demonstrate portions of Carolina Power and Light emergency response capabilities and other elements of the CP&L Robinson Nuclear Project Department (RNPD) Radiological Emergency Plan, associated implementing procedures and the CP&L Corporate Emergency Plans in accordance with Nuclear Regulatory Commission (NRC) Regulation 10CFR50.47(b).

SCOPE AND OBJECTIVES

I. SCOPE

A simulated accident at the H. B. Robinson Nuclear Power plant which will involve planned response actions to include: emergency classification; notification of offsite organizations, notification of Plant personnel; augmentation of personnel (normal work day), activation of emergency facilities; and dispatching of plant teams. The exercise will involve partial participation by the State of South Carolina and surrounding Counties.

II. OBJECTIVES

Objectives for the 1991 H. B. Robinson Exercise are included in Section 2 of this package.

SITUATION AND ASSUMPTIONS

I. EXERCISE DATES

A.	Player Briefing:	March 29, 1994 - 10:00 a.m. @ Information Center
B.	Final Controller Meeting:	March 29, 1994 - 2:00 p.m. @ EOF Building
C.	Exercise:	March 30, 1994 - 8:30 a.m. to 1:00 p.m.
D.	Facility Critique with Players:	At conclusion of exercise
E.	Lead Evaluator Meeting:	March 30, 1994 - 7:00 p.m.
F.	CP&L Critique:	March 31, 1994 - 1:00 p.m. @ TSC/EOF Building Room 132
G.	NRC Exit:	March 31, 1994 - Following CP&L Critique, in Room 132

II. DRILL/EXERCISE LOCATIONS/FACILITIES

A. H. B. Robinson Steam Electric Plant,
Hartsville, South Carolina

1. Simulator Control Room The function of the Simulator Control Room is to provide plant control and initial direction of all plant related emergency operations.

2. Operations Support Center (OSC) The OSC will be located in the Maintenance Shop. The function of the OSC is to provide an area for assembly and briefing of support personnel and "off shift" personnel called to the site.

3. Technical Support Center (TSC) The location of the TSC is in the TSC/EOF/Training Building. The function of the TSC is to provide an assembly location for personnel who provide engineering and management support of plant activities following an accident, display of status of plant parameters; and provide an emergency reference collection of selected engineering and plant documents. The TSC is activated and emergency functions are performed in accordance with the provisions of the Plant Radiological Emergency Response Plan and Implementing Procedures.

The TSC will perform the EOF functions until the EOF is operational. In addition to the normal plant communications system, redundant emergency communications facilities in the TSC provide telephone contact with required agencies and other response centers, by use of the Corporate Emergency Communications System.

4. Joint Information Center (JIC) The JIC is located at the Florence District Office on Highway 52. The Center will be simulated during this exercise.

5. Emergency Operations Facility (EOF) The EOF is located in the plant TSC/EOF Training Building. When activated, the EOF is managed by the Emergency Response Manager. He will have a staff to provide support in: Technical Analysis, Administrative and Logistics, and Emergency Communications. The Radiological Control Manager and his staff, will participate in this exercise. Direction and coordination of field and mobile radiological Monitoring Teams and onsite/offsite Dose projection are emergency functions performed out of the EOF.

6. Meteorology Tower Located north of the TSC on the plant site. Measures wind at 10.0 meters (33 feet) and 62.8 meters (206 feet) above the ground.

B. Corporate Communications Department (CCD), Raleigh. The CCD is located in the Center Plaza Building, Raleigh, NC.

C. Miscellaneous Facilities

1. Hartsville Airport, 365 foot elevation, 3300 foot runway is located approximately 4 miles east of the RNPD Plant.

2. Motels

Landmark Motel, U.S. 15 Bypass and S.C. 151
Hartsville, South Carolina (803/332-2611)

Days Inn, Business Route 15 North,
Hartsville, South Carolina (803/383-0110)

CONCEPTS AND CONDUCT OF THE EXERCISE

I. Exercise Scenario

The exercise will simulate an off-normal incident at the RNPD Plant that will require: accident recognition and classification; assessment of onsite and offsite radiological consequences; alerting, notification, and mobilization of CP&L emergency response personnel; activation and use of emergency facilities and equipment; effective use of communications; preparation of reports, messages, and records; and dispatching of plant teams.

II. Robinson Exercise Organization Activities

The exercise organization will consist of players, the Exercise Director, the Lead Exercise Controller, Controllers, Evaluators, and Observers as follows:

1. The CP&L Players include plant personnel assigned to perform functions and the emergency positions as described in the Plant Radiological Emergency Response Plan. The success of the exercise is largely dependent upon player reaction, player knowledge of the Radiological Emergency Response Plan and Implementing Procedures, and an understanding of the Exercise Plan and Exercise Objectives. Some situations affecting player action or reaction may exist at the time play begins.

However, most situations will be introduced through the vehicle of simulator response, Controller Exercise Message Cards, Exercise SPDS Data Sheets, and messages generated by players. Therefore, players are responsible for initiating actions and/or messages during the exercise according to their procedures, responsibilities, and tasks outlined for their particular function in the Plant Radiological Emergency Response Plan and Procedures.

2. The Exercise Director and Lead Exercise Evaluator will be responsible for overall exercise preparation; to oversee conduct of the exercise; to arrange preparation at the conclusion of the exercise of a consolidated evaluation and critique report; and to prepare and follow-up on an itemized list of corrective actions recommended as a result of evaluation and critique.

3. The Lead Scenario Controller will coordinate controller input as necessary to initiate player response and keep the action moving according to the scenario and objectives.

4. The Controllers will deliver "Exercise Message Cards" to designated players at various times and places during the exercise; inject or deliver additional messages, as may be required to keep the action moving according to the scenario and objectives; observe the exercise at their assigned locations; maintain controller log sheet notes; and submit recorded observations to Lead Evaluators prior to the scheduled critique. Controllers will be identified as such.

5. Lead Evaluators and Evaluators are CP&L and contractor personnel who are assigned to observe and judge the effectiveness of selected organizations, personnel, functions and/or activities of the Plant Radiological Emergency Response Plan and Implementing Procedures. Selection of evaluators is based on their expertise in, or their qualifications to evaluate the activity or area assigned. In most cases, persons designated as Controllers for a given function will also be assigned as evaluators of that function. Evaluators may record their observations using the Controller Log Sheet, and if possible, provide recommendations on corrective actions to the Lead Evaluator prior to the scheduled critique. They will take steps whenever possible to collect data on the time and motion aspects of the activity observed for post exercise use in designing system improvements. Evaluators will also be identified as such.

6. Observers from various CP&L components and from other organizations may be authorized on a limited basis to participate in the exercise solely for the purpose of observing exercise activity. Observers will be identified as such.

III. Evaluation and Critique

The exercise will be evaluated by Evaluators who will be assigned to key locations and response activities where they will record their observations using checklists provided as guidelines. Following the exercise, Evaluators will present their findings at the critiques as scheduled in this plan.

A. Evaluation of the exercise will include activities:

The following activities will be evaluated:

1. Simulator Control Room (C.R.)
2. Operational Support Center (OSC)
3. Technical Support Center (TSC)
4. Emergency Operations Facility (EOF)
5. Accident recognition, classification, and assessment, including a classification of General Emergency.
6. Assessment of onsite and offsite radiological consequences
7. Alerting, notification, and mobilization activities
8. In plant corrective actions (simulated)
9. Use of emergency facilities and equipment
10. Use of communications equipment and procedures
11. Preparation of reports, messages, and records
12. Protective actions for site personnel (Evacuation assembly, and accountability will be simulated)
13. Joint Information Center (JIC)

B. Exercise performance will be evaluated on the basis of standards or requirements contained in the Plant Radiological Emergency Response Plan and Implementing Procedures.

C. Any deficiency in the Plant Radiological Emergency Response Plan and implementing procedures, training, etc., that is identified through the critique process shall be documented by the Lead Exercise Evaluator and corrected by the organizations and individuals who have responsibility for the areas identified. Management controls shall be established to ensure that corrective actions are taken as necessary.

IV. Exercise Exempt Personnel

Some plant personnel must be exempt from exercise participation in order to maintain vital plant functions such as security, normal operations, chemistry, etc.

V. General Guidance for the Conduct of the Exercise

A. Simulating Emergency Actions

Since exercises are intended to demonstrate actual capabilities as realistically as possible, participants should act as they would during a real emergency. Wherever possible, actions should be carried out.

B. Avoiding Violation of Law

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

1. All evaluators and potential participants must avoid intentional violation of all federal, state and local laws, regulations, ordinances, statutes, and other legal restrictions.

2. Participants will not direct illegal actions being taken by other participants or members of the general public.

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

C. Actions to Minimize Public Inconvenience

It is not the intent, nor is it desirable or feasible, to effectively train or test the public response during the conduct of radiological emergency exercise. Public inconvenience is to be minimized. The actions of federal, state, and county agencies and nuclear power plant operators receive continuous public notice and scrutiny; therefore, the conduct of an exercise could arouse public concern that an actual emergency is occurring. It is important that conversations that can be monitored by the public (radio, loudspeakers, etc.) be prefaced and conclude with the words. "THIS IS A DRILL/EXERCISE MESSAGE; THIS IS A DRILL/EXERCISE MESSAGE."

D. Maintaining Emergency Response Readiness

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

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

If a real emergency occurs during the exercise, requiring the actions of Company personnel, then the exercise will be terminated by the Lead Scenario Controller in consultation with appropriate plant management. All messages about the real events will be clearly identified as such. For example, precede a real message with: "THIS IS NOT, REPEAT NOT A DRILL/EXERCISE MESSAGE."

COMMAND, CONTROL, AND COMMUNICATIONS

I. Site Emergency Coordinator (SEC)

The SEC has immediate and unilateral authority to act on behalf of the Company to manage and direct all onsite emergency operations involving the facility. During the exercise, he will have responsibility also for the simulated emergency operations.

II. Communications

Communication equipment and procedures are described in Plant Emergency Procedure and others. The plant public address (P.A) system will be the primary means of communication.

III. Records

Robinson Plant Emergency Procedures, require that plant personnel responsible for maintaining records during an emergency shall provide a copy of those records to the Emergency Preparedness Staff following an emergency or emergency exercise.

IV. Exercise Message/Drill Card

The Exercise Message Cards are prepared by the exercise planners/controllers prior to the exercise to satisfy the requirements of the scenario. The purpose of the message is to initiate a player response and to keep the exercise moving according to the scenario and objectives. The messages that are delivered to players during the play of the exercise will allow "free play".

V. Time

A. All CP&L in-plant exercise participants will report time of incidents, messages, etc., in accordance with time based on the Control Room clocks.

B. Local 24-hour clock time will be used to reference time in all reports and communications. Eastern Standard Time (EST) will be specified as appropriate.

VI. Message Preamble and Close

The words "THIS IS A DRILL/EXERCISE MESSAGE" should be used at the beginning and end of each message.

EXERCISE BASICS

The following is a definition of terms found in the tables in the following pages:

I. Participants

1. Extent of Participation:

Not Involved - These groups will not play. They may or may not be simulated by controllers as necessary.

Limited - Play is limited to less than full participation. Evaluations by controllers will not penalize players on items caused by the limited participation.

Full Play - A full staff is expected to play in the facilities involved.

Controllers - (where checked) Controllers will be used to simulate organizations not participating.

Evaluators - Evaluators will evaluate the exercise.

Observers - Outside Organizations have requested to send observers to the areas checked.

Simulated - Where controllers are not used to simulate an organization that is not participating, the entire interface with the non-participating organization is simulated.

2. Notify:

Actual - Actual notification methods and procedures are used to notify the participating organization.

Simulated - The organization is not actually notified by procedure. The notification may be made to an artificial number with a controller staged to receive the information, or it may be simulated.

Start/Finish - Some organizations want notifications only at the start and finish of an exercise and not continual updates.

3. Activation:

Actual - Actual activation may involve notifying the emergency organization members at their work place and home, and set up of the facility is performed by the participants.

Prestaged - The affected personnel may be in place or in a nearby place on standby when the initial notification to begin activation is received.

II. Facilities

1. Manning:

Not Activated - No one reports to the facility.

Single Shift - Each position is expected to be manned by a primary or alternate designee. No shift turnover is expected or required, but individual turnovers are acceptable if unavoidable schedule conflicts occur.

Multiple Shift - A shift turnover is required to meet exercise objectives.

Augmentation - An augmentation drill progressing from the available shift complement to an activated emergency response facility is performed.

2. Setup:

Simulated - Setup of the facility is simulated.

Actual - Participants are expected to set up their facilities from everyday use to emergency use.

Prestaged - Setup of the facility is already prestaged in the emergency mode.

Alternate - Where available, an alternate facility will be used.

III. CP&L and Non-CP&L Activities

1. Extent:

Not Tested - This activity is not within the scope and objectives.

Simulated - This activity is not within the scope and objectives, but it must be simulated by the players and/or controllers to assure a complete and logical exercise.

Partial - This activity is expected to be performed to the extent that plant completion can permit. Evaluators will not penalize players for non-performance of activities where they must be simulated due to circumstances beyond their control; for example, lab analyses may involve players in the lab using props instead of actual equipment.

Full - This activity is expected to be performed in full without simulation. For example, full use of SCBAs and protective clothing means donning the clothing and equipment and using the breathing air. Evaluators will look for any problems when evaluating a fully played activity.

2. Frequency:

One Time - This activity can be demonstrated one time to the evaluators in order to fulfill exercise objectives.

Every Time - This activity must be performed every time as required by the players in response to the scenario. The evaluators, when available, will observe each time the activity is performed.

Specific Time - Where an activity is prestaged or constrained by the scenario, such as for offsite fire participation, a specific time will be built into the scenario for the activity.

3. Time:

Real Time - The activity is performed as given by the players and the scenario for as long as it takes.

Compressed Time - Some activities take so long, such as analysis of filed collected samples in the mobile laboratory, that time must be compressed to complete that activity within the exercise schedule.

4. Source:

Players - The driving force behind the activity will be player response to the scenario. No messages will be handed out to players to initiate the action.

Scenario - Driving force for initiating the activity will be a message handed to the player from the controller.

Exercise Basics

Date: March 30, 1994 Begin Time: 0830 End Time: 1300

Location(s): Robinson

X Announced ____ Full Scale Max. EAL ____ Site Emergency

____ Unannounced X Small Scale X General Emergency

	Extent of Participation							Notify			Activate	
Participants	Not Involved	Limited	Full Play	Controllers	Evaluators	Observers	Simulated	Actual	Simulated	Start/Finish	Actual	Pre-staged
CP&L Site			X	X	X	X		X		X	X	
CP&L Offsite (NPS HP/Chem)			X	X	X				X	X		*
CP&L Corporate (CCD)			X	X	X			X				
Counties		X						X				X
State		X						X				X
NRC Resident						X						
NRC Operations Center	X		**					X				
NRC Site Response Team	X											
FEMA	X											
Fire Dept.	X											
Ambulance	X											
Hospital	X											
Agreement Physician	X											
Media	X						X		X			

* These personnel will be in Hartsville area, and will be delayed such that their arrival will follow EOF activation.

** If NRC is not playing, then CP&L will provide a simulated NRC contact.

	Manning				Setup			
Facilities	Not Activated	Single Shift	Multiple Shift	Augmentation	Simulated	Actual	Pre-staged	Alternate
Control Room		X					X	
OSC		X				X		
TSC		X				X		
EOF		X				X		
Joint Information Center		X				X		
CCD		X				X		
State Mobile Lab	X							
Hospital	X							
SERT/FEOC	X							
SEOC		X				X		
Simulator		X					X	

	Extent				Frequency			Time		Source	
CP&L Activities	Not Tested	Simulated	Partial	Full	One Time	Every Time	Specific Time	Real Time	Compressed	Players	Scenario
Accident Assessment				X		X		X		X	
EAL Classification				X		X		X		X	
Notification				X		X		X		X	
Accountability		X									
Evacuation		X									
Prot. Area Access Control				X		X		X		X	
Use of Dosimetry				X		X		X		X	
Use of KI		X									
Use of Protective Clothing				X		X		X			
Use of SCBA			X			X		X		X	
Use of Respirators			X			X		X		X	
Source Term Determination				X		X		X		X	
Dose Assessment				X		X		X		X	
Offsite Protective Action Recommendation				X		X		X		X	
Fire Brigade						X		X		X	
First Aid Team	X										
Decontamination	X										
Security			X			X		X		X	
PASS Sample			X		X			X		X	
Other Samples		X			X			X		X	
Lab Analysis		X			X			X		X	
Onsite Surveys				X		X		X		X	
Offsite Surveys				X		X		X		X	
Press Conference		X				X		X		X	
Media Calls		X				X		X		X	
News Release		X				X		X		X	
Rumor Control		X				X		X		X	
Recovery	X										

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

2.0 OBJECTIVES

ROBINSON 1993 EXERCISE OBJECTIVES PERFORMED ON MARCH 30, 1994

1. Demonstrate the ability of the Control Room to detect accident conditions, assess and project radiological consequences, and formulate near term mitigating actions.

2. Demonstrate the adequacy of the Technical Support Center in providing accident assessment and mitigation, and communication/notification activities.

2A. Demonstrate the adequacy of the Emergency Operation Facility in providing dose assessment and communication/notification activities.

3. Demonstrate the ability to identify and properly classify the emergency in accordance with the Emergency Plan and Implementing Procedures.

4. Demonstrate the adequacy of alerting, notifying, and mobilizing Emergency Response Organization Personnel.

5. Demonstrate the timeliness of initial and follow-up notifications to responsible state and local government agencies.

6. Demonstrate the adequacy of the information provided to responsible state and local government agencies.

7. Demonstrate the capability to make timely and accurate notification to the Nuclear Regulatory Commission. (Actual participation of the NRC Operations may be simulated.)

8. Demonstrate the ability to communicate with plant emergency teams and company environmental monitoring teams.

9. Demonstrate the ability to communicate between emergency response facilities.

10. Demonstrate the ability to support the radiological assessment process while maintaining personnel radiation exposure as low as reasonably achievable (ALARA).

11. Demonstrate the capability to perform radiological monitoring activities and assessment.

12. Demonstrate the ability to provide adequate radiation protection services such as dosimetry and personnel monitoring.

13. Demonstrate the ability to adequately control the spread of contamination and the radiological exposure of on-site and off-site emergency workers.

14. Demonstrate the ability to formulate appropriate protective action recommendations to off-site government authorities.

16. Demonstrate the ability to augment the on-shift emergency organization within the time limits specified within the Emergency Plan and its implementing procedures (normal working hours).

17. Demonstrate that the Technical Support Center, Operational Support Center, and Emergency Operations Facility can be activated in accordance with the Emergency Plan and its implementing procedures.

32. Demonstrate the activation, operation, and reporting of field monitoring teams.

33. Demonstrate the assessment of radiological consequences of the accident and of any release of radioactive material to the environment.

36. Demonstrate the ability to reassess plant conditions and evaluate recovery considerations as defined by the plant emergency plan.

38. Demonstrate that previously identified NRC Open Items resulting from the previous year's exercise can be closed.

Numbered objectives represent their order in the data base and are not intended to be sequential.

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1994 DEFERRED EXERCISE

3.0 SCENARIO

CON-94-0222
RNPD-94-03-R0

Robinson 1993 Deferred Annual Exercise

Note: This Exercise will be run with the simulator in interactive mode, all times given are approximate

At 0830 EST on March 30, 1994 Robinson Unit 2 is at 100% power, late in core life, and the RCS activity is normal. At 0846 , a small fire in the Charging Pump room occurs at the "A" Charging Pump and cabling area. Fire alarms will be received in the Simulator Control Room and a Fire Brigade response initiated. At 0855 the dedicated shutdown power supply (a power supply in addition to the Emergency Busses) will be de-energized as a result of the fire, removing the use of loads supplied from the DS bus ("A" Charging Pump, "A" CCW Pump, etc.).

An **Alert** should be declared around 0900 based on a fire with the potential to affect safety related equipment. The fire may be successfully extinguished by the plant Fire Brigade after 15 minutes of in-room fire fighting effort. No offsite assistance will be required to extinguish the fire.

At 0915 a 100 gpm primary to secondary leak is ramped in to the "A" Steam Generator. The leak causes alarms in the blowdown radiation monitor for the associated Steam Generator and the Condenser Air Ejector discharge monitor. Plant shutdown may begin around 0930. At 0926, the fan belts break on the HVS-1 supply fan interrupting supply air to the Auxiliary Building. The loss of supply air disrupts the flow balance within the Auxiliary Building, but negative pressure is maintained.

During the plant shutdown, a spurious Turbine Trip occurs with no associated Reactor trip (ATWS). A manual trip from the control board will be required to reduce reactor power. This represents a second **Alert**. The Steam Dump System (designed to relive steam flow from the Steam Generators to the Condenser after a Turbine Trip) fails to operate. All Steam line Power Operated Relief Valves (PORVs) open to prevent overpressurization. When the plant stabilizes the "A" Steam Line PORV will remain stuck open.

A **Site Area Emergency** should be declared around 1017 based upon a 100 gpm leak in the Reactor Coolant System and the stuck open PORV which provides a direct uncontrolled path to the atmosphere. However the release is minor as no fuel failure has occurred at this time.

At 1116, a Loose Parts Monitoring System (LPMS) alarm occurs which indicates loose parts transported in the Reactor Coolant System. The loose parts result in mechanical damage to a number of fuel assemblies in the core. Approximately 9% of the fission product activity normally trapped in the space between the fuel and the cladding (gap activity) is released into the RCS. Reactor coolant related radiation monitors begin to alarm. Since there is also a leak of coolant into the "A" Steam Generator, this activity is released out the open PORV.

A **General Emergency** should be declared at around 1130 based upon the fuel damage in addition to the direct pathway via the Steam Generator leak and open PORV for release into the environment.

From 1130 until approximately 1300, the release continues while the Control Room cools down and depressurizes the Reactor Coolant System to mitigate the release. At 1210, the chain drive on the Turbine turning gear breaks, causing the turbine to stop rolling. Damage Control teams may want to repair the chain to prevent damage to the turbine.

Deferred 1993 RNPD Exercise Time line

Note: This Exercise will be run with the simulator in interactive mode, all times given are approximate

T0	0830	Initial conditions: Reactor is at 100% power steady state, RCS boron concentration is 22 ppm, late in core life, normal RCS activity. "A" Charging and "A" CCW pumps are running.
T+16"	0846	Fire alarm in Charging Pump Room (one train), Fire Tech. will be dispatched to investigate.
T+18"	0848	Second train fire alarm actuated in Charging Pump Room, Fire alarm will be sounded and fire brigade will respond.
T+21"	0851	Approximate time for status report from Charging Pump Room. Status will be room has heavy smoke near the overhead and flames appear to be coming from the "A" Charging Pump fire. Sparks have been thrown from "A" pump onto "B" pump and the Charging Pump Control Panel causing some burn marks on both.
T+25"	0855	DS Bus Undervoltage alarm is received on the DS/FP Annunciator panel A. "A" CCW Pump and "A" Charging Pump will be lost as a result of the loss of the DS bus. "D" Service Water Pump alternate power supply from the DS bus is lost also.
T+26"	0856	480 Volt Bus Ground Alarm (APP-009-E7) is received to give the Control Room indications of other potential problems. Approximate time for Fire Brigade at the scene.
T+30"	0900	Approximate time for declaring ALERT based on fire with potential to effect safety related equipment.
T+38"	0908	Approximate time fire is reported out. Actual time for "fire out" will be after 15 minutes of in room fire fighting. Initial attempts with portable equipment will be unsuccessful.
T+45"	0915	Charging Pump High Speed alarm (APP-003-F4) is received on the RTGB. Steam Generator Tube Rupture is beginning (100 gpm leak ramped in over 10 minutes) in "A" Steam Generator.
T+46"	0916	A second Charging Pump will be started and a leak rate determination (OST-051) may be started.
T+50"	0920	R-19A (Steam Generator Blowdown) monitor alarms.
T+52"	0922	R-15 (Condenser Air Ejector Discharge) monitor alarms.
T+56"	0926	Fan belts break on HVS-1 interrupting supply air to the Auxiliary Building.

T+59"	0929	Start shutdown of the Reactor at 2% a minute, RCS boration begins.
T+72"	0942	Approximate time to recover DS bus (actual time to be determined by player response), this will recover "A" CCW Pump.
T+75"	0945	Shutdown rate increased to 3% a minute.
T+97"	1007	A spurious Turbine trip and an failure of the reactor to automatically trip (ATWS). Manual Trip from the RTGB will be successful.
T+98"	1008	Due to a failure of the Steam Dump System to operate all three Steam Generator PORVs lift to reduce pressure.
T+102"	1012	"A" S/G PORV will remain open after temperature is returned to normal.
T+103"	1013	The Main Steam Isolation Valve for "A" S/G to be shut after RCS temperature is reduced below 547F.
T+107"	1017	Approximate time to declare SITE AREA EMERGENCY based on two (RCS and Containment) Fission Product Barriers breached.
T+152"	1102	"A" S/G PORV fails full open.
T+166"	1116	LPMS alarm is received in the Control Room.
T+168"	1118	R-9 (Letdown line) monitor alarms and continues to increase.
T+171"	1121	R-9 exceeds 5 Rem (if Letdown is in service).
T+175"	1125	Approximate time for GENERAL EMERGENCY declaration.
T+176-END	1126	Cooldown and depressurization to stop release.
T+220"	1210	Chain drive on Turbine Turning Gear breaks, causing turning gear to stop.
T+270"	1300	Approximate end of drill.

T-Time	Clock	Simulator Instruction	Event Description	Emergency Plan Actions	Missions Dispatched
0173	1123	Xmitter Override: RMS (31A): 55.1 mR/hr in 4900 sec. **If Letdown is NOT secured:** RMS (R-9): 9227 mR/hr in 2100 sec. RMS (R-4): 923 mR/hr in 2100 sec.	Control Room continues to attempt to cool down and stop release.		
0179	1129	Xmitter Override: RMS (31B): 3.2 mR/hr in 300 sec. RMS (31C): 3.2 mR/hr in 300 sec.			
0188	1138			Approximate time to declare a General Emergency, based on breach of all three fission product barriers, alarm on R-31A, and/or dose projection.	
0210	1200	**If Letdown is NOT secured:** Xmitter Override: RMS (R-9): 7414 mR/hr in 5400 sec. RMS (R-4): 741 mR/hr in 5400 sec.			
0220	1210	Malfuntsion: Turning Gear Motor Trip, APP -008, Window D-2 Turbine ar Zero Speed, APP-009, Window F-2	After turbine turning gear is engaged, a failure in the turning gear drive chain occurs, causing the turning gear to stop.		
0255	1245	Xmitter Override: RMS (31A): 26.4 mR/hr in 2700 sec.			
0270	1300	Terminate Drill	Terminate Drill	Terminate Drill	Terminate Drill

EMERGENCY EXERCISE SCENARIO
ROBINSON NUCLEAR PROJECT
ALL TIMES ARE APPROXIMATE

Developed:
March 16, 1994

T-Time	Clock	Simulator Instruction	Event Description	Emergency Plan Actions	Missions Dispatched
-0030	0800	Set IC=13; Set Met Data Flag: JLOA MET = False (File: 33094) 100% Power, EOL 22 ppm Boron "A" Charging Pump operating "A" CCW Pump running The cation demineralizer is not in service. MAL MSS 6A,B,C,D,E (Steam dumps fail shut) MAL RPS-1A and 1B, (Fail to trip auto only) Fail SI Flow indication on ERFIS only. Xmitter Override: RMS (R-2): 11 mR/hr RMS (R-4): 6 mR/hr RMS (R-7): 8 mR/hr RMS (R-9): 70 mR/hr RMS (R-11): 20000 CPM RMS (R-12): 1200 CPM RMS (R-14A): 700 CPM RMS (R-14B): 20 CPM RMS (R-14C): 40 CPM RMS (R-14D): 10 CPM RMS (R-14E): 10 CPM RMS (R-15): 15 CPM RMS (19A): 2000 CPM RMS (19B): 1000 CPM RMS (19C): 1000 CPM RMS (31A): .3 MR/HR RMS (31B): .4 MR/HR RMS (31C): .6 MR/HR RMS (32A),(32B): 1 R/HR RMS (33): .35 MR/HR	Initial Conditions: Reactor is at 100% power. The cation demineralizer is not in service. "A Charging Pump and "A" CCW Pump are in service.	Control Room/E&RC/Maintenance turnover briefing.	
0000	0830	Exercise begins:			

T-Time	Clock	Simulator Instruction	Event Description	Emergency Plan Actions	Missions Dispatched
0016	0846	LOA FPS-22 to true: Fire Alarm Train A, Charging Pump Room	A fire alarm in the charging pump room occurs.	Control Room dispatches AO to investigate	AO is dispatched to Charging Pump room.
0018	0848	LOA FPS-23 to true: Fire Alarm Train B, Charging Pump Room	Second train of fire alarm in charging pump room comes in.	Control Room sounds fire alarm and dispatches fire brigade.	Fire brigade musters
0021	0851				Status report from charging pump room. Room has heavy smoke near the overhead and flames appear to be coming from the "A" Charging Pump fire. Sparks have been thrown from "A" motor onto "B" pump causing some burn marks on the motor.
0025	0855	LOA EPS-63 to False: Loss of DS Bus	A DS Bus Undervoltage alarm is received on the DS/FP Annunciator panel A. "A" CCW Pump and "A" Charging Pump will be lost as a result of the loss of the DS bus. "D" Service Water Pump alternate power supply from the DS bus is lost also.		
0026	0856	Override EPS-5: 480v bus ground alarm.	A 480 volt bus ground alarm (APP-009-E7) is received to give the Control Room indications of other potential problems.	An Alert should be declared based upon a fire potentially affecting safety related equipment.	Fire brigade should reach the scene.
0038	0908	**LOA EPS-157 to.false to rack out "A" Charging Pump breaker.**			Fire brigade should report fire is out.
0041	0911			Offsite Agencies should be notified of an Alert. Search of TSC for incorporating into Protected Area should begin. PA announcement of Alert. TSC Personnel should assemble in old O&M Bldg.	
0043	0913	MAL SGN-2A at 100 gpm over 600 sec. Xmitter Override: RMS (R-15): 4359 CPM in 600 sec. RMS (19A): 3500 CPM in 600 sec.	A Steam Generator tube leak begins in the "A" Steam Generator. Control Room will first detect leak with a charging pump high speed alarm.		

T-Time	Clock	Simulator Instruction	Event Description	Emergency Plan Actions	Missions Dispatched
0046	0916	Xmitter Override: RMS (R-14A):2495 CPM in 3600 sec. RMS (R-14B): 142 CPM in 3600 sec. RMS (R-14C):1836 CPM in 3600 sec.	A second charging pump will be started and a leak rate determination (OST-051) may be started.	Review EALs. EAL should indicate Breach of RCS once leak rate is determined. This is still only an Alert.	
Var-iable	Var-iable	On R-19A Alarm/isolation: decayR-19A to 2000 cpm in 10000 seconds	An alarm is received for the Steam Generator blowdown monitor. Blowdown is automatically isolated.		
Var-iable	Var-iable		An alarm is received for the condenser air ejector discharge monitor.		
0053	0923	Xmitter Override: RMS (R-15): 16504 CPM in 3120 sec.			
0056	0926	Malfunction: HVS-1 Trouble alarm, APP-010, Window A-5	HVS-1 belts break interrupting supply ari to the Auxiliary Building.	Search of TSC should be complete. Personnel should be allowed to enter TSC.	
0059	0929		Control Room should begin shut down of unit at approximately 2% per minute. RCS boration begins.	Approximate time that TSC, EOF and OSC will be activated.	
0072	0932	LOA EPS-155 to true: approximate time to reenergize DS bus.	DS Bus is reenergized to recover "A" CCW pump.		
0075	0945		Control Room increases shutdown rate to approximately 3% per minute.		
0097	1007	EH oil leak at 20 gpm, **30 Seconds after EH leak:** MAL Tur-1: Turbine Trip **ATWS trip from RTGB successful**	EH leak causes turbine trip and a failure of the reactor to automatically trip (ATWS) occurs. A manual trip from the RTGB is successful.	A review of the EALs indicates the ATWS as an Alert also.	
0098	1008		Steam dumps fail to open and all three Steam Generator PORVs lift. to reduce pressure.		

T-Time	Clock	Simulator Instruction	Event Description	Emergency Plan Actions	Missions Dispatched
0102	1012	MAL MSS-4A to 30%: "A" S/G PORV fails to completely shut.	The "A" S/G PORV will remain open after temperature and pressure in the steam generator return to below the pressure set point.	Review EALs	Dispatch AO to investigate the PORV. Form an OSC repair team to gag the valve shut.
0103	1013	Xmitter Override: RMS (R-15): 3184 CPM in 3600 sec. RMS (R-14A):1045 CPM in 3600 sec RMS (R-14B): 44 CPM in 3600 sec. RMS (R-14C): 385 CPM in 3600 sec.	The MSIV for "A" Steam Generator is shut after RCS temperature is reduced below 547°F.		
0107	1017			Approximate time that a SITE AREA EMERGENCY is declared based upon: RCS Leakage > 50 gpm PORV stuck open = containment breach	
0152	1102	MAL MSS-4A to 100%: "A" S/G PORV fails to full open.	"A" Steam Generator PORV fails to full open.		
0166	1116	Override RCS-18 on: LPMS alarm	An LPMS alarm is recieved from the reactor vessel.		
0168	1118	Xmitter Override: RMS (31A): 23.8 mR/hr in 300 sec. **R-31A MUST Alarm!** RMS (R-15): 132 CPM in 7200 sec. RMS (R-14A): 713 CPM in 7200 sec RMS (R-14B): 25 CPM in 3600 sec. RMS (R-14C): 45 CPM in 3600 sec. **If Letdown is NOT secured:** RMS (R-4): 714 mR/hr in 2100 sec. RMS (R-9): 7135 mR/hr in 300 sec.			
Var-iable	Var-iable		**IF Letdown is NOT secured:** R-9 (Letdown Monitor) alarms, leading to a fuel fission product barrier breach.	Review EALs	
Var-iable	Var-iable		R-31A (Main Steam Line A) radiation monitor alarms, indicating a breach of all three fission product barriers.	Review EALs	

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

3.1 MESSAGES

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 1 Date 3-29-94 Time Player Briefing

MESSAGE FOR: ALL PARTICIPANTS

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

THE PLANT HAS BEEN AT 100% POWER FOR THE LAST 80 DAYS, NEAR THE END OF CORE LIFE (300 EFPD). THE BORON CONCENTRATION IS 22 PPM. THE "DIAL UP" PORT AT THE METEOROLOGICAL TOWER FOR USE BY PCs IS OUT OF SERVICE FOR THE REST OF THE WEEK. MET DATA IS AVAILABLE VIA ERFIS.

ACTIONS EXPECTED:

REVIEW DSR AND SHARE WITH EMPLOYEES AS APPROPRIATE.

FOR CONTROLLER USE ONLY

CON-94-0222
RNPD-94-03-R0

DATE 3-29-94

ROBINSON NUCLEAR PROJECT
OPERATIONS DAILY STATUS REPORT

DAYS OF CONTINUOUS RUN: 80
ON LINE: 01-08
@ 0557

CORE THERMAL POWER: 100
ELECTRIC GEN: NET 690
GROSS 724
MDC: 683

1. SIGNIFICANT OCCURRENCES OR EVOLUTIONS SINCE LAST REPORT (SCRAM, S/U, S/D, ETC.) AFFECTING POWER LEVEL OR SCHEDULE:
   NET GENERATION THROUGH MIDNIGHT 3-28-94: 4,026,328

2. GENERATION OR OUTAGE PLANS AND LIMITS FOR NEXT 24 HOURS:

3. SIGNIFICANT PROBLEMS THAT HAVE POTENTIAL TO AFFECT LOAD OR SCHEDULE:
   SIGNIFICANT LCO'S:

   NEW PROBLEMS:

4. ADDITIONAL COMMENTS:
   MAJOR WORK IN PROGRESS:

   ABNORMAL PLANT CONDITIONS:

ANNUNCIATOR: LIGHTED 0 DISABLED 0

PRIMARY COOLANT LEAKAGE .0396 CONDENSER AIR INLEAKAGE 0

AVERAGE S/G CATION CONDUCTIVITY .11 MICRO-SIEMENS
(ACTION LEVEL 1 - >0.8)

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 2 Date 3-30-94 Time 0800

MESSAGE FOR: OPERATING SHIFT PERSONNEL

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

PLANT INITIAL CONDITIONS: 100% POWER NEAR END OF CORE LIFE, BORON CONCENTRATION 22 PPM. NORMAL WORK ACTIVITIES IN PROGRESS PER PLANT SCHEDULE (ATTACHED).

THE DIAL-UP PORT AT THE METEOROLOGICAL TOWER FOR USE BY PCs IS OUT OF SERVICE. MET DATA IS AVAILABLE FROM ERFIS.

ACTIONS EXPECTED:

SHIFT OPERATIONS PERSONNEL TO REVIEW AND UNDERSTAND STATUS OF PLANT.

FOR CONTROLLER USE ONLY

CON-94-0222
RNPD-94-03-R0

DATE 3-30-94

ROBINSON NUCLEAR PROJECT
OPERATIONS DAILY STATUS REPORT

DAYS OF CONTINUOUS RUN: 81
ON LINE: 01-08
@ 0557

CORE THERMAL POWER: 100
ELECTRIC GEN: NET 690
GROSS 724
MDC: 683

1. SIGNIFICANT OCCURRENCES OR EVOLUTIONS SINCE LAST REPORT (SCRAM, S/U, S/D, ETC.) AFFECTING POWER LEVEL OR SCHEDULE:
NET GENERATION THROUGH MIDNIGHT 3-29-94: 4,043,704

2. GENERATION OR OUTAGE PLANS AND LIMITS FOR NEXT 24 HOURS:

3. SIGNIFICANT PROBLEMS THAT HAVE POTENTIAL TO AFFECT LOAD OR SCHEDULE:
SIGNIFICANT LCO'S:

NEW PROBLEMS:

4. ADDITIONAL COMMENTS:
MAJOR WORK IN PROGRESS:

ABNORMAL PLANT CONDITIONS:

ANNUNCIATOR: LIGHTED 0 DISABLED 0

PRIMARY COOLANT LEAKAGE .0396 CONDENSER AIR INLEAKAGE 0

AVERAGE S/G CATION CONDUCTIVITY .11 MICRO-SIEMENS
(ACTION LEVEL 1 - >0.8)

CON-94-0222
RNPD-94-03-RO

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 3 Date 3-30-94 Time 0846

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

FIRE ALARM COMPUTER:

A11 30-MAR-94 08:46 ZN-4 FIRE ALM. TRN-A CHARGING PUMP ROOM.
A55 30-MAR-94 08:46 ZN-NO FIRE ALM. TRN-A FDAP A1 MASTER FIRE ALM.

ACTIONS EXPECTED:

DISPATCH FIRE TECH/FIRE BRIGADE MEMBER TO INVESTIGATE STATUS OF CHARGING PUMP ROOM.

FOR CONTROLLER USE ONLY

REFERENCE MISSION #1

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. A (CONTINGENCY) Date 3-30-94 Time ANY TIME AFTER 0846

MESSAGE FOR: ANY PASSERS-BY

FROM: CONTROLLER - FIRE

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

YOU HEAR A LOUD BELL RINGING.

ACTIONS EXPECTED:

NOTIFY DRILL CONTROL ROOM VIA THE PA SYSTEM.

FOR CONTROLLER USE ONLY

THE BELL IS FROM FDAP PANEL. INFORMATION MAY BE GIVEN TO ANY PASSER-BY. ENSURE, AND IF NECESSARY, PROMPT: "THIS IS AN EXERCISE MESSAGE" OVER THE PA SYSTEM.

REFERENCE MISSION #1

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 4 Date 3-30-94 Time 0848

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

FIRE ALARM COMPUTER:

A73 30-MAR-94 08:48 ZN-4 FIRE ALM. TRN-B CHARGING PUMP ROOM.
B09 30-MAR-94 08:48 ZN-NO FIRE ALM. TRN-B FDAP B1 MASTER FIRE ALM.

ACTIONS EXPECTED:

CONTROL OPERATOR SOUNDS PLANT FIRE ALARM AND MAKES PLANT PAGE ANNOUNCEMENT REGARDING A FIRE IN THE CHARGING PUMP ROOM. ALSO MAKES PLANT PAGE ANNOUNCEMENT FOR FIRE BRIGADE TO RESPOND.

COORDINATE WITH CONTROL ROOM THE SOUNDING OF THE PLANT FIRE ALARM.

SHIFT SUPERVISOR/DESIGNEE MAY START EVALUATING THE EALS FOR CLASSIFICATION OF EVENT.

FOR CONTROLLER USE ONLY

ENSURE, AND IF NECESSARY, PROMPT: "THIS IS AN EXERCISE MESSAGE" OVER THE PA SYSTEM.

REFERENCE MISSION #1

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 5 Date 3-30-94 Time UNSPECIFIED (SEE BELOW)

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

FIRE ALARM COMPUTER:

C58 A50 30-MAR-94 _____ ZN-NO FIRE ALM TRN-NO M.D. FIRE PUMP RUNNING

ACTIONS EXPECTED:

NONE SPECIFIED

FOR CONTROLLER USE ONLY

ALARM TIME IS 08:55 IF MOTOR DRIVEN FIRE PUMP WAS NOT MANUALLY STARTED BY CONTROL ROOM PERSONNEL. OTHERWISE, THE ALARM TIME IS ACTUAL TIME OF CONTROL ROOM ACTION IF THEY DO MANUALLY START THE PUMP. ENTER TIME OF MANUAL PUMP START OR SPRINKLER ACTIVATION IN BLANK SPACE ABOVE.

REFERENCE MISSION #1

CP&L
EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 6 Date 3-30-94 Time 0855

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

DS/FP ANNUNCIATOR PANEL A ALARMS: DS BUS UNDERVOLTAGE (APP-021-E1) ALARMS
52/32A TRIP (APP-021-22) ALARMS

ANNUNCIATOR PANEL 1 ALARM: COMP COOL PUMPS LO PRESS (APP-001-F5)
ON RTGB: "A" CCW PUMP INDICATOR LIGHTS ARE OUT
"B" & "C" CCW PUMPS LIGHTS INDICATE RED

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL MAY CONTACT I&C OR ANY NON-FIRE BRIGADE A.O. TO INVESTIGATE BUS ALARM.

CONTROL ROOM PERSONNEL MAY CONTACT FIRE BRIGADE REGARDING ISOLATION OF ELECTRICAL FEEDS TO "A" CHARGING PUMP AND RECEPTACLES IN CHARGING PUMP ROOM.

CONTROL ROOM PERSONNEL MAY INVESTIGATE IMPACT OF LOSS OF DS BUS ON PLANT (I.E., LOSS OF "A" CCW PUMP AND DS BUS FEED TO "D" SERVICE WATER PUMP).

FOR CONTROLLER USE ONLY

DS BUS TRIPPED VIA OPENING OF BREAKER 32A. THE "A" CHARGING PUMP CIRCUITRY SHORTED AND THE BREAKER FAILED TO TRIP. THIS SHORT PULLED DOWN THE VOLTAGE ON THE DS BUS AND THE 32A (BUS SUPPLY) BREAKER TRIPPED ON UV. OPENING AND/OR RACKING OUT THE "A" CHARGING PUMP BREAKER WILL CLEAR THE DS BUS FAULT AND THE BUS MAY BE RE-ENERGIZED VIA BREAKER 32A OR VIA THE DS DIESEL AND BREAKER 32B. IF AN ATTEMPT IS MADE TO RESTORE THE DS BUS VIA THE DS DIESEL AND BREAKER 32B PRIOR TO CLEARING THE "A" CHARGING PUMP BREAKER FAULT, THE 32B BREAKER WILL ALSO TRIP ON UV.

REFERENCE MISSION #2

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 7 Date 3-30-94 Time 0856

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

APP-009 E7 "480V GROUND FAULT"

ACTIONS EXPECTED:

REFER TO ANNUNCIATOR PANEL PROCEDURES.

DISPATCH AO TO LOCATE GROUND.

FOR CONTROLLER USE ONLY

GROUND IS TO GIVE INDICATIONS THAT THERE MAY BE OTHER PROBLEMS.
GROUND ON "B" CHARGING PUMP. (E1 BUS)

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 7A Date 3-30-94 Time 0856

MESSAGE FOR: OPERATOR INVESTIGATING GROUND

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

GROUND ON E1 BUS ("B" CCW PUMP)

ACTIONS EXPECTED:

REPORT LOCATION.

DISPATCH AO TO LOCATE GROUND.

FOR CONTROLLER USE ONLY

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 8 Date 3-30-94 Time ON ARRIVAL (SEE BELOW)

MESSAGE FOR: FIRE TECH/FIRE BRIGADE TEAM LEADER/AO

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

CHARGING PUMP ROOM SIGHT AND SOUND INFORMATION: ROOM HAS HEAVY SMOKE NEAR OVERHEAD, FLAMES ARE PRESENT ON "A" CHARGING PUMP MOTOR. DOES NOT FEEL INTENSE HEAT AT DOOR.

FDAP PANELS ARE ALARMING AND ZONE LIGHT FOR CHARGING PUMP ROOM IS LIT.

ACTIONS EXPECTED:

NOTIFICATION OF ROOM STATUS BE MADE TO THE CONTROL ROOM. ONCE TEAM LEADER IS ON SCENE, HE WILL UPDATE THE RESPONDING FIRE BRIGADE MEMBERS. RC FIRE SUPPORT PERSONNEL SHOULD RESPOND WITH THE BRIGADE.

FOR CONTROLLER USE ONLY

PROVIDE INFORMATION TO FIRE TECH/FIRE BRIGADE TEAM LEADER WHEN THEY FIRST ENTER THE CHARGING PUMP ROOM.

REFERENCE MISSION #1

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. B (CONTINGENCY) Date 3-30-94 Time NOT SPECIFIED (SEE BELOW)

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

"A" CHARGING PUMP HAS NO LIGHT INDICATION. IF A START IS ATTEMPTED, THERE IS STILL NO LIGHT INDICATION AND CHARGING FLOW DOES NOT INCREASE.

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL MAY CONTACT I&C OR NON-FIRE BRIGADE A.O. TO INVESTIGATE PUMP STATUS.

FOR CONTROLLER USE ONLY

IF STATUS OF "A" CHARGING PUMP IS DISCOVERED BY CONTROL ROOM PERSONNEL AS A RESULT OF LOSS OF DS BUS, PROVIDE THIS MESSAGE AT THAT TIME. OTHERWISE, PROVIDE THIS MESSAGE IF THEY ATTEMPT TO START THE "A" CHARGING PUMP.

REFERENCE MISSION #2.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 9 Date 3-30-94 Time NOT SPECIFIED (SEE BELOW)

MESSAGE FOR: FIRE BRIGADE

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

THE FIRE IS EXTINGUISHED. ROOM STILL CONTAINS CONSIDERABLE SMOKE. WATER IS ON THE FLOOR (IF HOSE USED).

ACTIONS EXPECTED:

FIRE BRIGADE TO NOTIFY CONTROL ROOM THAT FIRE IS OUT, SCOPE OF DAMAGE IS UNKNOWN AND A LARGE AMOUNT OF SMOKE IS STILL IN ROOM.

FIRE BRIGADE MAY MAKE PREPARATIONS FOR SMOKE EJECTION.

FIRE BRIGADE MAY ALSO DE-ENERGIZE SELECTED ELECTRICAL FEEDS TO THE ROOM. SIMULATION OF THE DE-ENERGIZING IS PERMITTED.

FOR CONTROLLER USE ONLY

ACTUAL MESSAGE TIME IS TO BE AFTER 15 MINUTES OF FIRE FIGHTING ACTIONS INSIDE OF THE CHARGING PUMP ROOM WITH FIRE HOSES AND/OR APPROPRIATE FIRE EXTINGUISHERS. NO ACTUAL EXTINGUISHER ACTUATION OR HOSE ENERGIZATION IS TO BE DONE. SIMULATE THESE ACTIONS.

CREDIT FOR SIMULATION OF DE-ENERGIZING ELECTRICAL FEEDS SHOULD BE EARNED BY PLAYERS BY DEMONSTRATION OF KNOWLEDGE REGARDING HOW AND WHERE TO PERFORM THESE ACTIONS.

REFERENCE MISSION #1

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. C (CONTINGENCY) Date 3-30-94 Time 0913

MESSAGE FOR: SHIFT SUPERVISOR

FROM: CONTROLLER - CONTROL ROOM

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

DECLARE AN ALERT BASED UPON CONFIRMED FIRE. FIRE HAS THE POTENTIAL TO AFFECT SAFETY RELATED EQUIPMENT.

ACTIONS EXPECTED:

SHIFT SUPERVISOR WILL DECLARE ALERT AND IMPLEMENT ACTIONS OF PEP-103.

FOR CONTROLLER USE ONLY

GIVE THIS MESSAGE OUT ONLY IF AN ALERT HAS NOT BEEN DECLARED BY 0913.

DO NOT GIVE THIS MESSAGE WITHOUT APPROVAL OF LEAD EXERCISE CONTROLLER.

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 10 Date 3-30-94 Time 0915

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 1 ALARM: CHARGING PUMPS HI SPEED (APP-003-F4) ALARMS
ON RTGB: MAXIMUM DEMAND SIGNAL PRESENT ON SPEED CONTROLLER FOR OPERATING CHARGING PUMP

ACTIONS EXPECTED:

CONTROL OPERATOR STARTS A SECOND CHARGING PUMP (REFER TO CONTINGENCY MESSAGE B REGARDING USE OF THE "A" CHARGING PUMP).

CONTROL ROOM PERSONNEL MAY DISPATCH A.O. TO INVESTIGATE CHARGING PUMP ROOM LEAKS AND/OR OTHER AUX. BLDG. LEAKS/SUMPS.

CONTROL ROOM PERSONNEL MAY OBSERVE VCT LEVEL, PRESSURIZER LEVEL, LETDOWN FLOWRATE AND CHARGING FLOWRATE.

CONTROL ROOM PERSONNEL MAY PERFORM OST-051.

FOR CONTROLLER USE ONLY

100 GPM LEAK STARTING WHEN OST-051 IS INITIATED PROVIDE ATTACHED INITIAL DATA FORM AFTER PLAYER HAS SHOWN KNOWLEDGE OF HOW TO OBTAIN DATA AND FILL IN THE APPROPRIATE INITIAL READING TIME. THE FINAL DATA FORM IS ASSOCIATED WITH MESSAGE #13.

LEAKAGE EVALUATION DATA SHEET

		TOTAL LEAKAGE			TANK INLEAKAGE DATA			
STEP NO.	ITEM	VCT LVL LI-115 (NEAREST 0.1")	PZR LVL LI-459A or LI-460	RCS TEMP. (TAVG TR-408) (≥540°F) (TR-413) (<540°F)	PZR RELIEF TANK LI-470	RCS DRAIN TANK LI-1003	ACCUMULATORS LI-920 LI-924 LI-928	TIME
7.1	Initial Reading	34.9	52	575	70 % gal*	23 % gal**	77 76 77	
7.3	Final Reading				% gal*	% gal**		
Difference				N/A	N/A	N/A		
Multiplier		23.78 gal/in	50.56 gal/%	N/A	N/A	N/A	7 gal/%	N/A
Change in Volume (gals)				N/A				N/A

Total Leakage Rate $= \frac{(\Delta \text{ VCT Lvl, gal}) + (\Delta \text{ Pzr Lvl, gal})}{\text{(Test Duration, min)}} =$ _____ gpm

COMMENTS:

*Use Curve Book, Curve 8.23 to convert tank level into gallons (if level did not change, N/A).

**Use Curve Book, Curve 8.10 to convert tank level into gallons (if level did not change, N/A).

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 11 Date 3-30-94 Time 0920

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 2 ALARM: PROCESS MONITOR HI RADIATION (APP-021-A2) ALARMS
RADIATION MONITOR PANEL: R-19A ALARMS AT 3500 CPM AND IS INDICATING 4000 CPM.

ACTIONS EXPECTED:

PERFORM AOP-005 ACTIONS. CONTACT CHEMISTRY TO SOURCE CHECK THE MONITOR. MAKE PAGE ANNOUNCEMENT REGARDING R-19A ALARM. CHECK TO VERIFY THAT BLOWDOWN ISOLATION VALVES ARE SHUT FOR "A" STEAM GENERATOR.

MAY DISPATCH AN A.O. TO CHECK STATUS OF FCV-4204A.

FOR CONTROLLER USE ONLY

FCV-1930 A & B IS CLOSED.

POST ATTACHED FORM LOCALLY NEAR R-19A AREA.

CON-94-0222
RNPD-94-03-R0

CON-94-0222
RNPD-94-03-RO

THIS IS AN EXERCISE MESSAGE

NOTICE:

PROCESS RADIATION MONITOR R-19A

IS IN ALARM

3.1-15A

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. D (CONTINGENCY) Date 3-30-94 Time FLOATING, FOLLOWS MESSAGE #11 ACTIONS

MESSAGE FOR: CHEMISTRY TECHNICIAN

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

NO STEAM GENERATOR "A" SAMPLE FLOW.

ACTIONS EXPECTED:

R19A INTERLOCK RESET AND SAMPLE TAKEN. (SEE CONTROLLER MESSAGE BELOW)

FOR CONTROLLER USE ONLY

HAND OUT ONLY IF R-19A INTERLOCK NOT RESET PRIOR TO SAMPLING. MAY BE RESET AT RTGB (KEYSWITCHED) OR A SECOND PERSON MUST HOLD THE CONTROL SWITCH FOR VALVES FCV-1933A & B TO THE OPEN POSITION ON THE BLOWDOWN CONTROL VALVE PANEL FOR THE DURATION OF THE SAMPLING.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 12 Date 3-30-94 Time 0922

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 2 ALARM (REFLASH): PROCESS MONITOR HI RADIATION REFLASHES
RADIATION MONITOR PANEL: R-15 ALARMS AND IS READING 2500 CPM.

ACTIONS EXPECTED:

PERFORM AOP-005 ACTIONS
PERFORM SOURCE CHECK OF R-15
MAKE PAGE ANNOUNCEMENT REGARDING R-15 ALARM
CONTROL ROOM PERSONNEL MAY REFER TO EALS

FOR CONTROLLER USE ONLY

R-15 IS READING 2500 CPM AND INCREASING RAPIDLY.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 13 Date 3-30-94 Time NOT SPECIFIED
5 MIN AFTER
OST START VIA
MESSAGE #10

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

OST-051 DATA (FINAL) (DATA ATTACHED)

ACTIONS EXPECTED:

SATISFACTORY COMPLETION OF OST-051 INDICATES 55 GPM UNIDENTIFIED LEAKAGE. CONTROL ROOM PERSONNEL MAY REFER TO EALS.

FOR CONTROLLER USE ONLY

FINAL DATA TO BE GIVEN 5 MINUTES AFTER INITIAL DATA, FILL IN THE APPROPRIATE TIMES. 55 GPM MAINTAINS ALERT BASED ON 1 FPB BREACHED (RCS).

CON-94-0222
RNPD-94-03-RO

LEAKAGE EVALUATION DATA SHEET

		TOTAL LEAKAGE			TANK INLEAKAGE DATA			
STEP NO.	ITEM	VCT LVL LI-115 (NEAREST 0.1")	PZR LVL LI-459A or LI-460	RCS TEMP. (TAVG TR-408) (≥540°F) (TR-413) (<540°F)	PZR RELIEF TANK LI-470	RCS DRAIN TANK LI-1003	ACCUMULATORS LI-920 LI-924 LI-928	TIME
7.1	Initial Reading	34.9	52	575	70 % gal*	23 % gal**	77 76 77	
7.3	Final Reading	23.2	52	575	70 % gal*	23 % gal**	77 76 77	
Difference				N/A	N/A	N/A		5
Multiplier		23.78 gal/in	50.56 gal/%	N/A	N/A	N/A	7 gal/%	N/A
Change in Volume (gals)				N/A				N/A

Total Leakage Rate = $\frac{(\Delta \text{ VCT Lvl, gal}) + (\Delta \text{ Pzr Lvl, gal})}{\text{(Test Duration, min)}}$ = _____ gpm

COMMENTS:

_____

_____

*Use Curve Book, Curve 8.23 to convert tank level into gallons (if level did not change, N/A).

**Use Curve Book, Curve 8.10 to convert tank level into gallons (if level did not change, N/A).

3.1-18A

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. E (CONTINGENCY) Date 3-30-94 Time 0929

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

COMMENCE UNIT SHUTDOWN AT A RATE OF 2%/MINUTE

ACTIONS EXPECTED:

START BORATION OF RCS TO FACILITATE TAVE/ΔFLUX CONTROL DURING POWER DECREASE. CONTROL ROOM OPERATORS MAY LOOK AHEAD TO HSD/CSD SHUTDOWN MARGIN PROJECTIONS. PERFORM ACTIONS PER GP-006.

FOR CONTROLLER USE ONLY

IF DECISION IS MADE TO SHUTDOWN AT AN EARLIER TIME, DELAY UNTIL AFTER 0915. IF SHUTDOWN DECISION IS NOT MADE BY 0929, FORCE THE SHUTDOWN TO BEGIN TO MAINTAIN APPLICABILITY OF SPDS DATA SHEET INFORMATION.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 14 Date 3-30-94 Time 0945

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

INCREASE SHUTDOWN RATE TO 3%/ MINUTE

ACTIONS EXPECTED:

CONTROL OPERATOR MAY CHANGE BORATION RATE

FOR CONTROLLER USE ONLY

TO MAINTAIN APPLICABILITY OF SPDS DATA SHEET INFORMATION. ALSO, BEGIN TO FILL IN STATUS OF CHARGING PUMP "A" AND DS BUS/DG.

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 15 Date 3-30-94 Time 1007

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 4 ALARM (FIRST OUT PANEL): TURBINE TRIP TRIP (APP-004-F4) IS FLASHING.

TURBINE STOP AND GOVERNOR VALVES ARE ALL GREEN. BOTH REACTOR TRIP BREAKERS INDICATE RED.

REACTOR POWER IS OBSERVED TO BE STEADY, AVERAGE TEMPERTURE (RCS_{TAVG}) IS INCREASING.

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL ENTER EOP NETWORK PATH-1.

CONTROL OPERATOR BEGINS EMERGENCY BORATION IN RESPONSE TO 2 STUCK CONTROL RODS.

CONTROL ROOM PERSONNEL MAY REFER TO EALS.

MANUALLY TRIP REACTOR USING PUSHBUTTONS ON RTGB.

FOR CONTROLLER USE ONLY

REFERENCE MISSIONS #4 & #5.

THIS IS AN ATWS, CONTROL OPERATOR MAY DISPATCH AOs TO TRIP REACTOR LOCALLY. REACTOR TRIPS FROM RTGB, INFORM CO OF REACTOR TRIP AFTER ATTEMPT WITH MANUAL PUSHBUTTON.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 16 Date 3-30-94 Time 1008

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ALL 3 STEAM GENERATOR PORVS (RV-1,2,3) HAVE DUAL INDICATIONS. CONDENSER STEAM DUMP VALVES ALL INDICATE GREEN.

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL MAY CONTACT I&C/OSC REGARDING FAILURE OF STEAM DUMPS TO ACTUATE. MAY ALSO SEND A.O. TO INVESTIGATE STEAM DUMP VALVES.

CONTROL ROOM PERSONNEL SHOULD RECOGNIZE THAT THE S/G "A" PORV OPEN CONSTITUTES AN ATMOSPHERIC RELEASE. CONTROL ROOM PERSONNEL MAY REFER TO EALS.

FOR CONTROLLER USE ONLY

REFERENCE MISSION #6.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 17 Date 3-30-94 Time 1010

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 8 ALARM: EH FLUID LEVEL LO ALARMS.

ACTIONS EXPECTED:

MAY DISPATCH A.O. TO INVESTIGATE EH FLUID LOSS. CONTROL OPERATOR MAY TRIP EH PUMPS.

FOR CONTROLLER USE ONLY

REFERENCE MISSION #4

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 18 Date 3-30-94 Time 1011

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 6 ALARM: S.G. 1 ACTUAL - S.P. LVL DEV ALARMS

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

LEVEL DECREASING IN S/G "A" DUE TO STUCK OPEN PORV.

REFERENCE MESSAGE #19

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 19 Date 3-30-94 Time 1012

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

AVERAGE COOLANT TEMPERATURE IS 547°F. THE S/G "A" PORV HAS DUAL INDICATION AND THE "B" AND "C" PORV INDICATOR LIGHTS ARE GREEN. STEAM NOISE REMAINS AUDIBLE.

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL MAY REFER TO EALS.

CONTROL ROOM PERSONNEL MAY REQUEST A.O./OSC HELP TO ISOLATE "A" S/G PORV (OR PORV AIR SUPPLY).

CONTROL OPERATOR MAY CLOSE THE "A" MSIV TO ISOLATE THE "A" S/G.

FOR CONTROLLER USE ONLY

CONDITIONS NOW SATISFIED FOR SITE AREA EMERGENCY (2 FPBS LOST-CV & RCS)

REFERENCE MISSION #7.

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 20 Date 3-30-94 Time FLOATING - WHEN SITE AREA EMERG. DECLARED

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

SEE ATTACHED PEP-104 SHEET.

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

MAKE SURE THIS MESSAGE IS USED IN LIEU OF THE ACTUAL PEP MESSAGE.

2.0 PROCEDURE (Continued)

2.5.1 If not, call Security and request that the TSC be searched and incorporated into the Protected Area. If conditions exist as defined in the Robinson Security Plan, inform Security that you (Shift Supervisor or SRO in the Control Room) are invoking 10CFR50.54x and to allow IMMEDIATE access to the TSC via the Protected Area.

2.6 With the VLC switch in the "EMERGENCY" position, perform a site-wide announcement over the plant PA as follows:

2.6.1 Sound Site Evacuation Alarm for approximately 15 seconds.

2.6.2 Make the following announcement.

ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL. THIS IS A DRILL MESSAGE. A SITE AREA EMERGENCY HAS BEEN DECLARED. THE CAUSE OF THE EMERGENCY IS _____

_____

_____

ALL NON-EMERGENCY RESPONSE PERSONNEL DO NOT EVACUATE THE PLANT SITE TO THE (choose one) EAST OR WEST PARKING LOT ASSEMBLY AREA. I REPEAT, DO NOT EVACUATE. THE USE OF THE PUBLIC ADDRESS SYSTEM IS NOW RESTRICTED TO (choose one) DRILL OR EMERGENCY COMMUNICATIONS UNTIL FURTHER NOTICE.

2.6.3 If the TSC <u>has been incorporated</u> into the Protected Area, announce:

ALL RNPD EMERGENCY RESPONSE ORGANIZATION PERSONNEL REPORT TO YOUR DESIGNATED FACILITY.

2.6.4 If the TSC <u>has not been incorporated</u> into the Protected Area, announce:

ALL TECHNICAL SUPPORT CENTER (TSC) PERSONNEL REPORT TO THE O&M MODULAR BUILDING AND AWAIT FURTHER INSTRUCTIONS. ALL OTHER RNPD EMERGENCY RESPONSE ORGANIZATION PERSONNEL REPORT TO YOUR DESIGNATED FACILITY.

2.6.4.1 Upon notification that TSC has been incorporated into the Protected Area, announce: ATTENTION ALL TSC PERSONNEL, THE TECHNICAL SUPPORT CENTER IS READY FOR ACCESS, REPORT TO THE TSC.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 21 Date 3-30-94 Time 1014

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 6 ALARM S.G. 1 ("A") NAR. RGE LO/LO-LO/LVL (APP-006-D1) ALARMS

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

LOW LEVEL ALARM ON "A" S/G <35%

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. F (CONTINGENCY) Date 3-30-94 Time 1015

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

CLOSE THE "A" MSIV.

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

DATA PRESUMES "A" MSIV CLOSED BY 1015. ISSUE THIS MESSAGE IF VALVE IS NOT CLOSED BY 1015.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. G (CONTINGENCY) Date 3-30-94 Time 1016

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 8 ALARM: EH FLUID LEVEL HI/LO-LO ALARMS.

ACTIONS EXPECTED:

MAY SEND A.O. TO INVESTIGATE EH FLUID LOSS. CONTROL OPERATOR MAY TRIP EH PUMPS.

FOR CONTROLLER USE ONLY

HAND OUT IF EH PUMPS NOT STOPPED IN RESPONSE TO MESSAGE #17.

REFERENCE MISSION #4

CON-94-0222
RNPD-94-03-RO

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. H (CONTINGENCY) Date 3-30-94 Time 1021

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 8 ALARM: EH FLUID RES LEVEL LO TURB DC LOST (APP-008-33) ALARMS

EH PUMPS TRIP

ACTIONS EXPECTED:

MAY SEND A.O. TO INVESTIGATE EH FLUID LOSS.

FOR CONTROLLER USE ONLY

HAND OUT ONLY IF EH PUMPS NOT STOPPED.

REFERENCE MISSION #4

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. H (CONTINGENCY) Date 3-30-94 Time 1021

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 8 ALARM: EH FLUID RES LEVEL LO TURB DC LOST (APP-008-C1) ALARMS

EH PUMPS TRIP

ACTIONS EXPECTED:

MAY SEND A.O. TO INVESTIGATE EH FLUID LOSS.

FOR CONTROLLER USE ONLY

HAND OUT ONLY IF EH PUMPS NOT STOPPED.

REFERENCE MISSION #4

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 22 Date 3-30-94 Time 1030

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 6 ALARM (REFLASH): S.G. 1 ("A") NAR RGE LO/LO-LO/LVL (APP-006-D1)

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

LO-LO LEVEL ALARM ON "A" S/G <16%

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. J (CONTINGENCY) Date 3-30-94 Time 1037

MESSAGE FOR: SITE EMERGENCY COORDINATOR - TSC

FROM: CONTROLLER - TSC

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

DECLARE A SITE AREA EMERGENCY BASED UPON A BREACH OF THE RCS (>50 GPM LEAK) AND A BREACH OF CONTAINMENT (PORV STUCK OPEN ON PRIMARY TO SECONDARY LEAK).

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL MAY START A COOLDOWN.

CONTROL ROOM PERSONNEL MAY REQUEST PERIODIC RCS BORON SAMPLES.

SEC WILL DECLARE SITE AREA EMERGENCY AND IMPLEMENT ACTIONS OF PEP-104.

FOR CONTROLLER USE ONLY

GIVE THIS MESSAGE OUT ONLY IF A SITE AREA EMERGENCY HAS NOT BEEN DECLARED BY 1037.

DO NOT GIVE THIS MESSAGE WITHOUT THE PERMISSION OF THE LEAD EXERCISE CONTROLLER.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 23 Date 3-30-94 Time FLOATING-TIME OF SITE AREA EMERG. + 25 MIN.

MESSAGE FOR: SECURITY

FROM: CONTROLLER - SECURITY

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ACCOUNTABILITY IS COMPLETE AND THERE ARE NO MISSING PERSONS.

ACTIONS EXPECTED:

THIS INFORMATION IS RELAYED TO THE TSC.

FOR CONTROLLER USE ONLY

RECORD TIME MESSAGE ISSUED: _____

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. K (CONTINGENCY) Date 3-30-94 Time 1040

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

COMMENCE RCS COOLDOWN PER GP-007.

ACTIONS EXPECTED:

CONTROL ROOM PERSONNEL START A COOLDOWN. CONTROL ROOM PERSONNEL MAY REQUEST PERIODIC RCS BORON SAMPLES.

FOR CONTROLLER USE ONLY

GIVE THIS MESSAGE OUT ONLY IF COOLDOWN HAS NOT STARTED BY 1040. COOLDOWN MUST START BY 1040 HOURS TO MAINTAIN SCENARIO TIMELINE.

DO NOT GIVE THIS MESSAGE WITHOUT PERMISSION OF THE LEAD EXERCISE CONTROLLER.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. L (CONTINGENCY) Date 3-30-94 Time 1040

MESSAGE FOR: PLANT OPERATIONS DIRECTOR - TSC

FROM: CONTROLLER - TSC

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

INCREASE COOLDOWN RATE UP TO TECHNICAL SPECIFICATION LIMITS.

ACTIONS EXPECTED:

PLANT OPERATIONS DIRECTOR TO CONTACT CONTROL ROOM WITH ABOVE INSTRUCTIONS.

FOR CONTROLLER USE ONLY

GIVE THIS MESSAGE OUT ONLY IF MAXIMUM COOLDOWN RATE ORDER HAS NOT BEEN PREVIOUSLY ISSUED.

THIS IS NEEDED TO MAINTAIN SCENARIO TIMELINE.

DO NOT GIVE OUT WITHOUT PERMISSION OF LEAD EXERCISE CONTROLLER.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 24 Date 3-30-94 Time 1120

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 2 ALARM: ACCIDENT MONITOR HI RADIATION (APP-021-B2) ALARMS
RADIATION MONITOR PANEL: R-31A ALARMS AND READS 16 MR/HR.

ACTIONS EXPECTED:

PERFORM AOP-005 ACTIONS.

PERFORM SOURCE CHECK OF R-31A.

MAKE PAGE ANNOUNCEMENT REGARDING R-31A ALARM.

FOR CONTROLLER USE ONLY

R-31A READS 16 mR/hr WITH SLIGHT DOWNWARD TREND.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 25 Date 3-30-94 Time 1102

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER - CONTROL ROOM

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

THE S/G "A" PORV GREEN POSITION INDICATOR LIGHT HAS EXTINGUISHED. THE RED LIGHT REMAINS ILLUMINATED. THE STEAM NOISES ARE LOUDER.

ACTIONS EXPECTED:

INFORM THE TSC THAT THE S/G "A" PORV NOW INDICATES FULL OPEN.

FOR CONTROLLER USE ONLY

THE S/G "A" PORV IS NOW ACTUALLY FULL OPEN (MAXIMUM RELEASE PATH).

REFERENCE MISSION #7

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 26 Date 3-30-94 Time 1116

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 36 ALARM: LPMS ALARM (APP-036-A12) LPMS TROUBLE.

ACTIONS EXPECTED:

DISPATCH STA OR ALTERNATE TO LPMS PANEL

FOR CONTROLLER USE ONLY

REFERENCE MISSION #9.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 27 Date 3-30-94 Time 1118

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 21 ALARM: ACCIDENT MONITOR HI RADIATION (APP-021-B2)

RADIATION MONITOR PANEL: R-31A ALARMS AND INDICATES 25 mR/hr.

ACTIONS EXPECTED:

PERFORM AOP-005 ACTIONS.

PERFORM SOURCE CHECK OF R-9 AND R-31A.

MAKE PAGE ANNOUNCEMENT REGARDING R-9 AND R-31A ALARMS.

CONTROL ROOM PERSONNEL MAY REFER TO EALS.

CONTINUATION OF COOLDOWN/DEPRESSURIZATION TO MITIGATE RELEASE.

FOR CONTROLLER USE ONLY

R-31A INDICATES 25 mR/hr AND IS INCREASING RAPIDLY.

CONDITIONS NOW SATISFIED FOR GENERAL EMERGENCY (3 FPB LOST).

POST ATTACHED FORM LOCALLY NEAR R-9 AREA.

CON-94-0222
RNPD-94-03-RO

THIS IS AN EXERCISE MESSAGE

NOTICE:

AREA RADIATION MONITOR R-9

IS IN ALARM

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 28 Date 3-30-94 Time 1125

MESSAGE FOR: E&RC LEADER OR PERSONNEL

FROM: CONTROLLER - OSC

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

THE FRISKERS AND PORTAL MONITORS AT PAP-EAST ARE ALSO ALARMING.

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

IF ASKED, MONITORS READ 1500 CPM.

POST ATTACHED FORMS LOCALLY NEAR FRISKERS AND/OR PORTAL MONITORS.

THIS IS AN EXERCISE MESSAGE

NOTICE:

PAP-EAST FRISKER MONITORS

ARE IN ALARM

CON-94-0222
RNPD-94-03-R0

THIS IS AN EXERCISE MESSAGE

NOTICE:

PAP-EAST PORTAL MONITORS

ARE IN ALARM

3.1-40B

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 29 Date 3-30-94 Time 1129

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER - CONTROL ROOM

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 2 ALARM: ACCIDENT MONITOR HI RADIATION (APP-021-B2) REFLASHES.
RADIATION MONITOR PANEL: R-31B AND R-31C INCREASE AND BOTH INDICATE 3 mR/hr.

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

INCREASE TO "SHINE" FROM RELEASE ON "A" SG LINE.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 30 Date 3-30-94 Time CONTINGENCY MESSAGE

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL 2 ALARM: AREA MONITOR HI RADIATION REFLASHES.
RADIATION MONITOR PANEL : R-6 ALARMS AND INDICATES 55 mR/hr.

ACTIONS EXPECTED:

IMPLEMENT AOP-005 ACTIONS.

PERFORM SOURCE CHECK OF R-6.

MAKE PAGE ANNOUNCEMENT REGARDING R-6 ALARM.

FOR CONTROLLER USE ONLY

R-6 INDICATES 55 MR/HR AND IS RAPIDLY INCREASING.

POST ATTACHED FORM LOCALLY NEAR R-6 AREA.

CON-94-0222
RNPD-94-03-R0

THIS IS AN EXERCISE MESSAGE

NOTICE:

AREA RADIATION MONITOR R-6

IS IN ALARM

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 31 Date 3-30-94 Time 1135

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

ANNUNCIATOR PANEL APP-021-B2 ALARM: AREA MONITOR HI RADIATION REFLASHES.
RADIATION MONITOR PANEL: R-4 ALARMS AND INDICATES 100 mR/hr.

ACTIONS EXPECTED:

IMPLEMENT AOP-005 ACTIONS.

PERFORM SOURCE CHECK OF R-4.

MAKE PAGE ANNOUNCEMENT REGARDING R-4 ALARM.

FOR CONTROLLER USE ONLY

R-4 INDICATES 100 MR/HR AND IS RAPIDLY INCREASING.

POST ATTACHED FORM LOCALLY NEAR R-4 AREA.

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RNPD-94-03-R0

CON-94-0222
RNPD-94-03-R0

THIS IS AN EXERCISE MESSAGE

NOTICE:

AREA RADIATION MONITOR R-4

IS IN ALARM

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 32 Date 3-30-94 Time FLOATING - WHEN GENERAL EMERG. DECLARED

MESSAGE FOR: CONTROL OPERATOR

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

SEE ATTACHED PEP-105 SHEET.

ACTIONS EXPECTED:

FOR CONTROLLER USE ONLY

MAKE SURE THIS MESSAGE IS USED IN LIEU OF THE ACTUAL PEP MESSAGE.

2.0 PROCEDURE (Continued)

2.5.2 Make the following announcement (with VLC switch in the "EMERGENCY" position):

ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL. THIS IS A DRILL MESSAGE. A GENERAL EMERGENCY HAS BEEN DECLARED. THE CAUSE OF THE EMERGENCY IS _____

_____

_____

ALL RNPD EMERGENCY RESPONSE ORGANIZATION PERSONNEL REPORT TO YOUR DESIGNATED EMERGENCY RESPONSE FACILITY. ALL OTHER PLANT PERSONNEL DO NOT EVACUATE THE PLANT SITE TO THE (choose one) EAST OR WEST PARKING LOT ASSEMBLY AREA. I REPEAT, DO NOT EVACUATE. THE USE OF THE PUBLIC ADDRESS SYSTEM IS NOW RESTRICTED TO (choose one) DRILL OR EMERGENCY COMMUNICATIONS UNTIL FURTHER NOTICE.

2.5.3 Continue to sound the Site Evacuation Alarm for approximately 1 minute.

2.5.4 Upon initiation of evacuation procedure, implement PEP-502, Personnel Accountability, and PEP-504, Access Control.

2.6 Determine if the TSC has been incorporated into the Protected Area.

2.6.1 If it has, go to Step 2.7.

NOTE

A deviation from 10CFR73.55(d) is required when allowing TSC access prior to search by Security.

2.6.2 If not, call Security and request that the TSC be immediately incorporated into the Protected Area. Inform them that you (the Shift Supervisor or SRO in the Control Room) are invoking 10CFR50.54(x), and to allow IMMEDIATE access to TSC via the Protected Area.

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. N (CONTINGENCY) Date 3-30-94 Time 1143

MESSAGE FOR: SITE EMERGENCY COORDINATOR - TSC

FROM: CONTROLLER - TSC

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

DECLARE A GENERAL EMERGENCY BASED ON A BREACH OF ALL THREE FISSION PRODUCT BARRIERS.

ACTIONS EXPECTED:

SEC WILL DECLARE A GENERAL EMERGENCY AND IMPLEMENT ACTIONS OF PEP-105.

CONTROL ROOM WILL CONTINUE COOLDOWN/DEPRESSURIZATION TO MITIGATE RELEASE.

FOR CONTROLLER USE ONLY

GIVE THIS MESSAGE OUT ONLY IF A GENERAL EMERGENCY HAS NOT BEEN DECLARED BY 1143. DO NOT GIVE THIS MESSAGE OUT WITHOUT THE PERMISSION OF THE LEAD EXERCISE CONTROLLER.

CON-94-0222
RNPD-94-03-R0

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 0 (CONTINGENCY) Date 3-30-94 Time FLOATING, WHEN RCS SAMPLE PURGE IS STARTED AFTER 1116

MESSAGE FOR: CHEMISTRY TEAM MEMBER IN PRIMARY SAMPLE ROOM

FROM: CONTROLLER - CHEMISTRY

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

R-6 RAD MONITOR INDICATES OFFSCALE HIGH AND LOCALLY ALARMS.

ACTIONS EXPECTED:

EVACUATE SAMPLE ROOM. NOTIFY EXERCISE CONTROL ROOM.

FOR CONTROLLER USE ONLY

IMMEDIATELY INFORM CONTROL ROOM CONTROLLERS PRIOR TO ISSUING THIS MESSAGE. POST ATTACHED FORM LOCALLY NEAR THE R-6 AREA.

CON-94-0222
RNPD-94-03-R0

CON-94-0222
RNPD-94-03-R0

THIS IS AN EXERCISE MESSAGE

NOTICE:

AREA RADIATION MONITOR R-6

IS IN ALARM

3.1-46A

CP&L

EXERCISE MESSAGE CARD

RNPD
Plant

Message No. 33 Date 03-30-94 Time 1300 (SEE BELOW)

MESSAGE FOR: EMERGENCY RESPONSE MANAGER

FROM: CONTROLLER

MESSAGE/SIMULATED PLANT CONDITIONS: "THIS IS AN EXERCISE MESSAGE"

THE EXERCISE IS OVER.

ACTIONS EXPECTED:

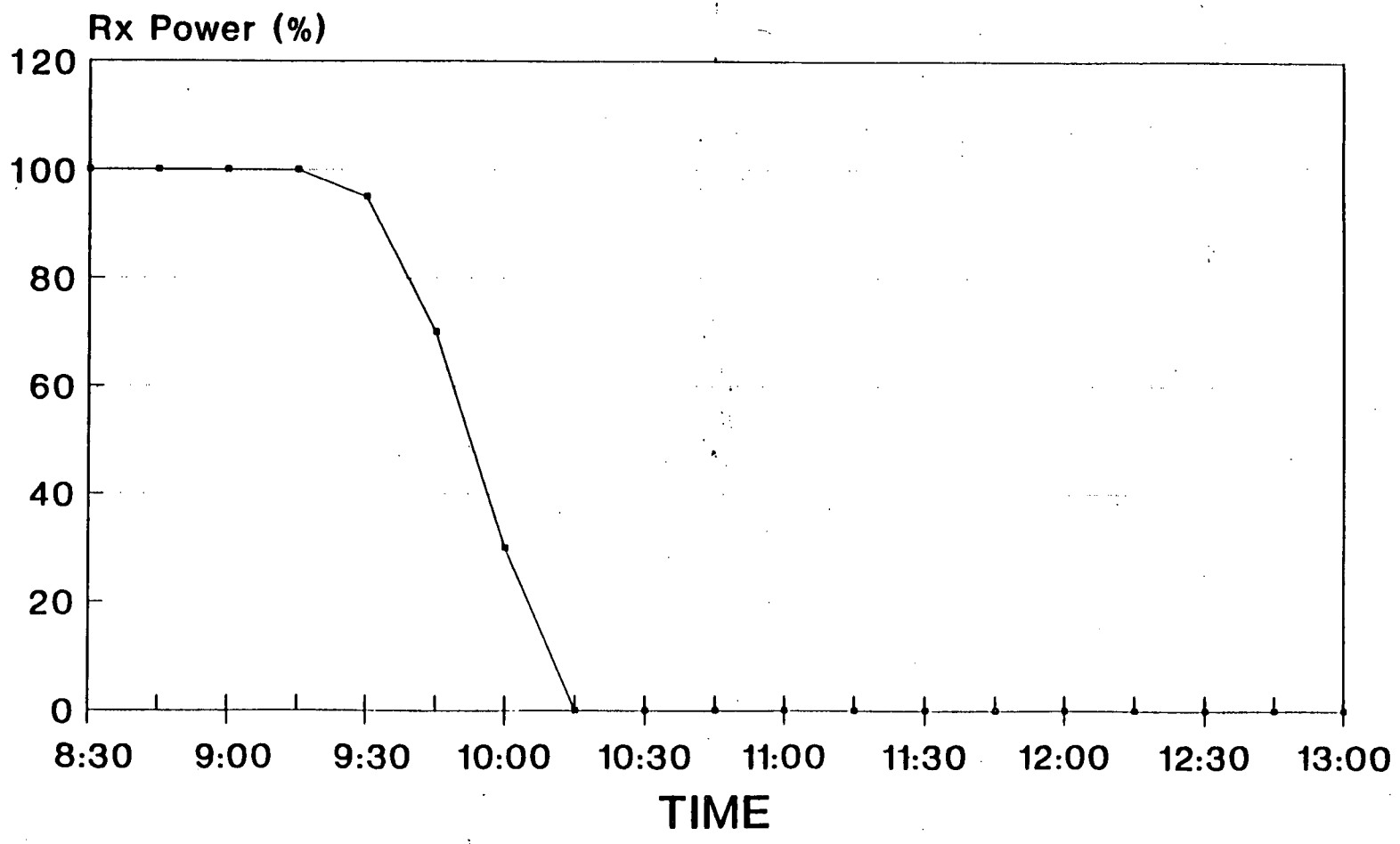
FOR CONTROLLER USE ONLY

ENSURE NOTIFICATIONS ARE MADE TO NRC, JIC, STATE, COUNTIES, PLAYERS.

1300 EST IS NOMINAL EXERCISE COMPLETION TIME. THE LEAD EXERCISE CONTROLLER MAY CHOOSE TO END THE EXERCISE PRIOR TO 1300 OR EXTEND IT BEYOND AT HIS DISCRETION.

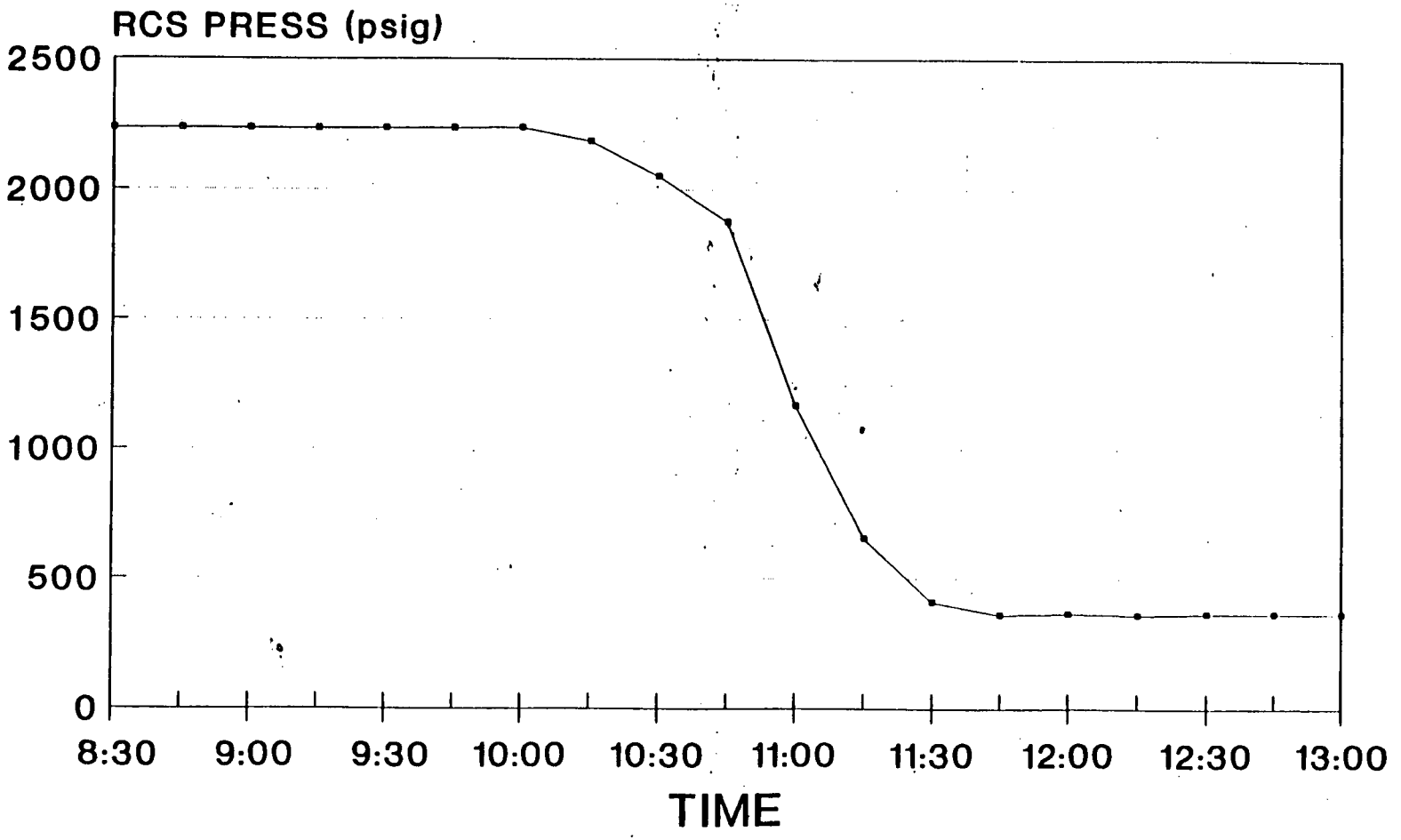
SECTION 3.1.1 GRAPHS TABLE OF CONTENTS

Reactor Power
EXERCISE



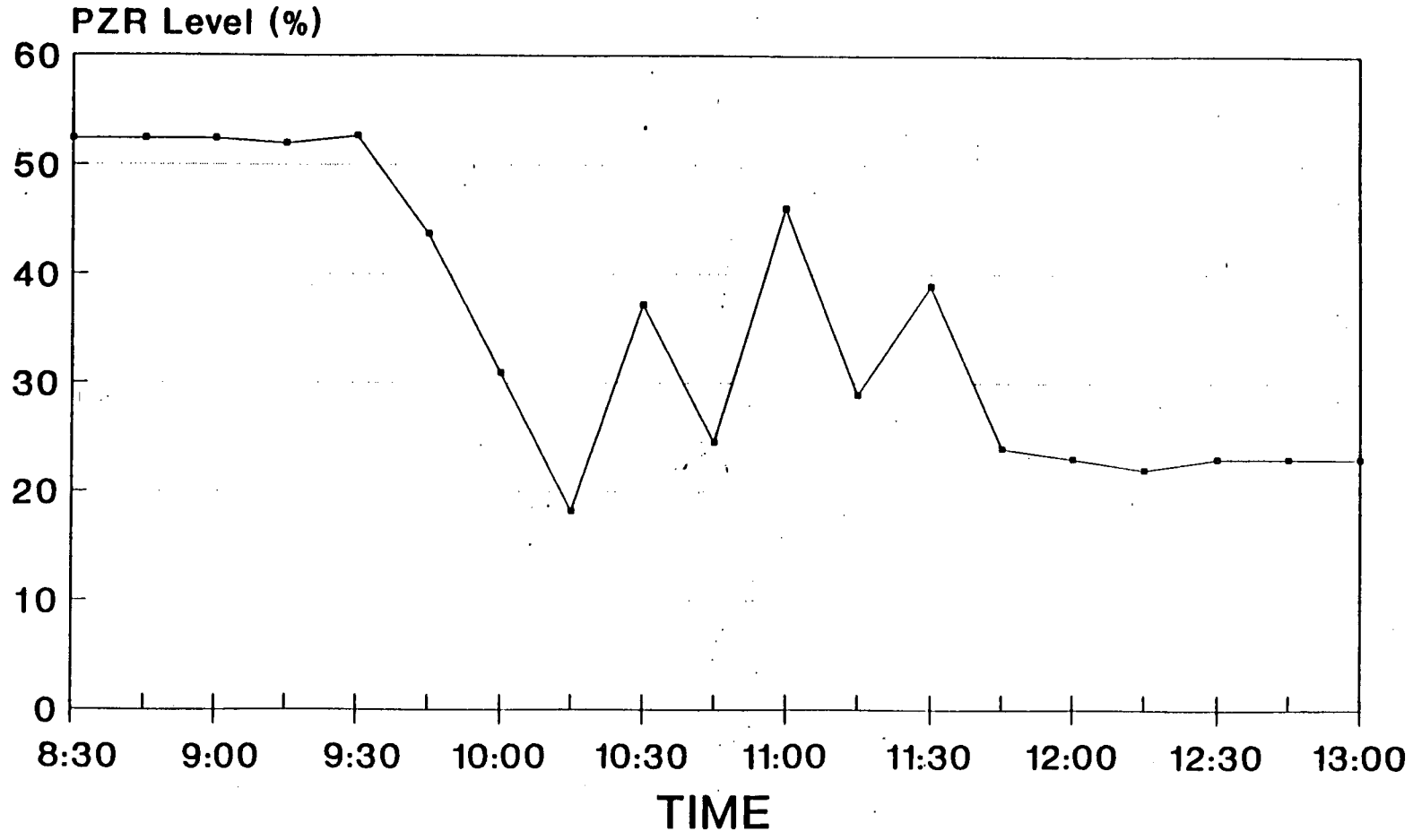
3.1.1-1

RCS Pressure
EXERCISE



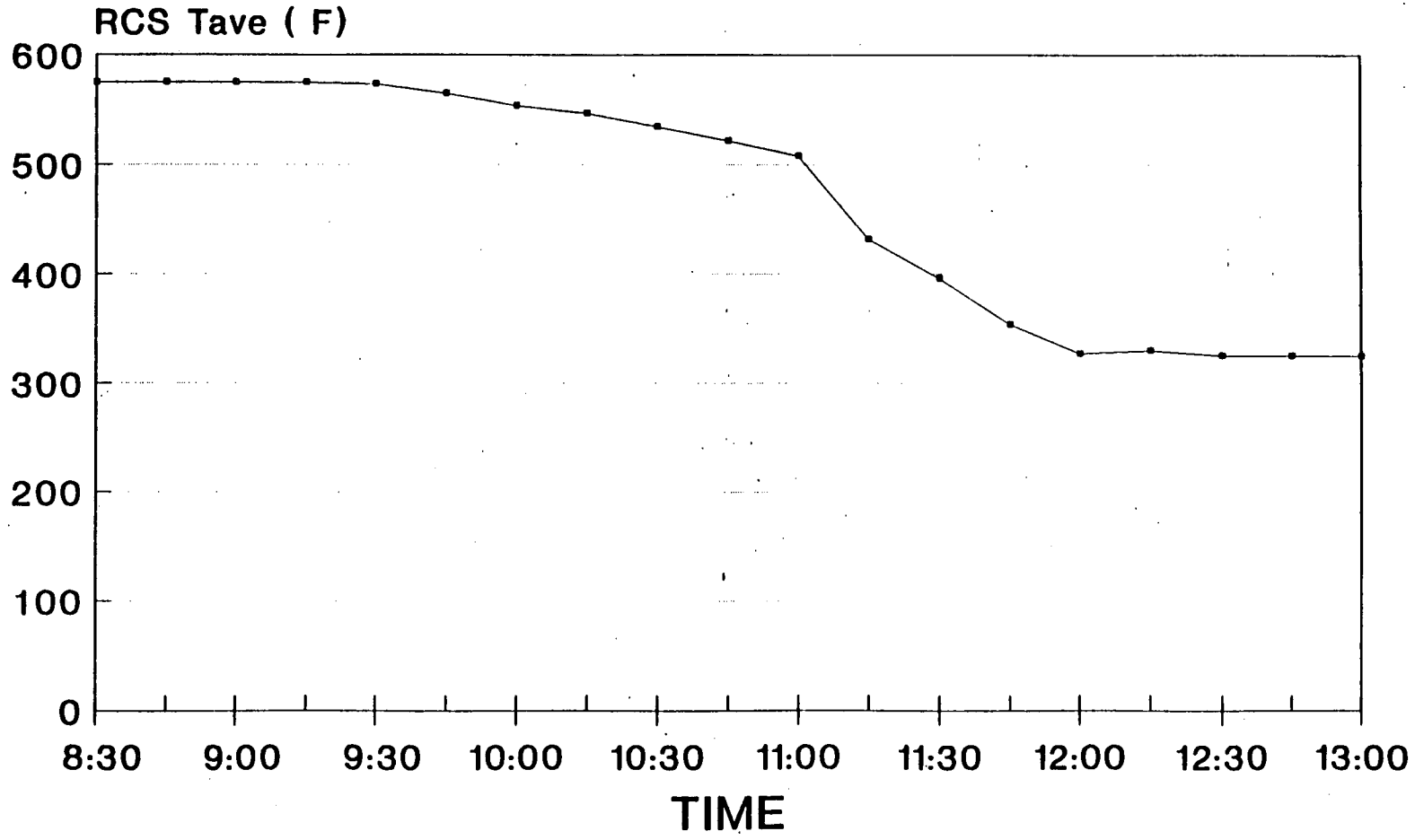
3.1.1-2

PZR Level
EXERCISE



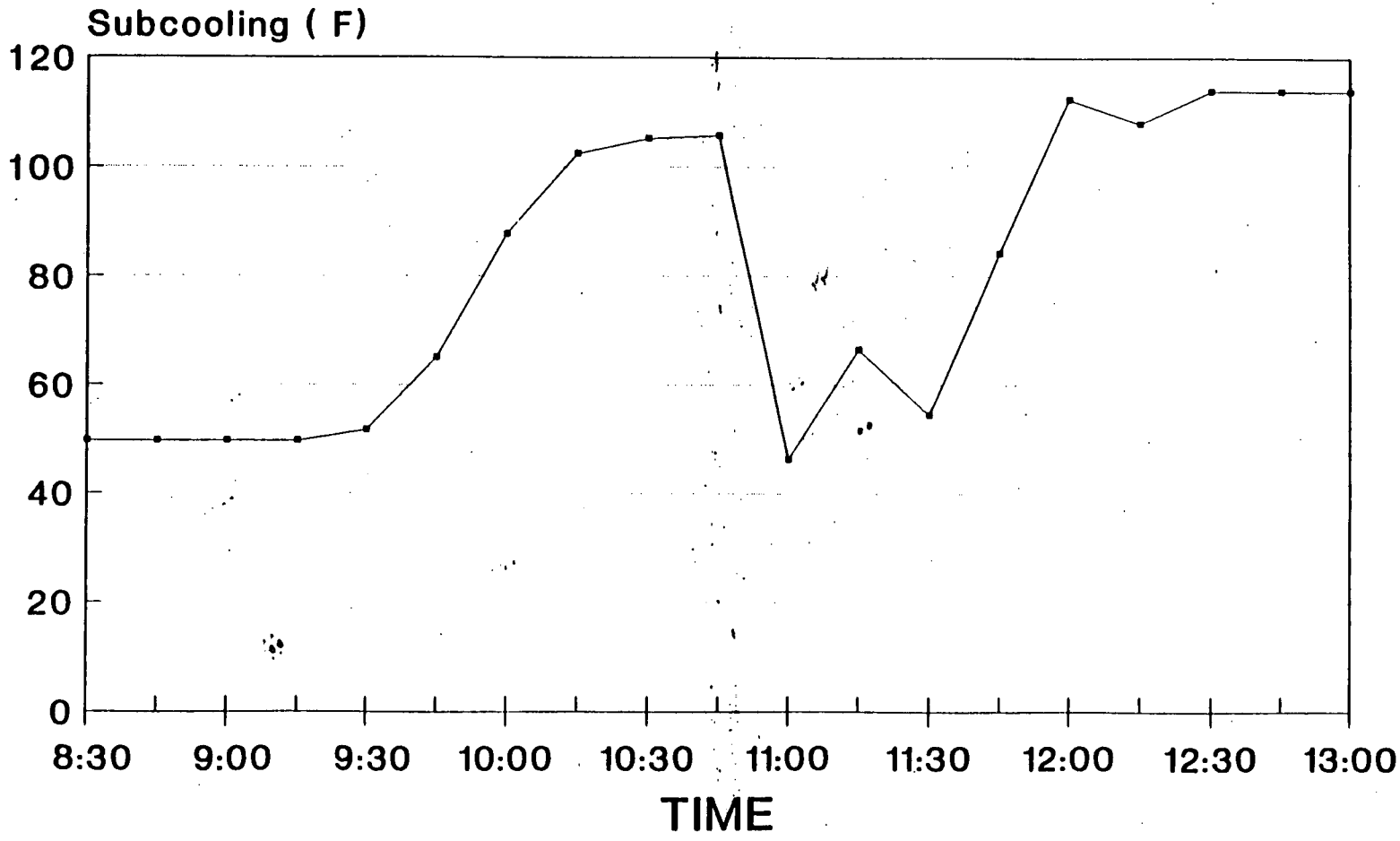
3.1.1-3

RCS Tave
EXERCISE



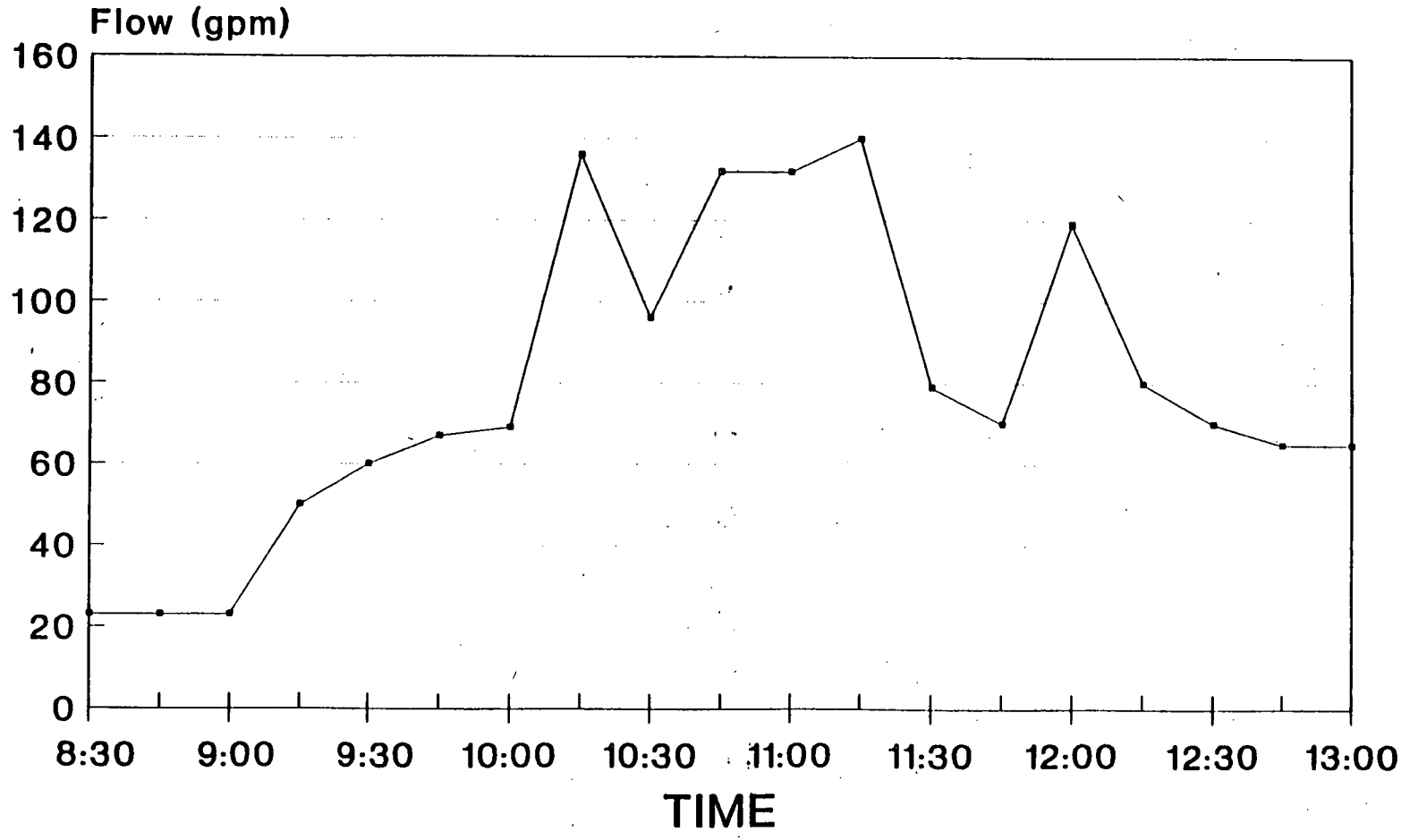
3.1.1-4

RCS Subcooling
EXERCISE



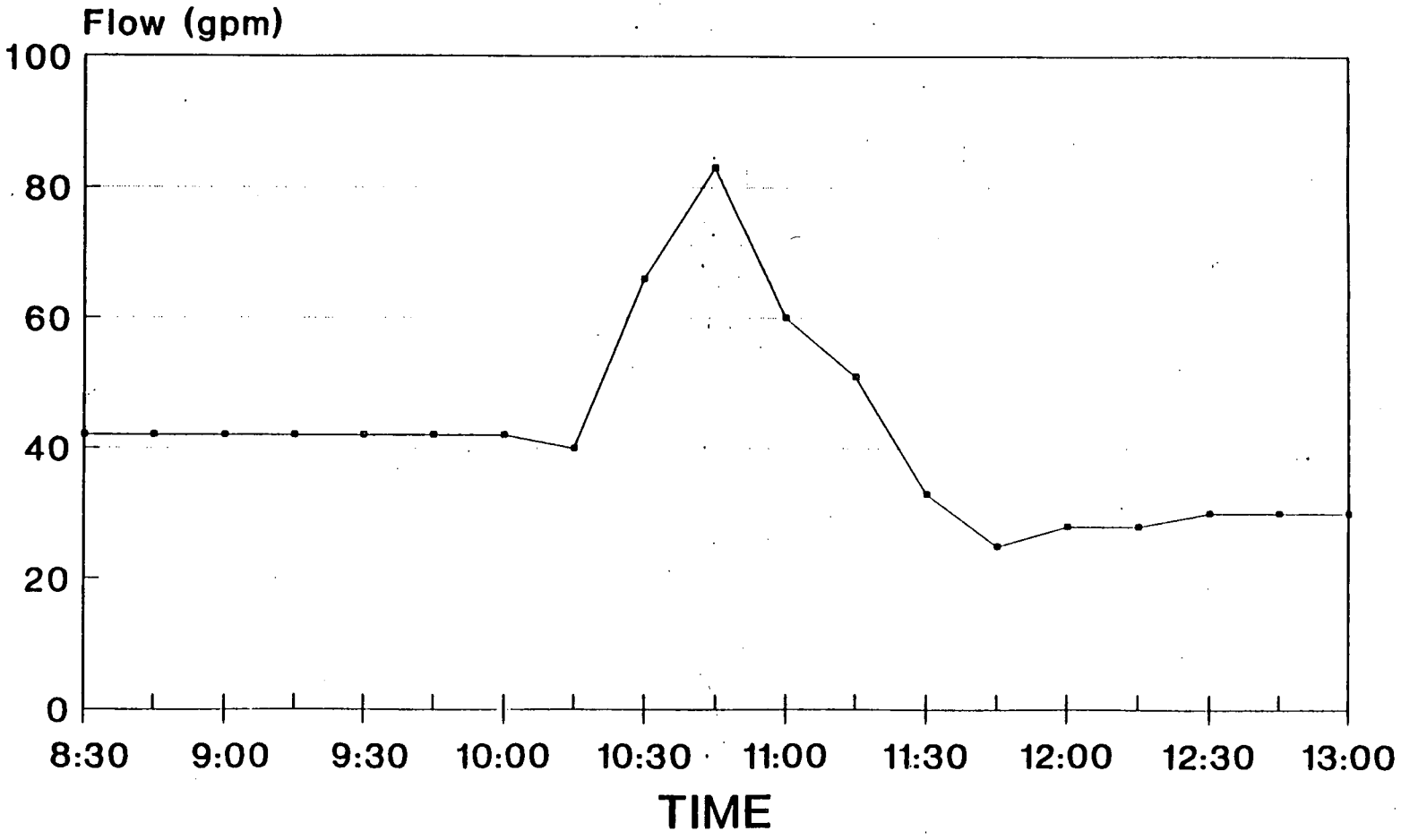
3.1.1-5

Charging Flow
EXERCISE



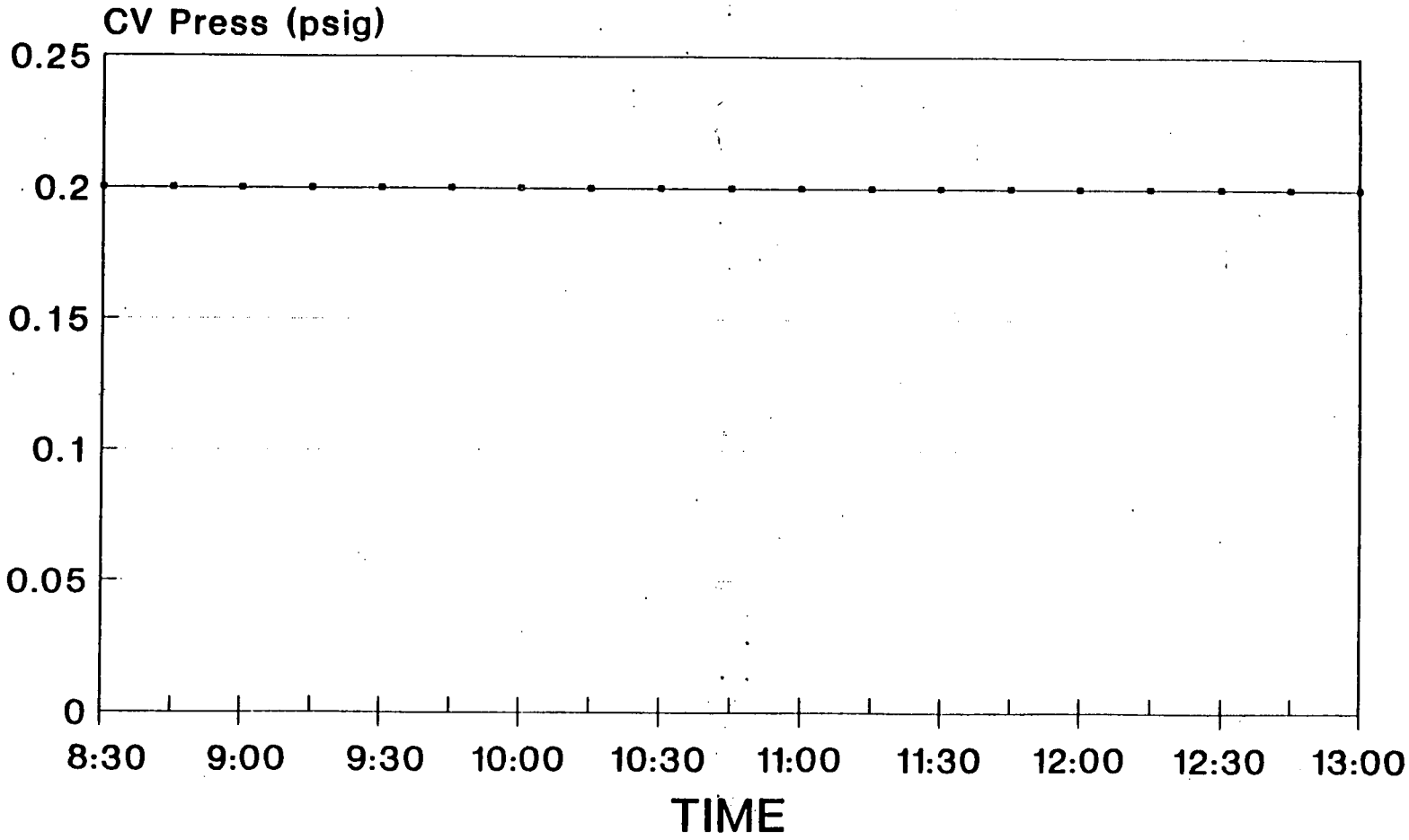
3.1.1-6

Letdown Flow
EXERCISE



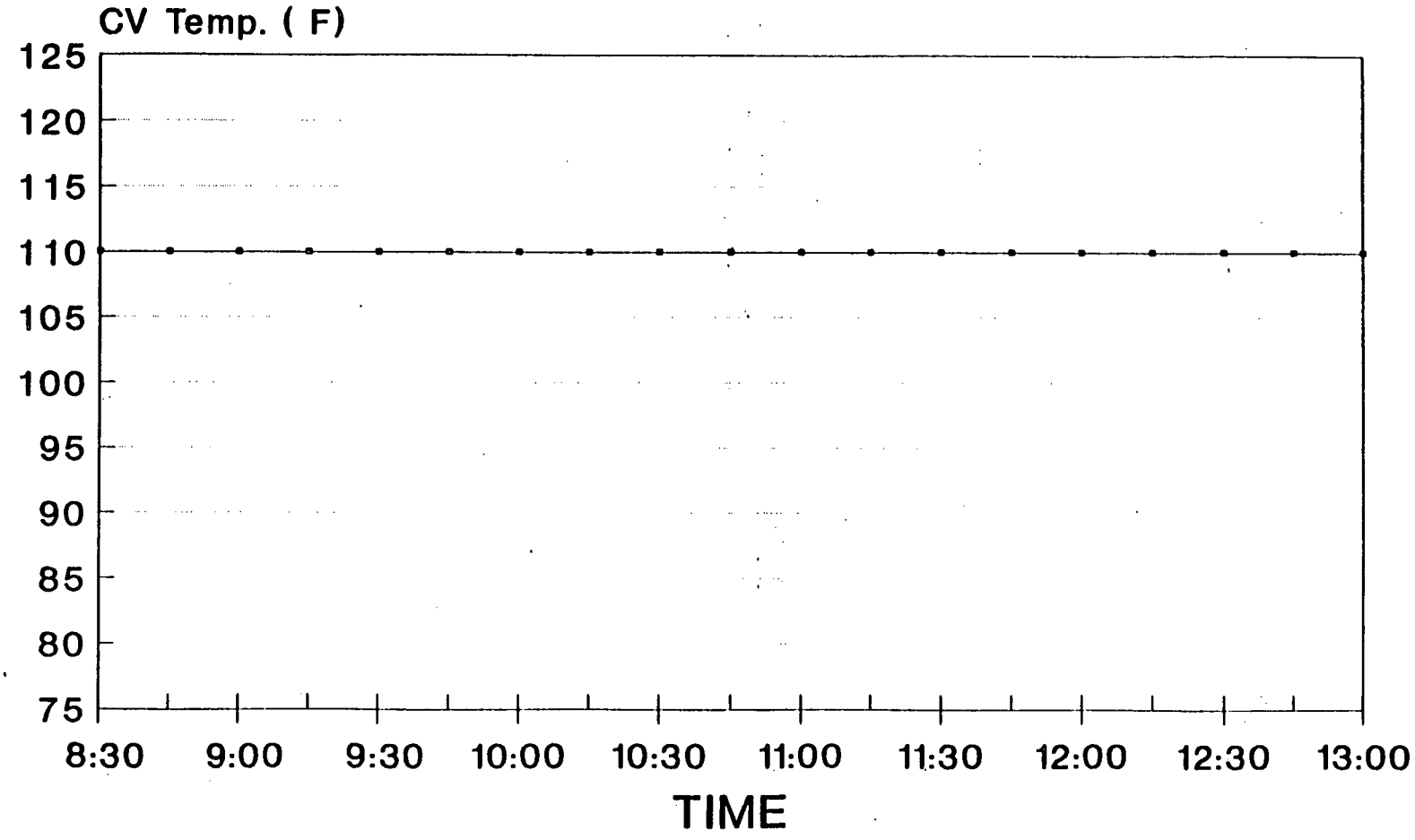
3.1.1-7

Containment Press
EXERCISE



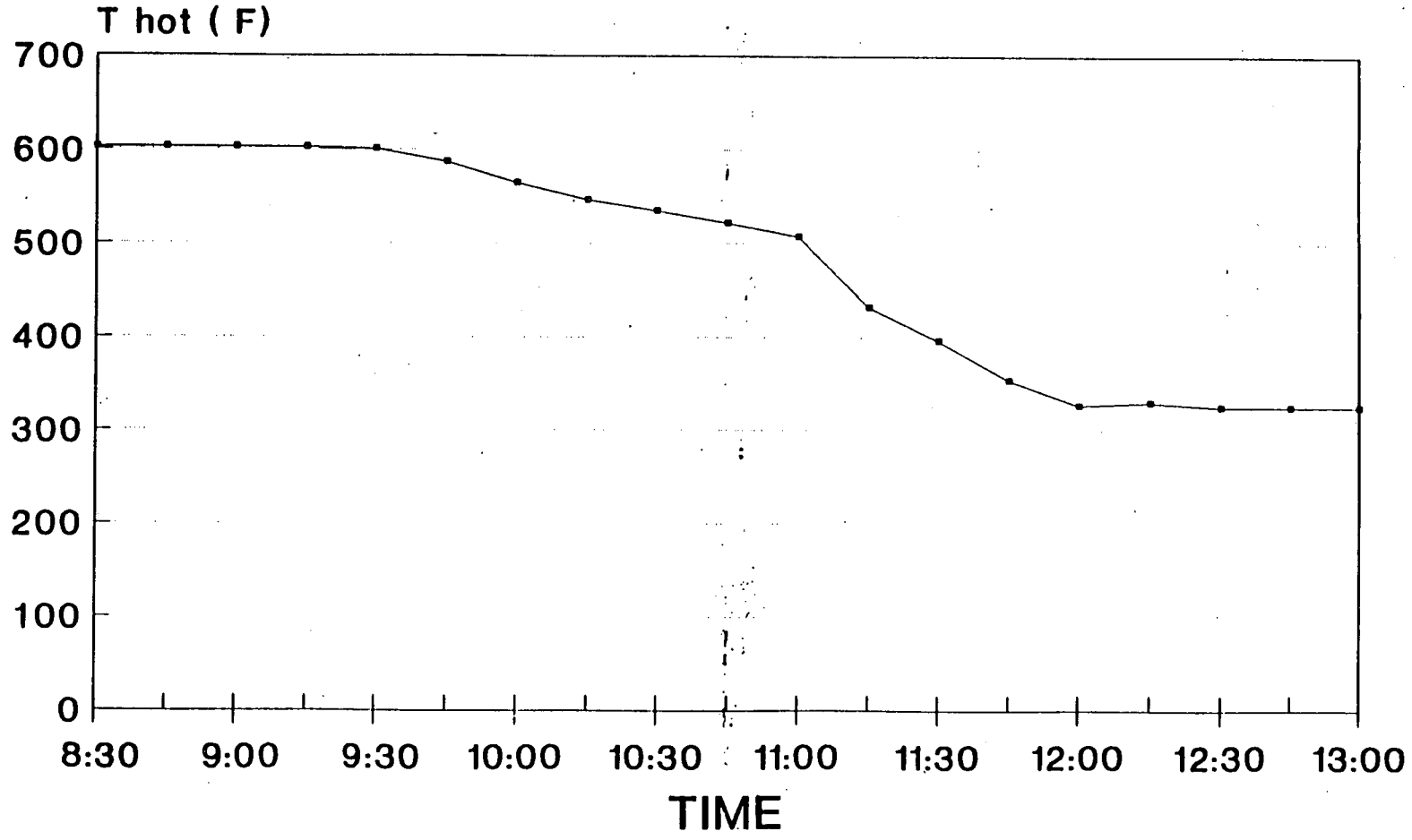
3.1.1-8

Containment Temperature
EXERCISE



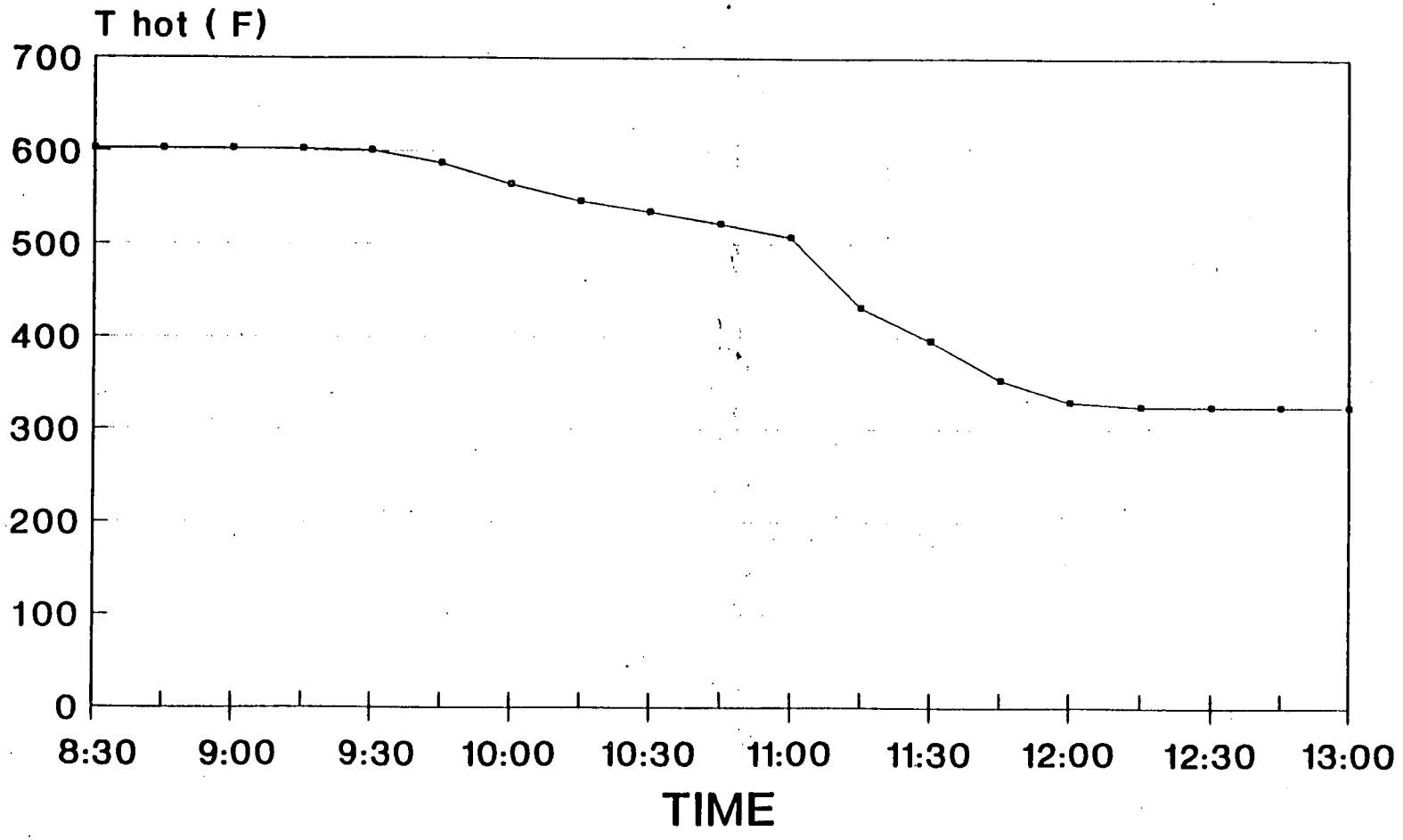
3.1.1-9

Loop A Thot
EXERCISE



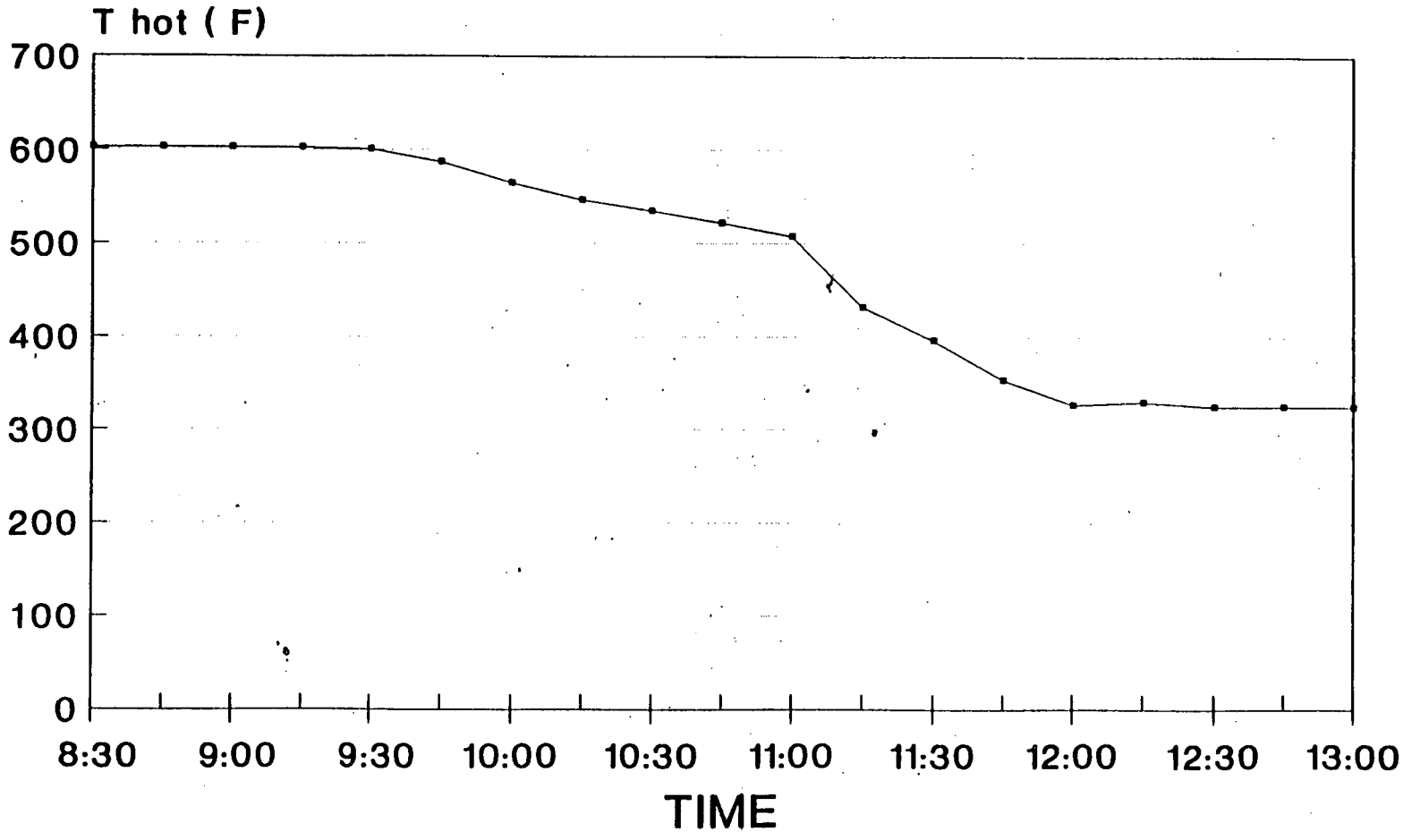
3.1.1-10

Loop B Thot
EXERCISE



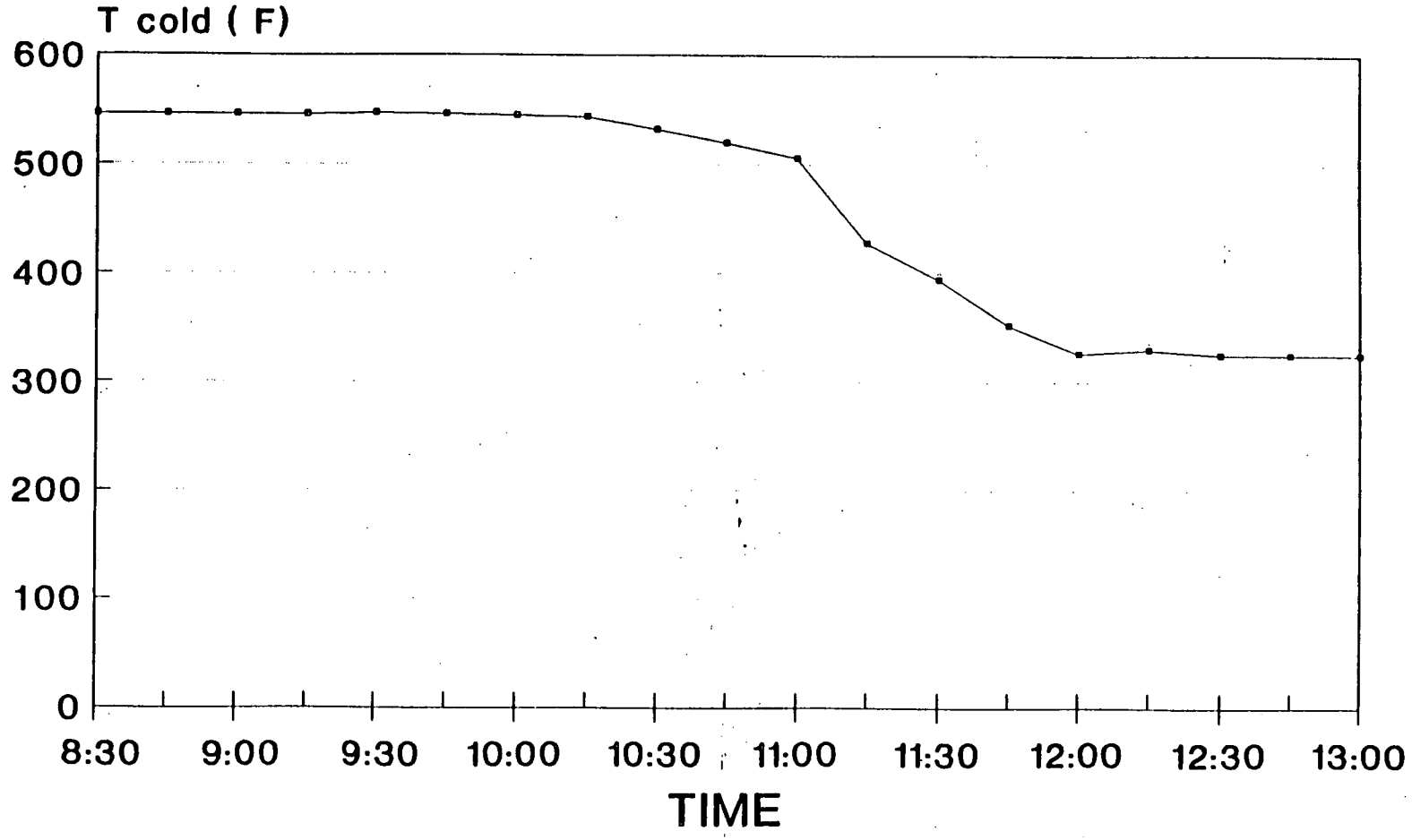
3.1.1-11

Loop C Thot
EXERCISE



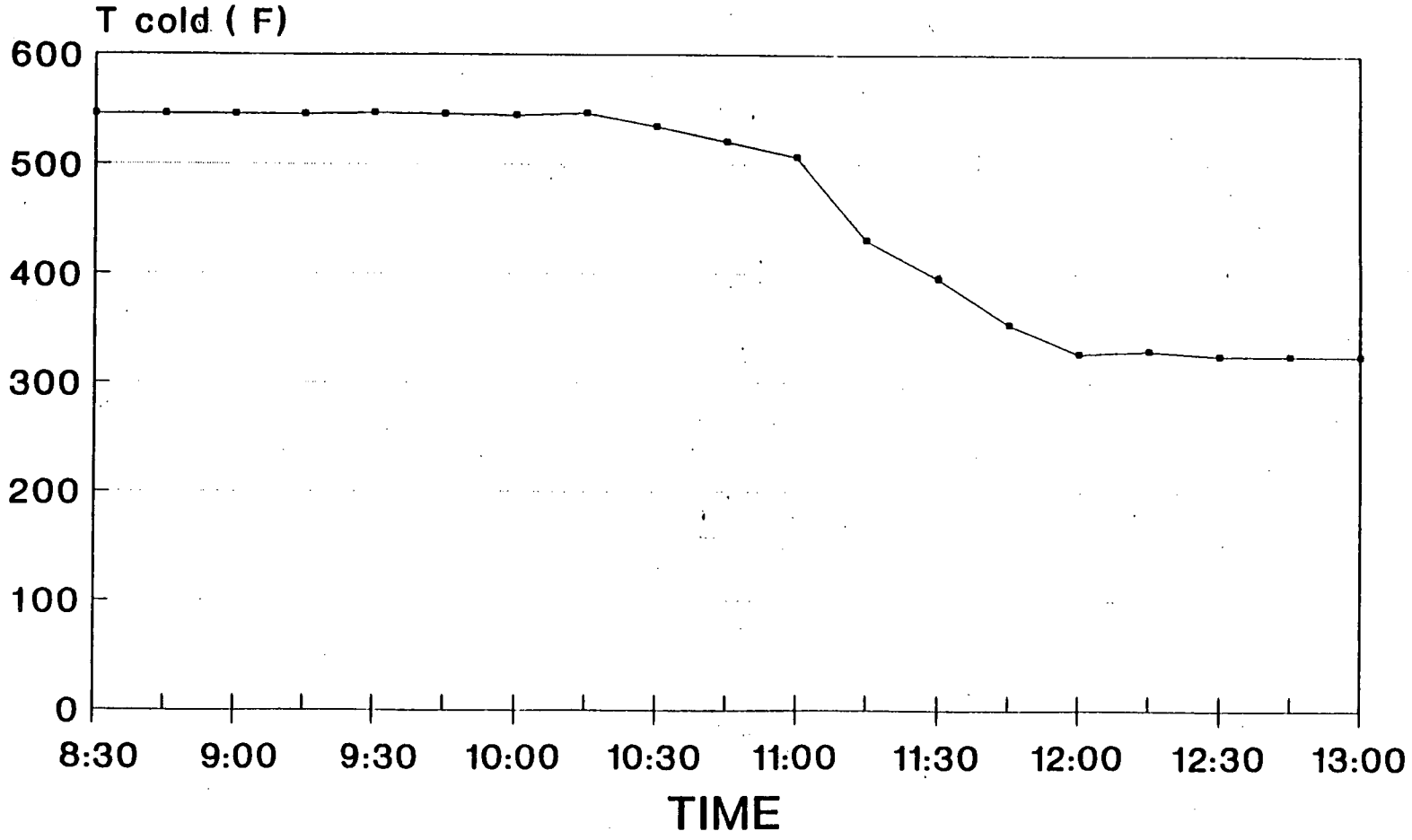
3.1.1-12

Loop A Tcold
EXERCISE



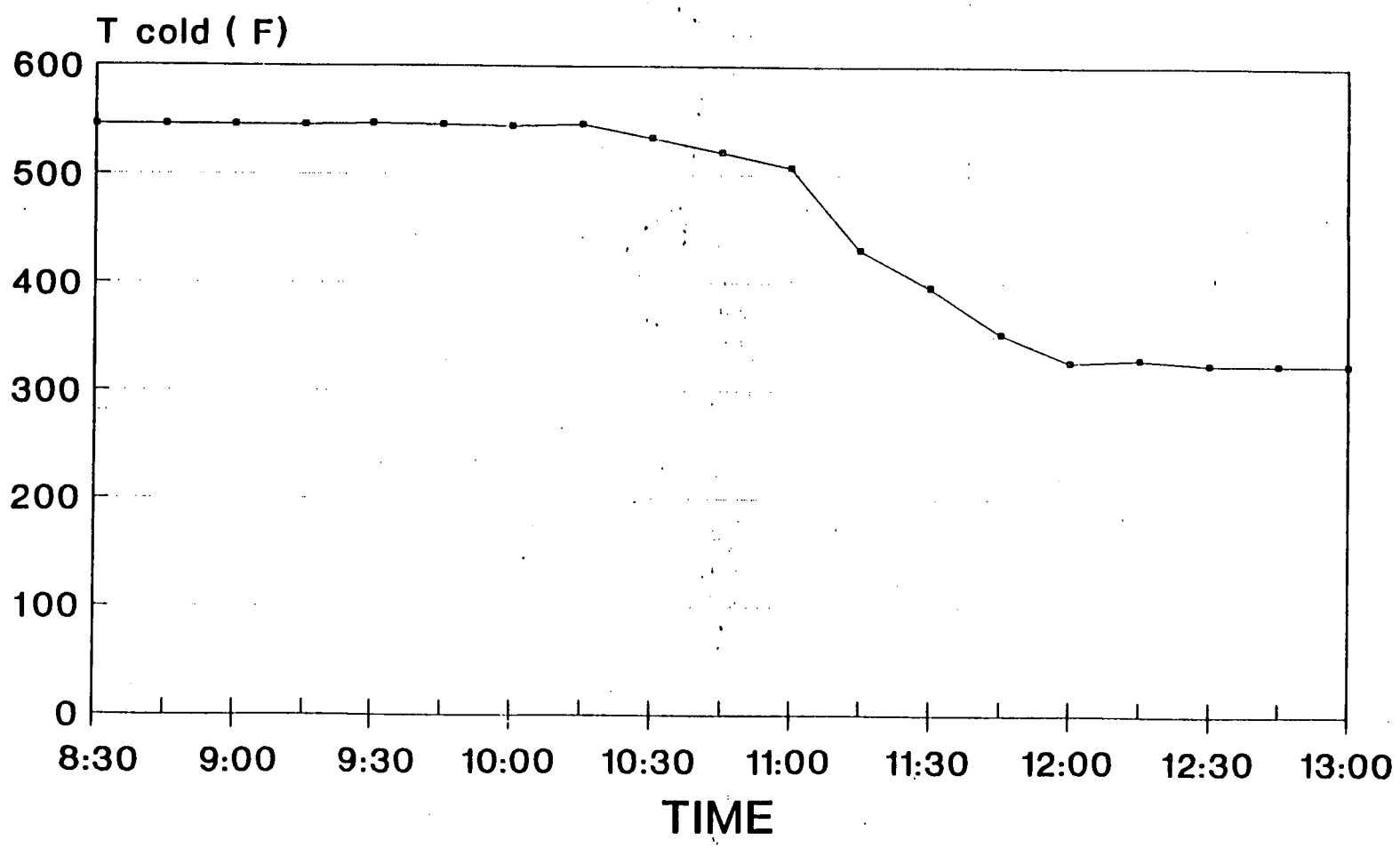
3.1.1-13

Loop B Tcold
EXERCISE



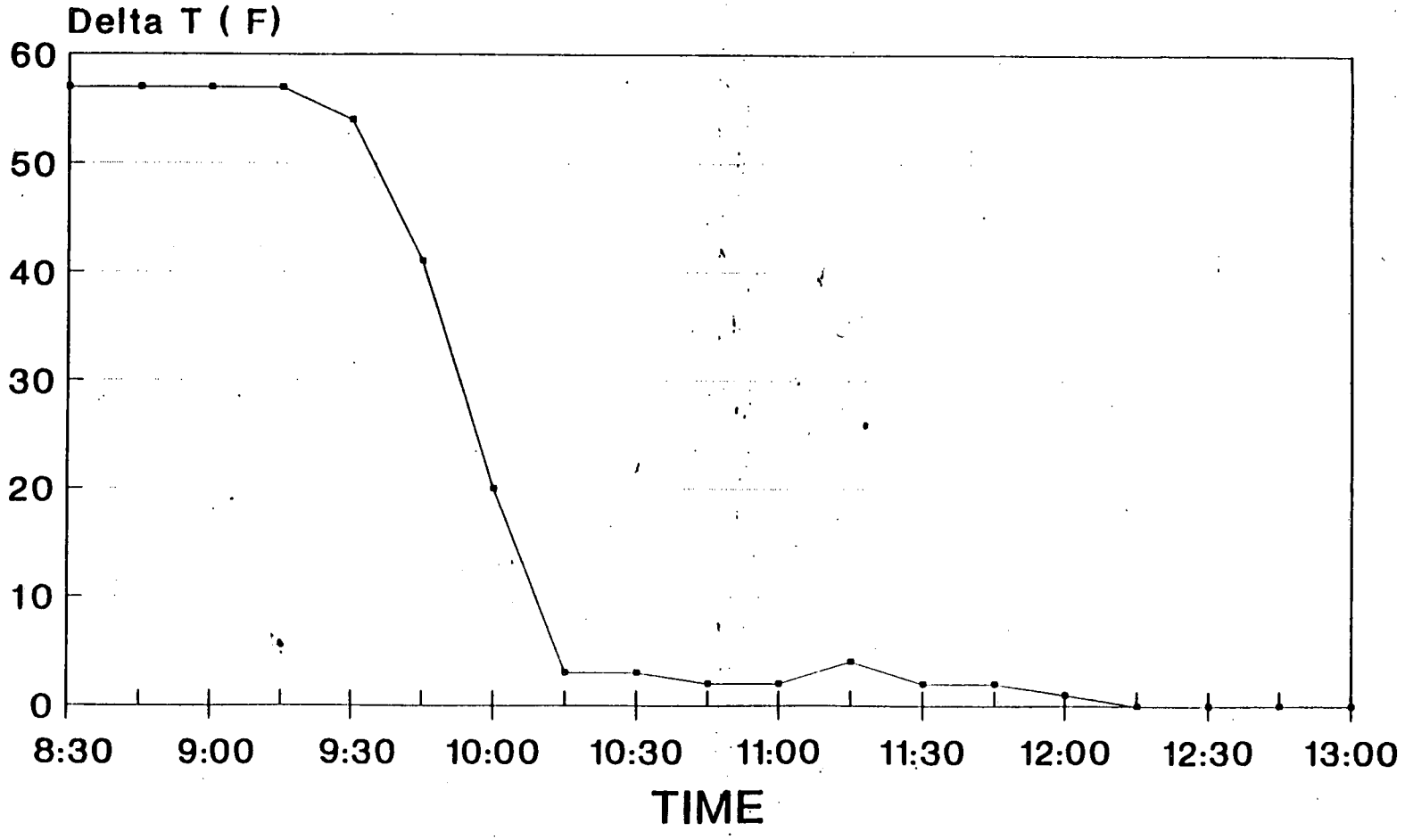
3.1.1-14

Loop C Tcold
EXERCISE



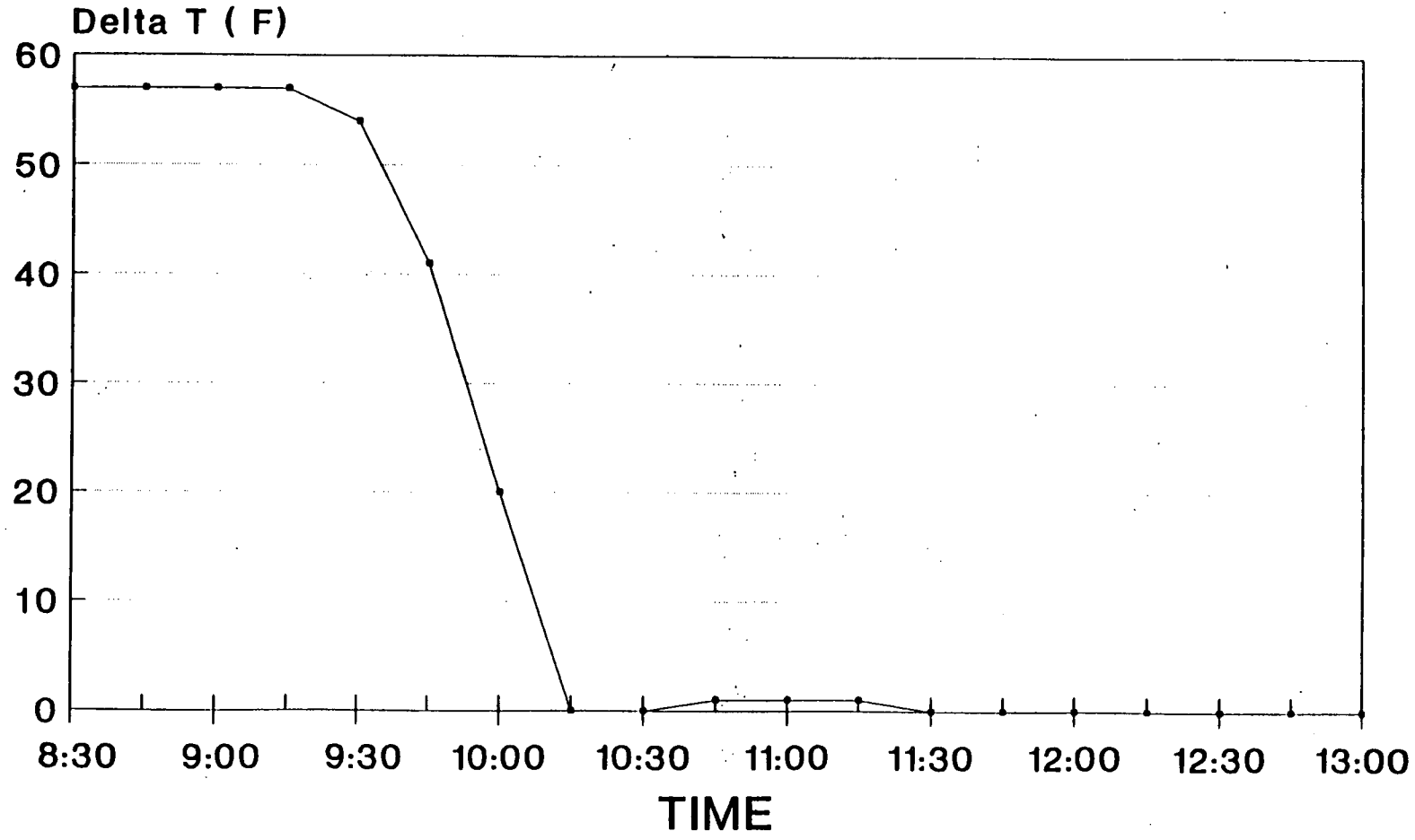
3.1.1-15

Loop A Delta T
EXERCISE



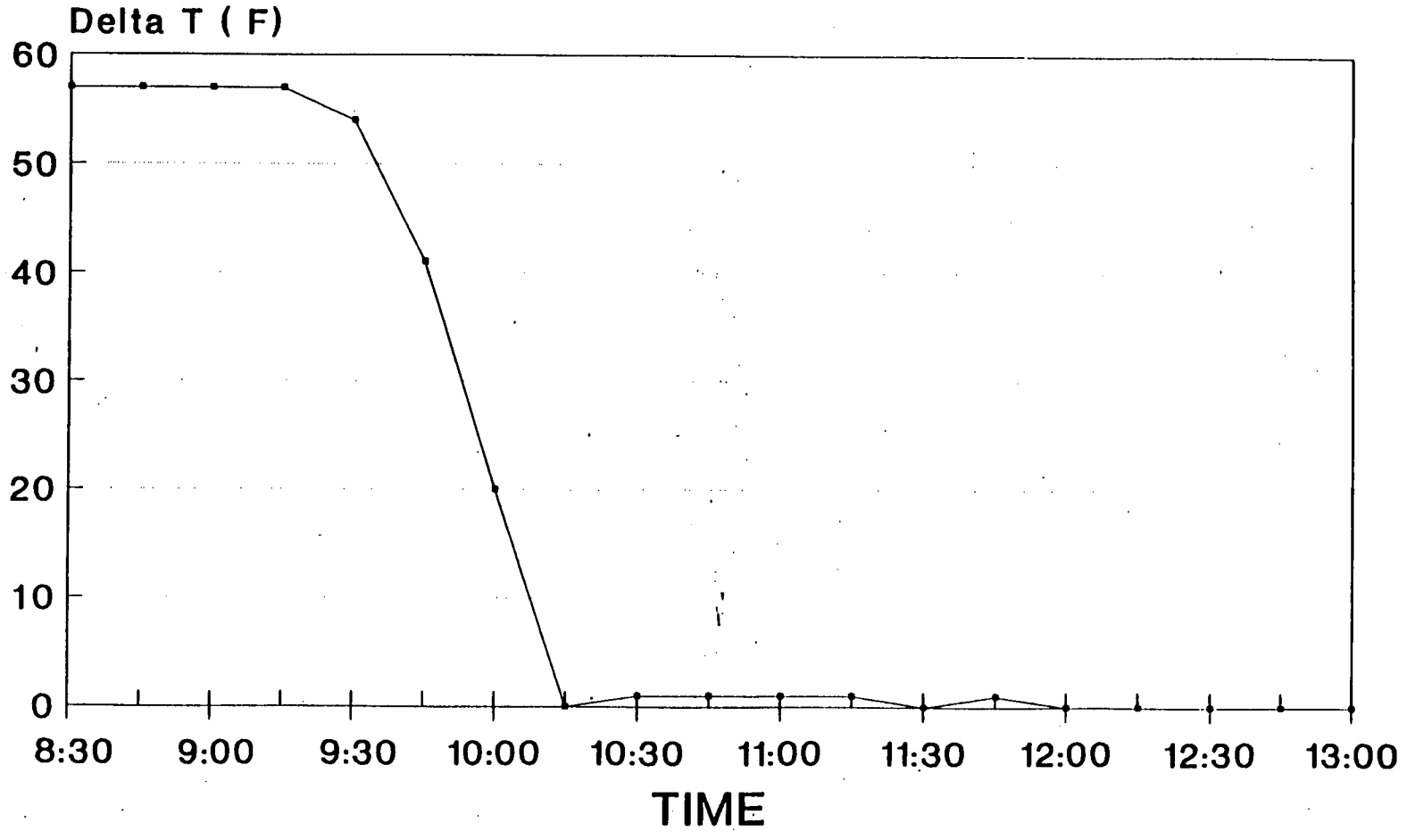
3.1.1-16

Loop B Delta T
EXERCISE



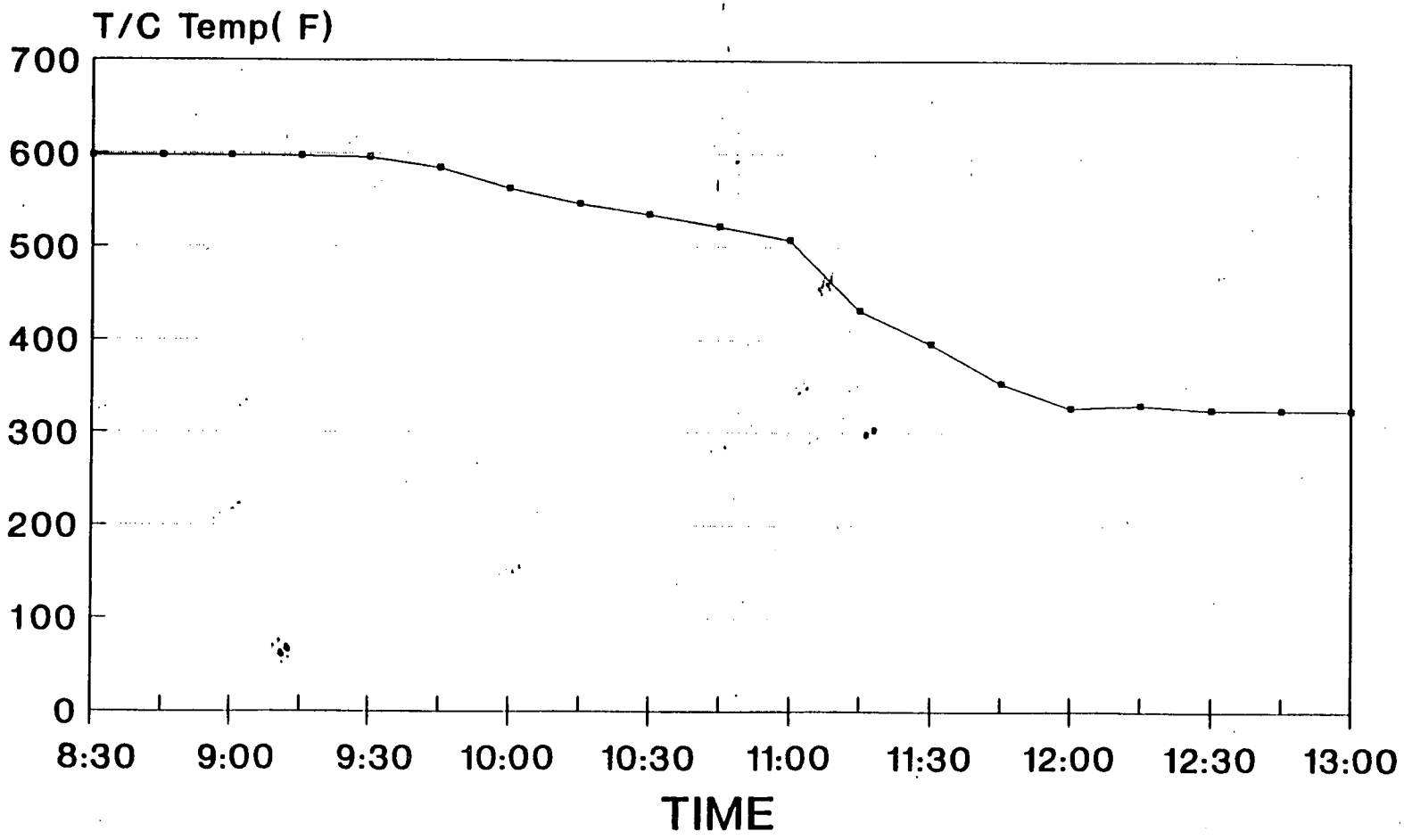
3.1.1-17

Loop C Delta T
EXERCISE



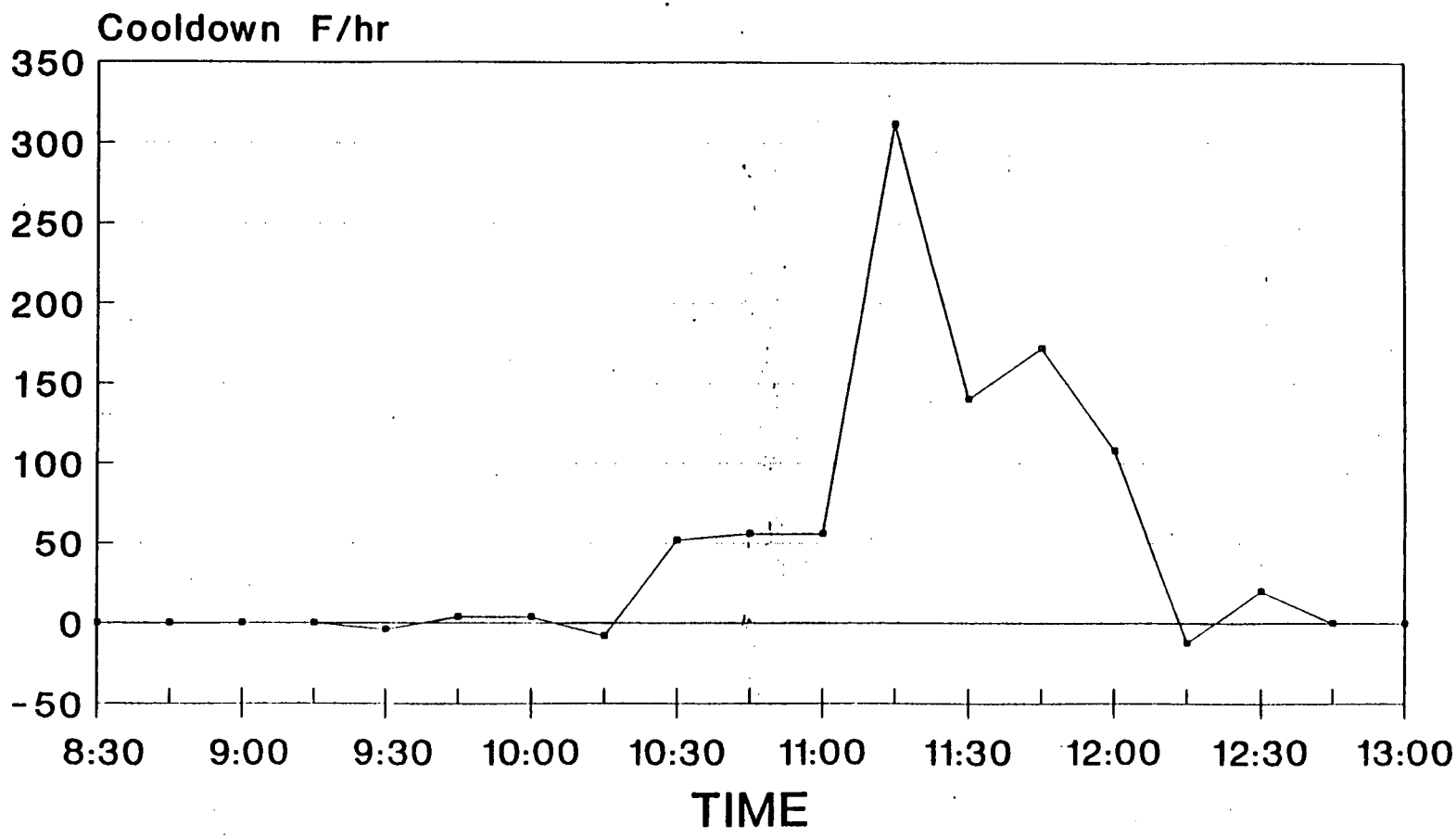
3.1.1-18

Ave of 5 Highest T/Cs
EXERCISE



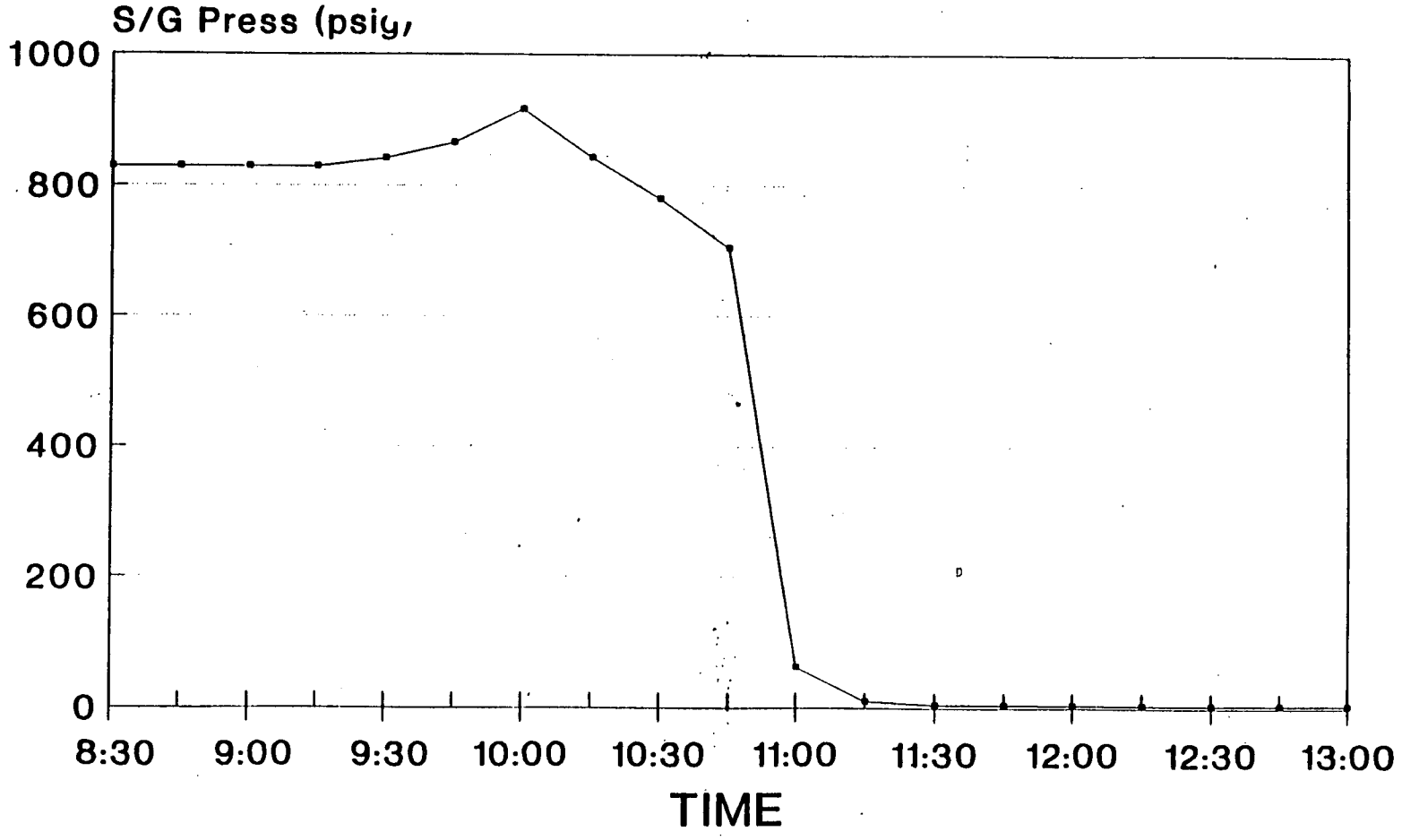
3.1.1-19

RCS Cooldown Rate
EXERCISE



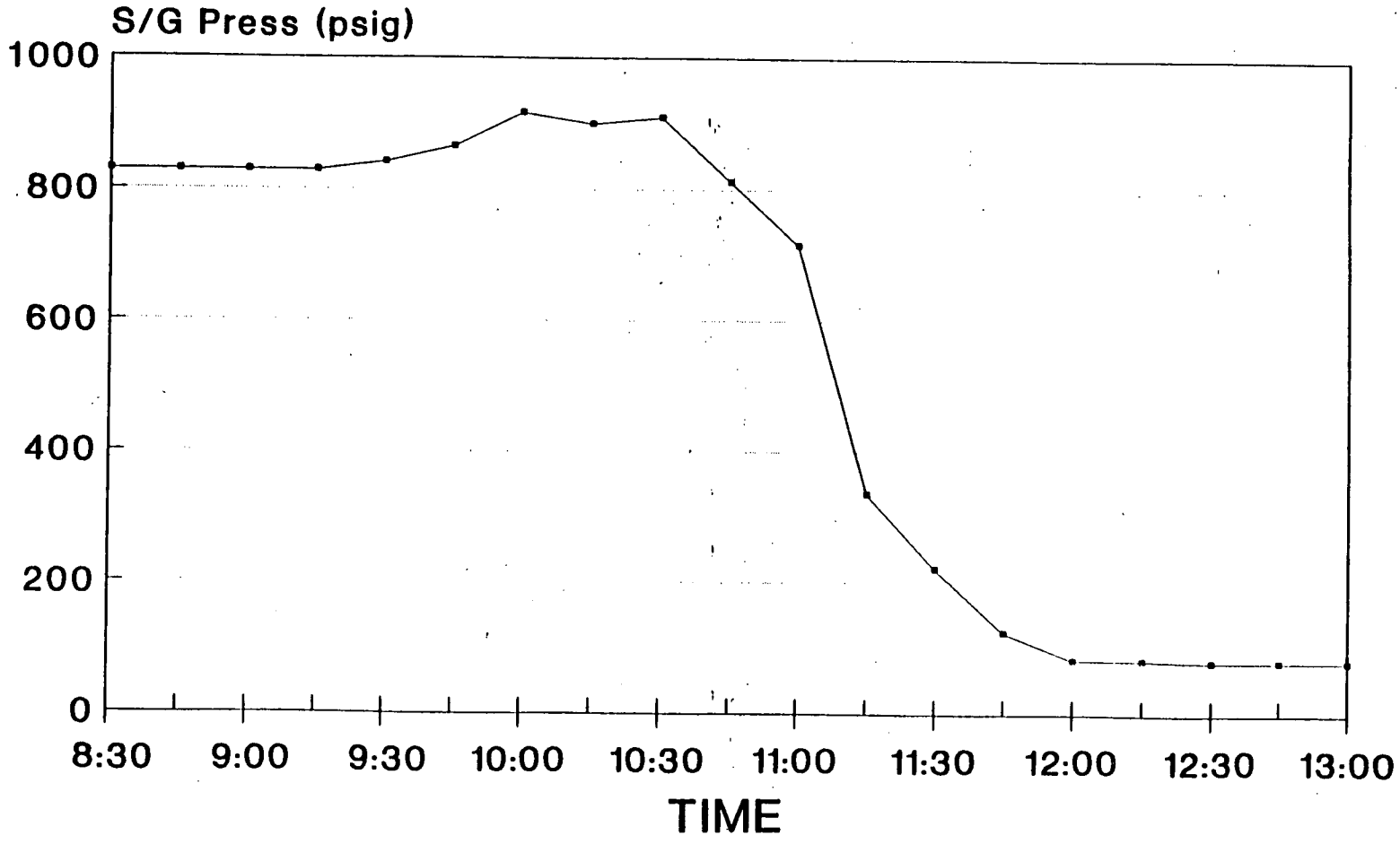
Based on Cold Leg Temp

S/G A Press
EXERCISE

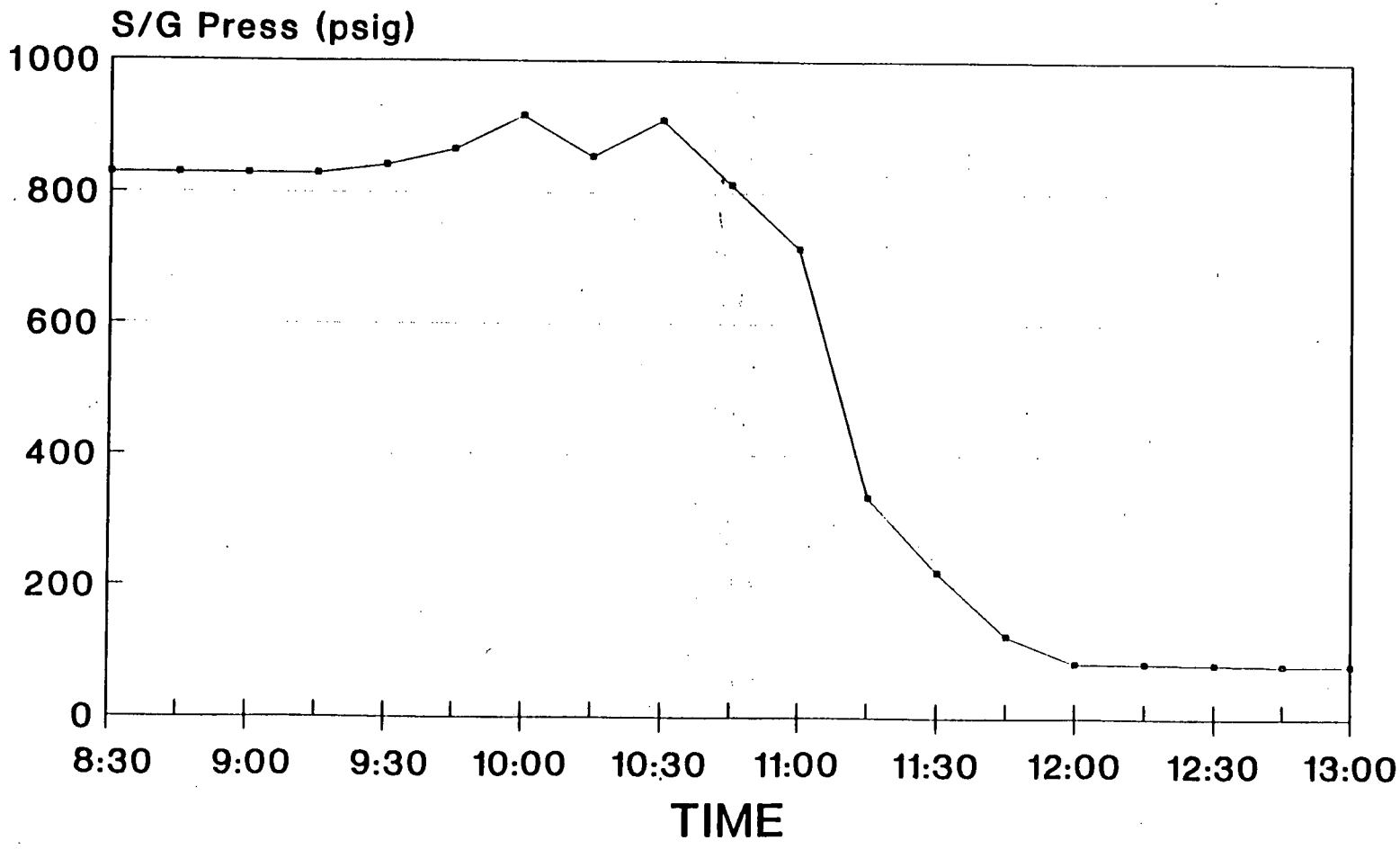


3.1.1-21

S/G B Press
EXERCISE

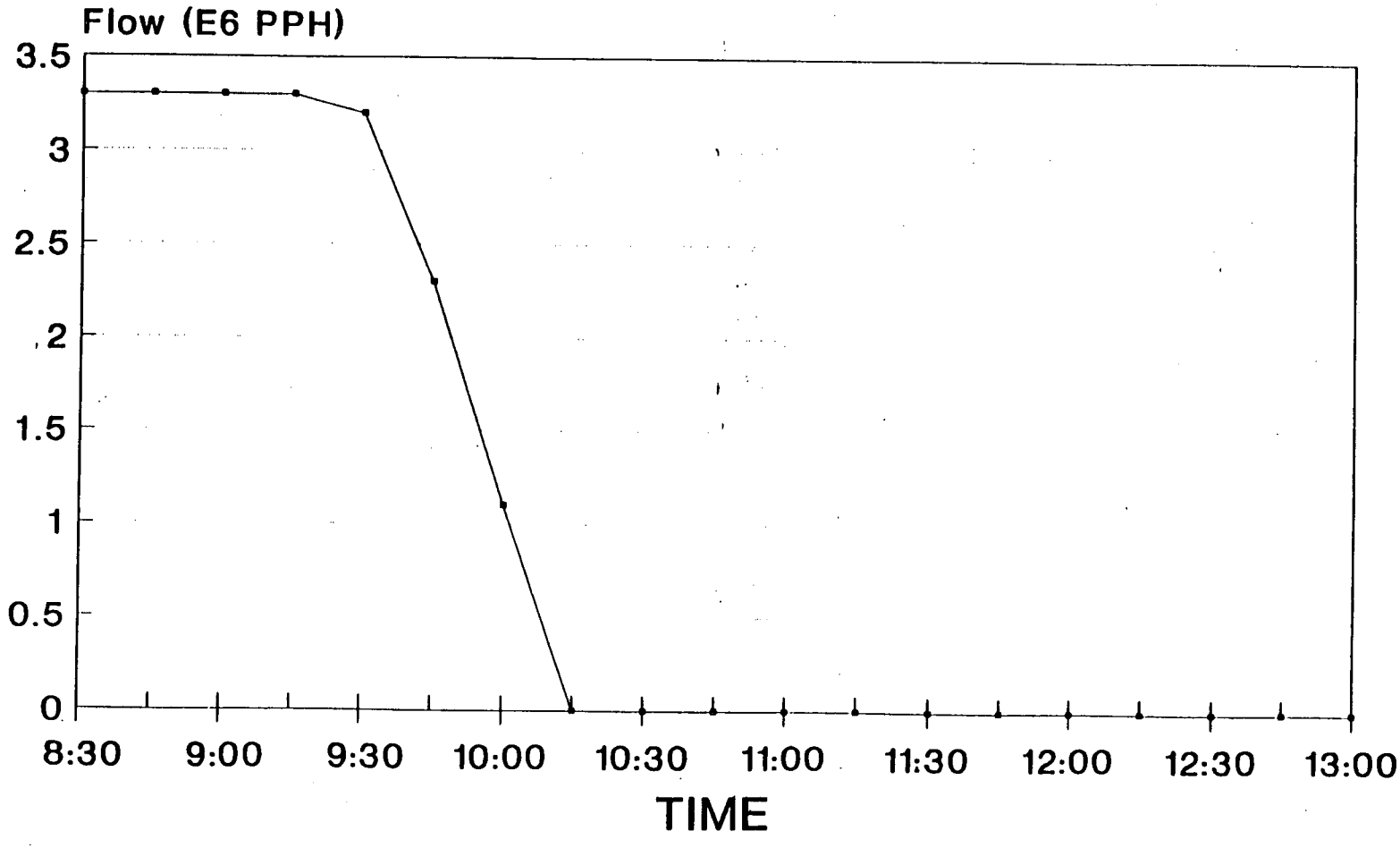


S/G C Press
EXERCISE



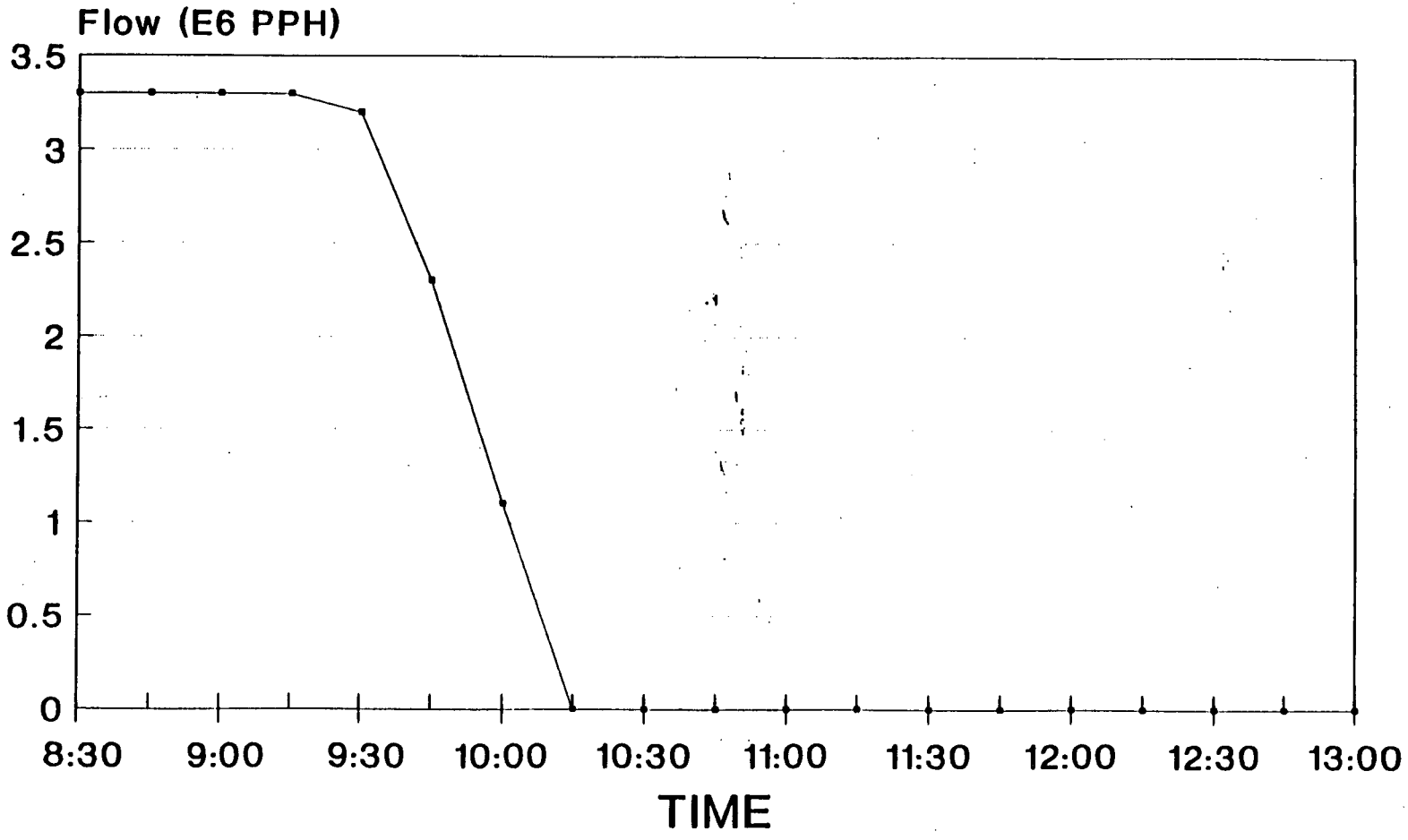
3.1.1-23

S/G A Feedwater Flow
EXERCISE

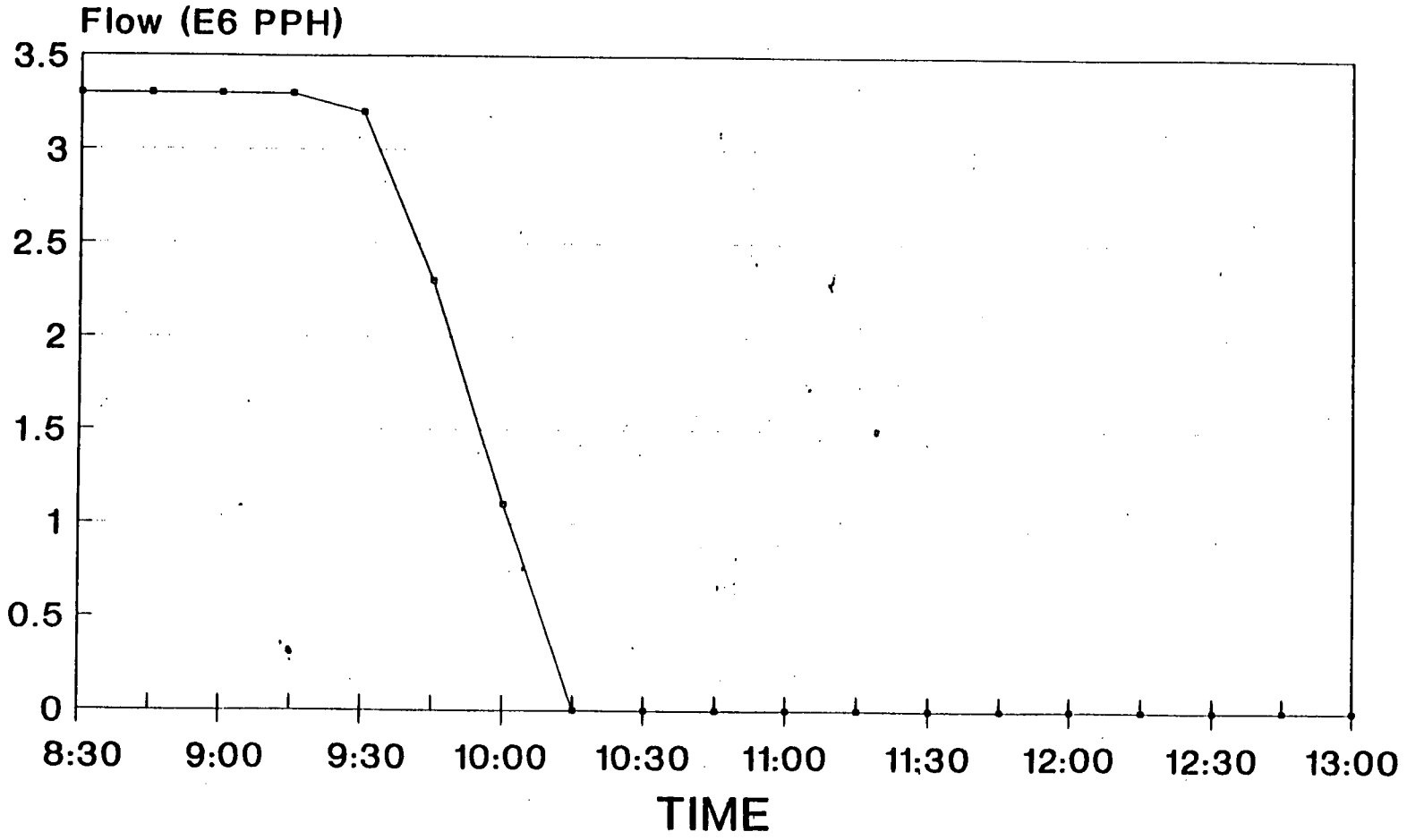


3.1.1-24

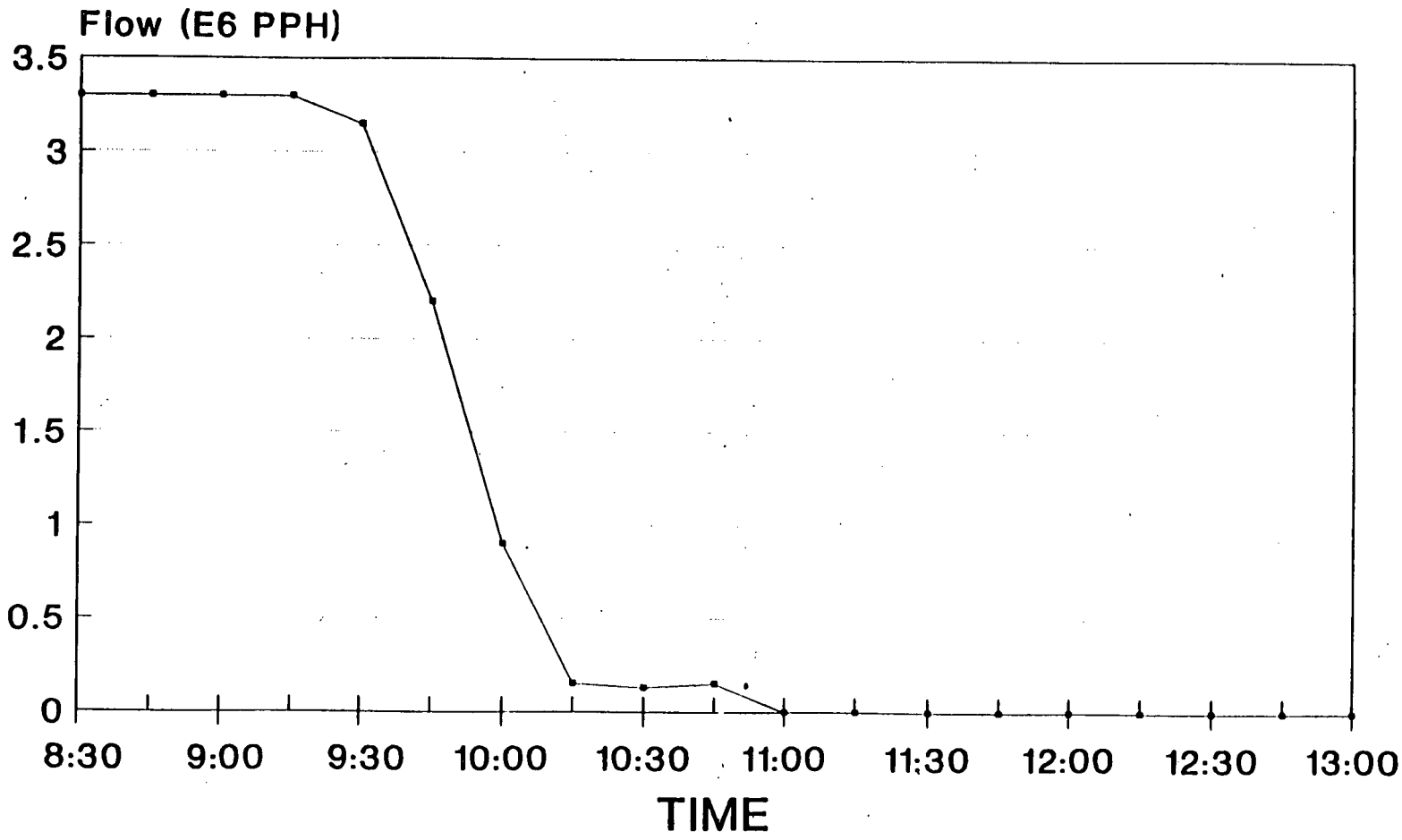
S/G B Feedwater Flow
EXERCISE



S/G C Feedwater Flow
EXERCISE

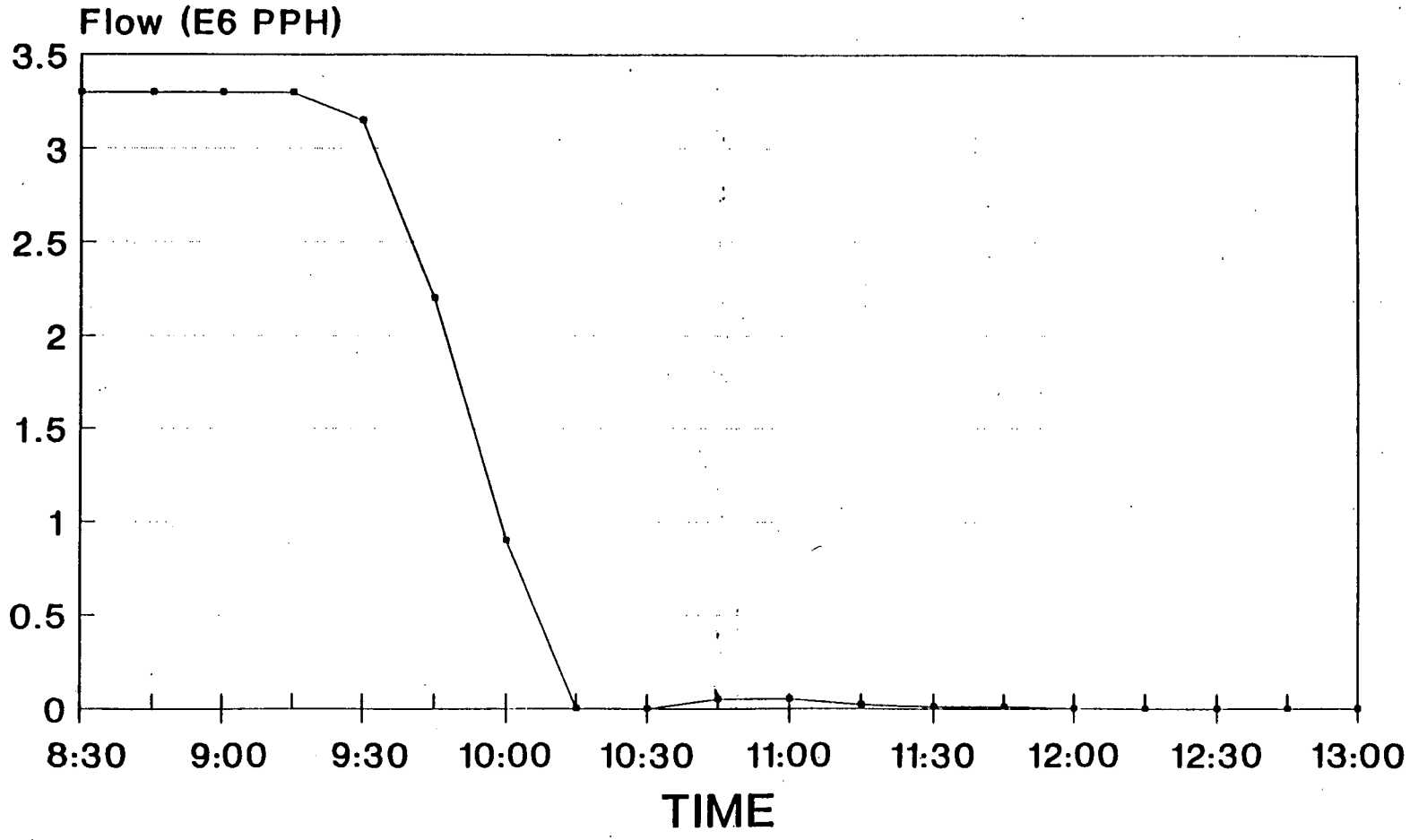


S/G A Steam Flow
EXERCISE



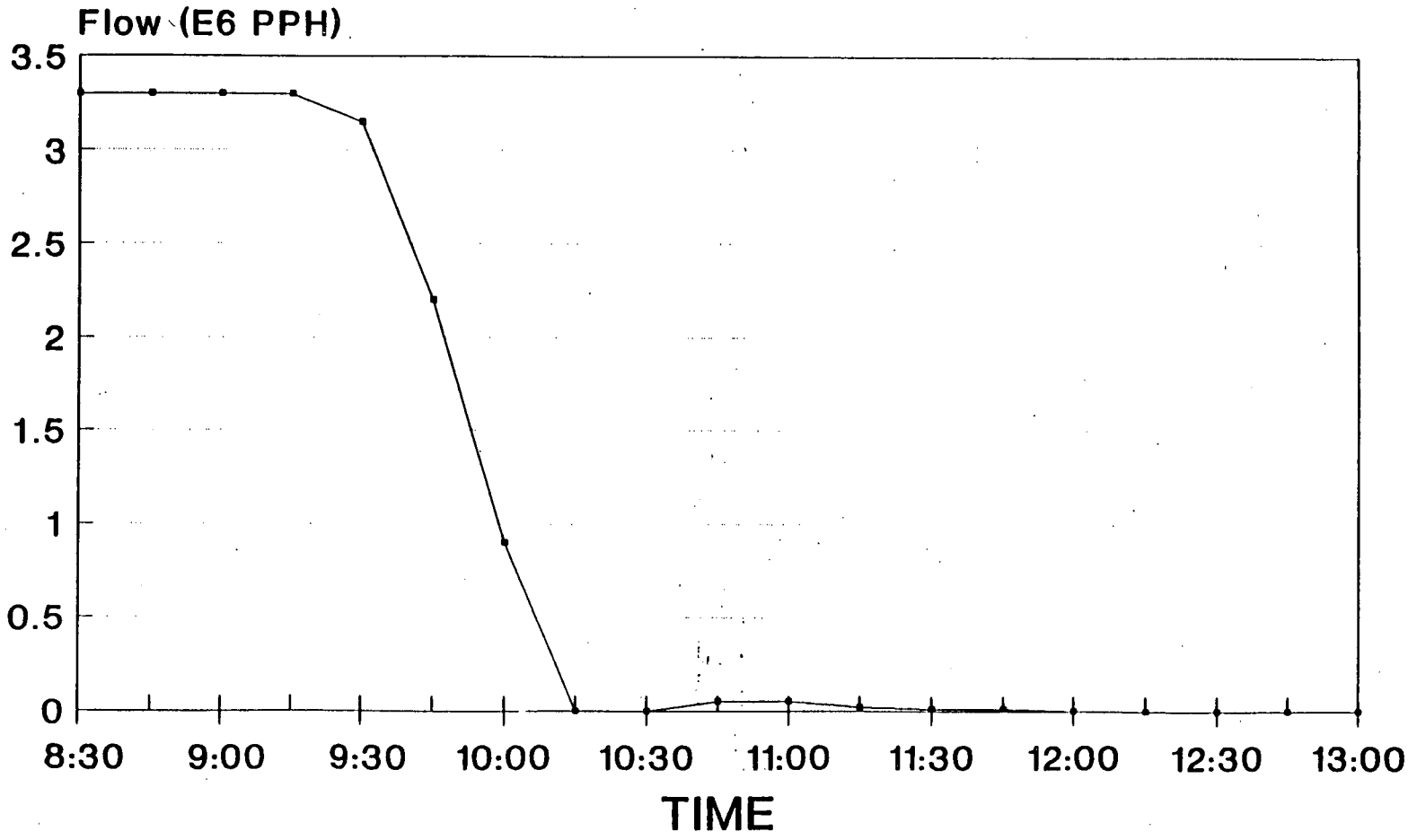
3.1.1-27

S/G B Steam Flow
EXERCISE

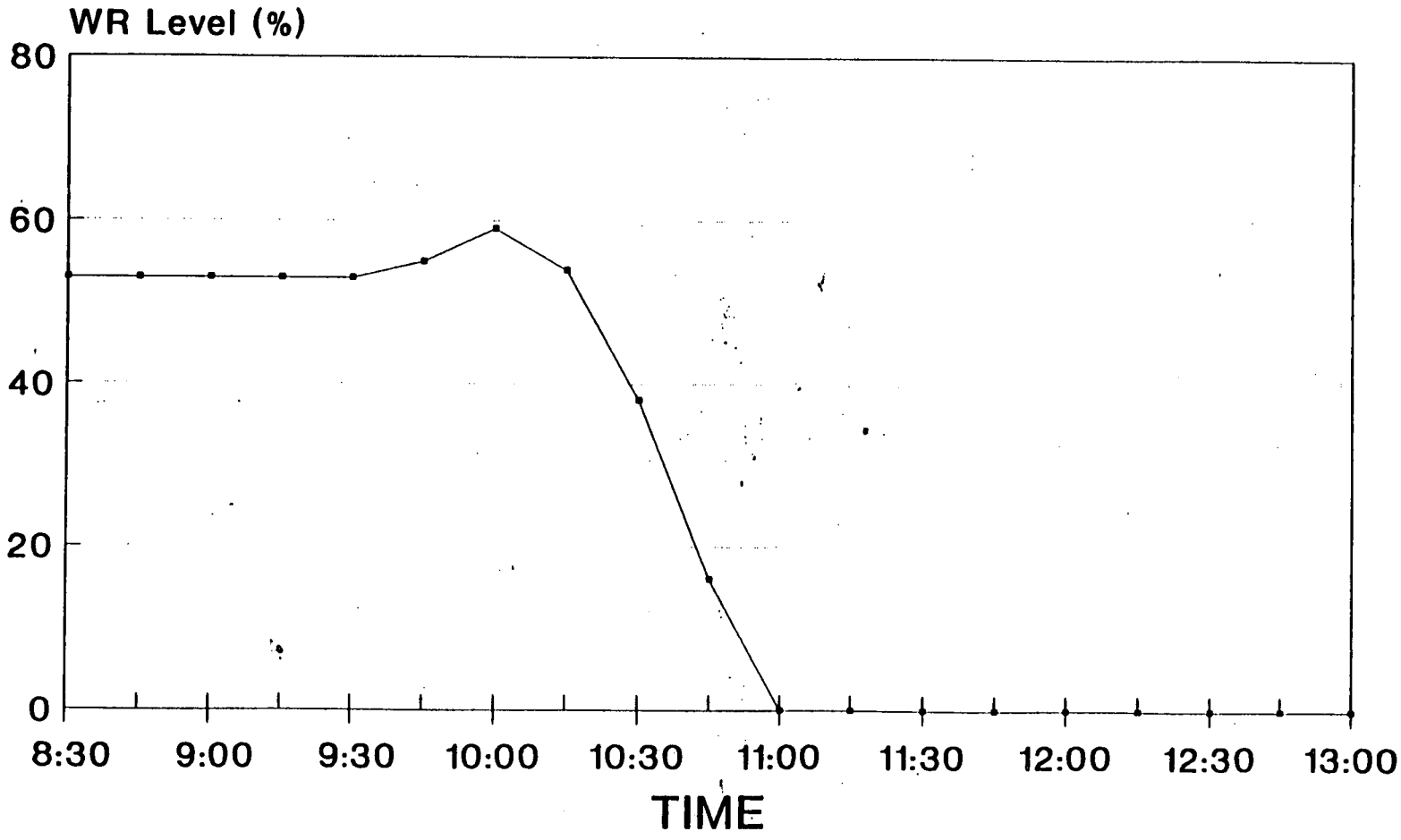


3.1.1-28

S/G C Steam Flow
EXERCISE

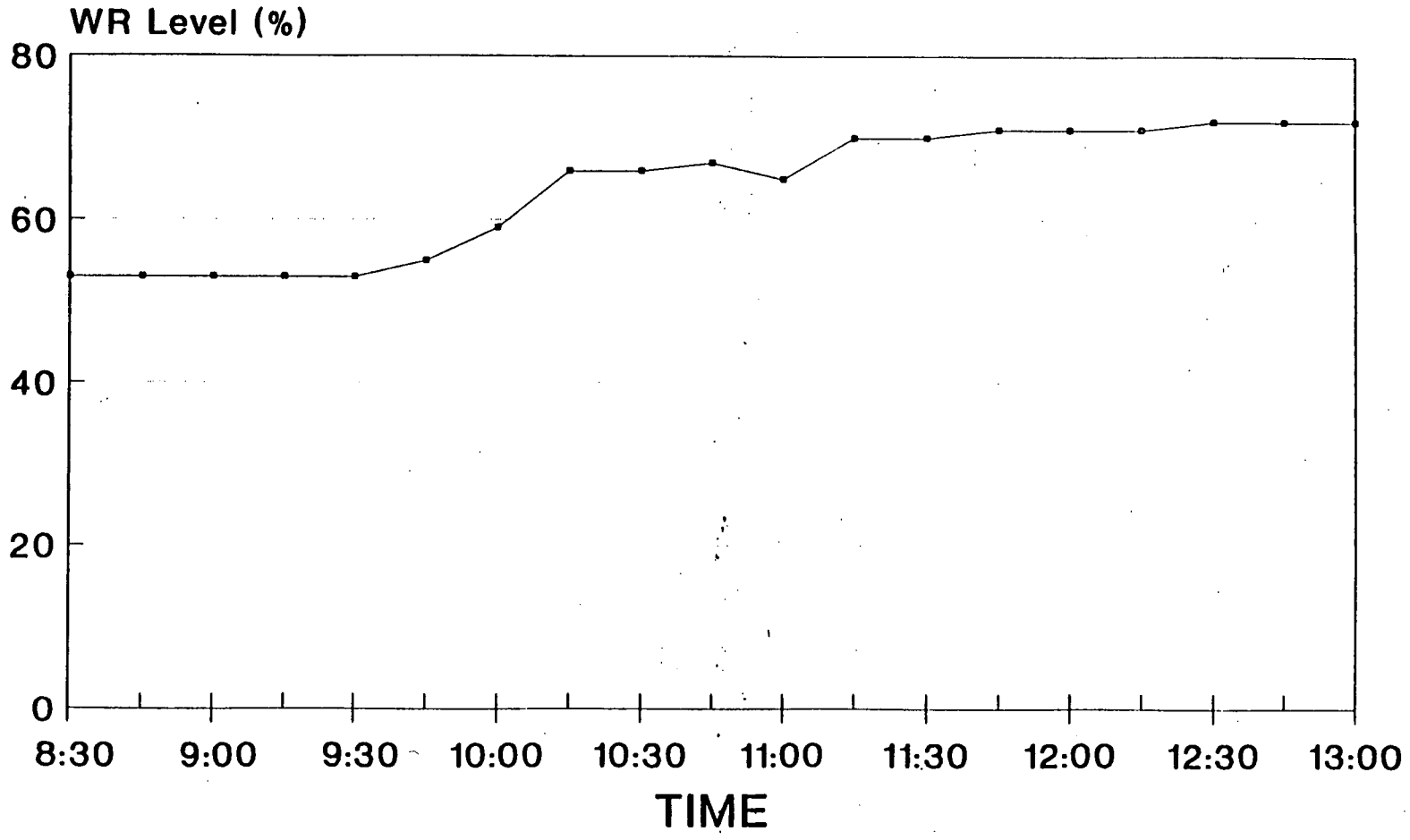


S/G A Level (WR)
EXERCISE



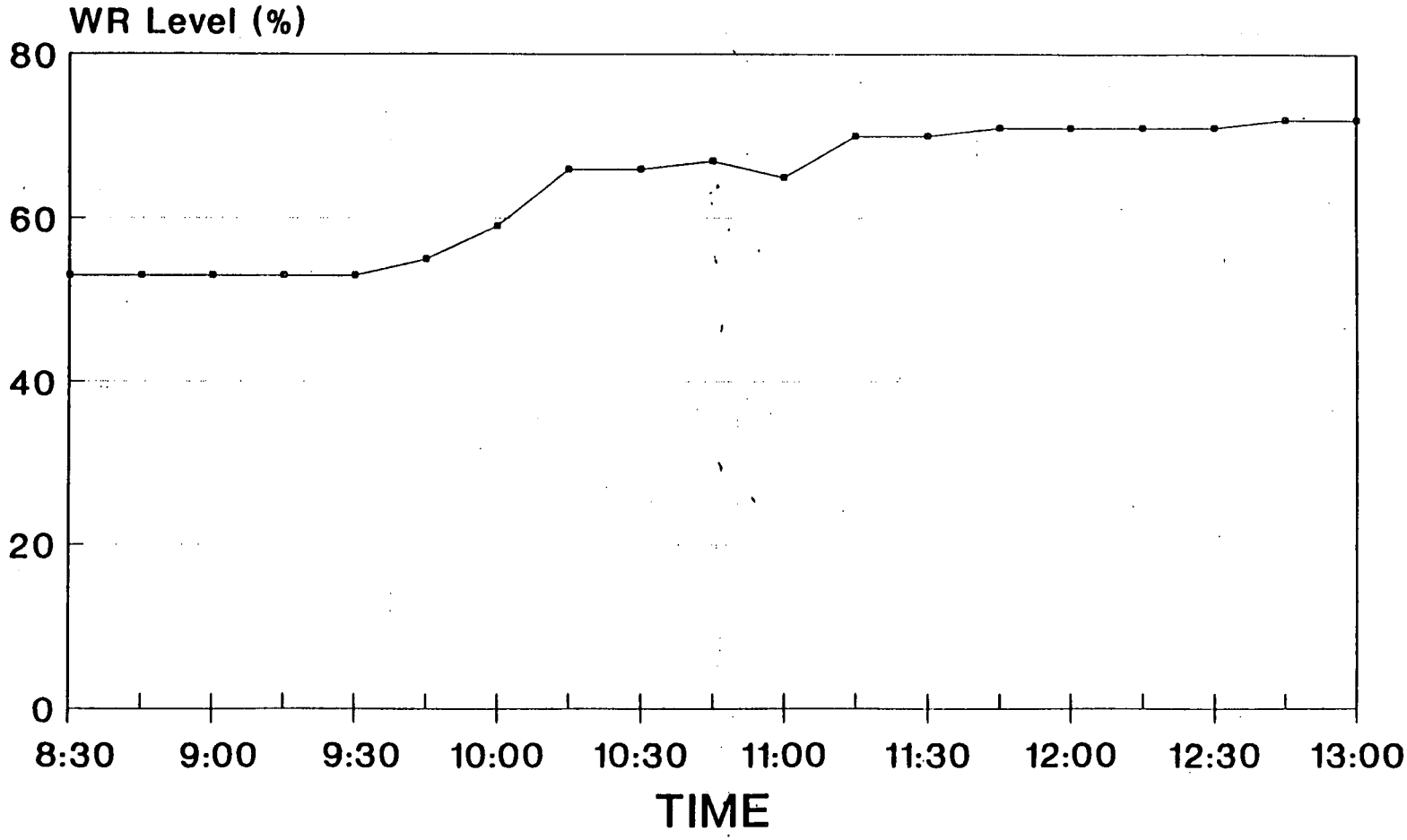
3.1.1-30

S/G B Level (WR)
EXERCISE



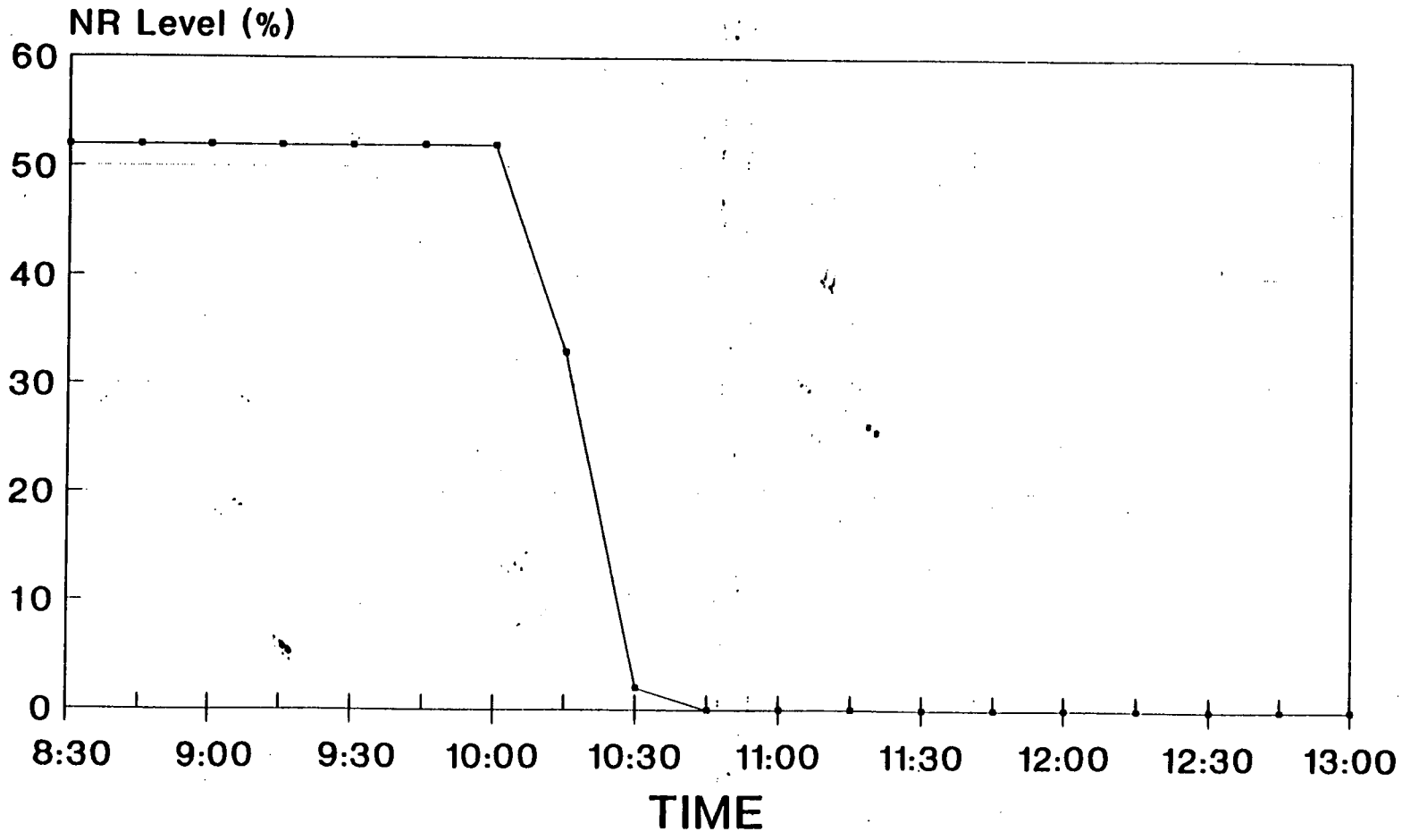
3.1.1-31

S/G C Level (WR)
EXERCISE



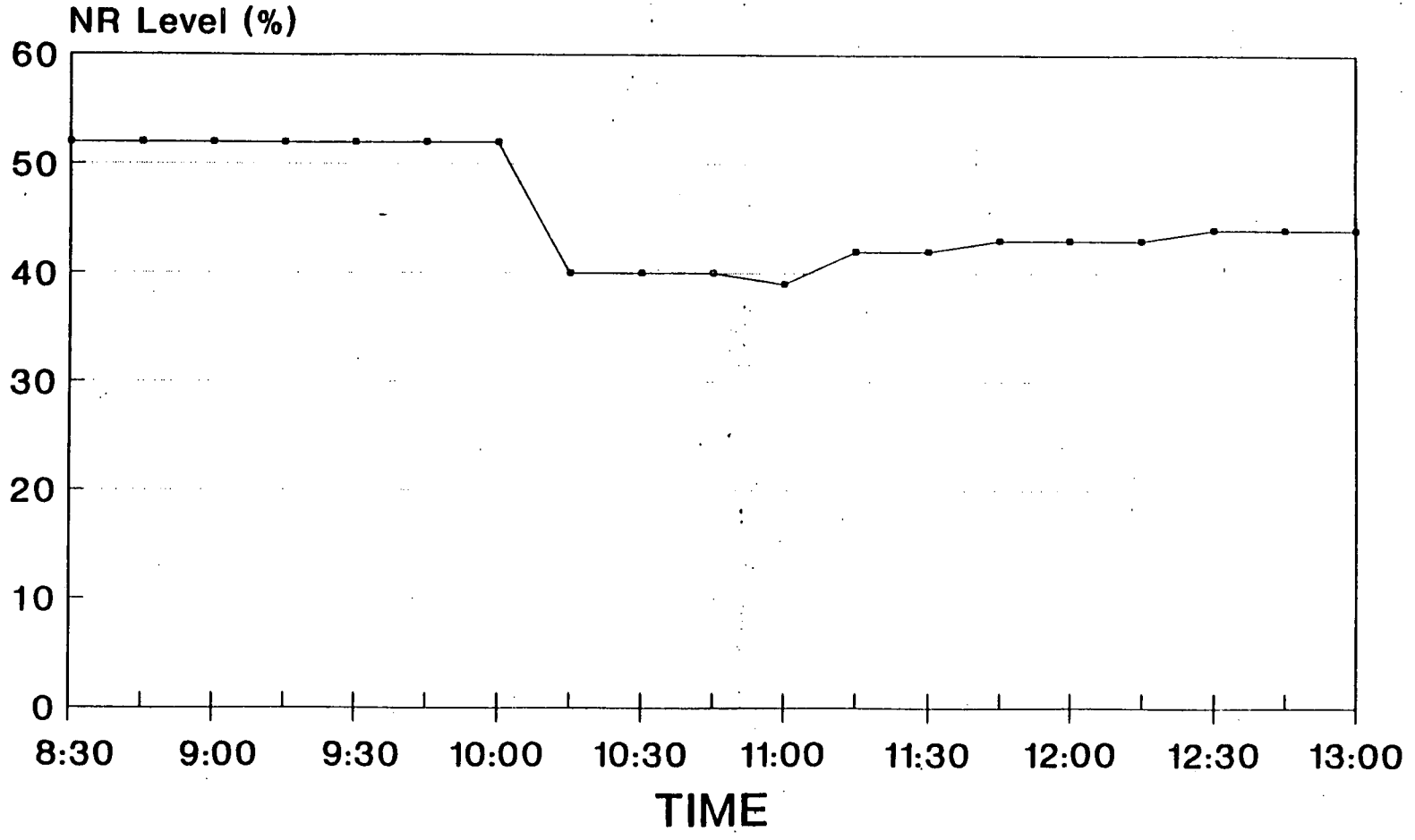
3.1.1-32

S/G A Level (NR)
EXERCISE



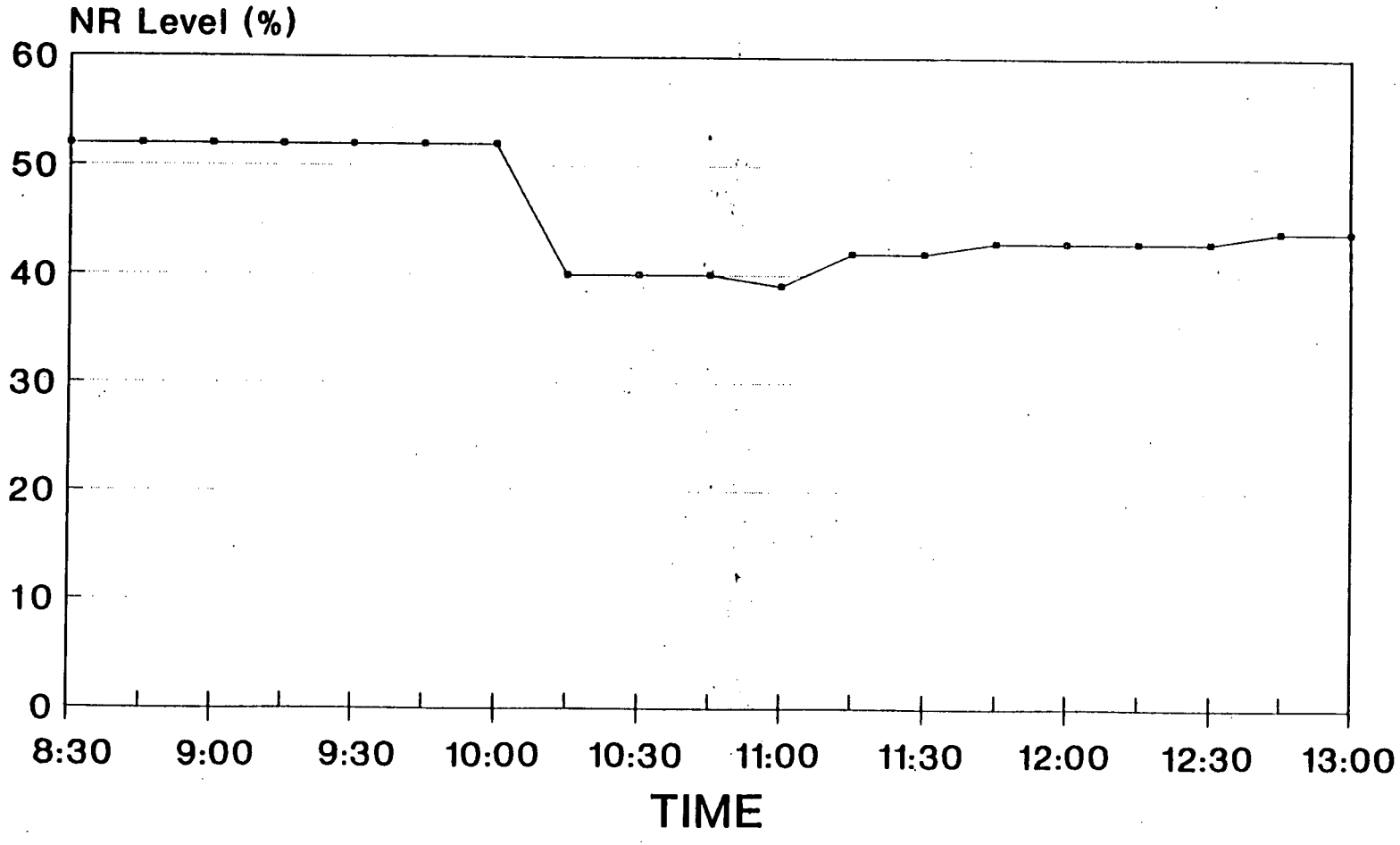
3.1.1-33

S/G B Level (NR)
EXERCISE



3.1.1-34

S/G C Level (NR)
EXERCISE



3.1.1-35

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1994 DEFERRED EXERCISE

3.2 PLANT PARAMETERS

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 0830

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	7.1
LOWER (MPH)	3.7
WIND DIR. UPPER (° FROM)	233
LOWER (° FROM)	229
AIR TEMPERATURE (°F)	46.1
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	8
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	700
R-14B "I" PLT VNT (CPM)	20
R-14C "NG" PLT VNT (CPM)	40
R-15 COND. AIR EJEC. (CPM)	15
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2235
PZR LEVEL (%)	52.4
TAVE (°F)	575.4
LOOP A TH (°F)	603
TC (°F)	546
ΔT	57
LOOP B TH (°F)	603
TC (°F)	546
ΔT	57
LOOP C TH (°F)	603
TC (°F)	546
ΔT	57
SUBCOOLING (°F)	49.7
CHARGING FLOW (GPM)	23
LETDOWN FLOW (GPM)	42
REACTOR POWER	100
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	598
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A	A	B	A	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	O	B	O				
COND PUMP	A	O	B	O				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	O	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG	A							
OFFSITE	E							
EMER. BUS E1	E	E2	E					
FROM: OFFSITE	E	D.G.	A					

FANS

HVE 1A	A	1B	A					
HVE 2A	O	2B	A					
HVE 5A	A	5B	A					
HVE 15	O	15A	A					

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 0845

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	5.7
LOWER (MPH)	3.8
WIND DIR. UPPER (° FROM)	228
LOWER (° FROM)	230
AIR TEMPERATURE (°F)	48.2
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	8
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	700
R-14B "I" PLT VNT (CPM)	20
R-14C "NG" PLT VNT (CPM)	40
R-15 COND. AIR EJEC. (CPM)	15
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2235
PZR LEVEL (%)	52.4
TAVE (°F)	575.4
LOOP A TH (°F)	603
TC (°F)	546
ΔT	57
LOOP B TH (°F)	603
TC (°F)	546
ΔT	57
LOOP C TH (°F)	603
TC (°F)	546
ΔT	57
SUBCOOLING (°F)	49.7
CHARGING FLOW (GPM)	23
LETDOWN FLOW (GPM)	42
REACTOR POWER	100
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	598
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A	A	B	A	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	O	B	O				
COND PUMP	A	O	B	O				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	O	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG	A							
OFFSITE	E							
EMER. BUS E1	E	E2	E					
FROM: OFFSITE	E	D.G.	A					

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 0900

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	5.6
LOWER (MPH)	4.2
WIND DIR. UPPER (° FROM)	218
LOWER (° FROM)	220
AIR TEMPERATURE (°F)	50.5
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	8
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	700
R-14B "I" PLT VNT (CPM)	20
R-14C "NG" PLT VNT (CPM)	40
R-15 COND. AIR EJEC. (CPM)	15
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2235
PZR LEVEL (%)	52.4
TAVE (°F)	575.4
LOOP A TH (°F)	603
TC (°F)	546
ΔT	57
LOOP B TH (°F)	603
TC (°F)	546
ΔT	57
LOOP C TH (°F)	603
TC (°F)	546
ΔT	57
SUBCOOLING (°F)	49.7
CHARGING FLOW (GPM)	23
LETDOWN FLOW (GPM)	42
REACTOR POWER	100
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	598
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A	N	B	A	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	O	B	O				
COND PUMP	A	O	B	O				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	O	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG	N							
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A					
HVE 2A	O	2B	A					
HVE 5A	A	5B	A					
HVE 15	O	15A	A					

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 03/30/94 / 0915

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	6.3
LOWER (MPH)	4.0
WIND DIR. UPPER (° FROM)	226
LOWER (° FROM)	215
AIR TEMPERATURE (°F)	51.7
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	8
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	844
R-14B "I" PLT VNT (CPM)	30
R-14C "NG" PLT VNT (CPM)	184
R-15 COND. AIR EJEC. (CPM)	4359
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	3.5K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2235
PZR LEVEL (%)	52.0
TAVE (°F)	575.4
LOOP A TH (°F)	603
TC (°F)	546
ΔT	57
LOOP B TH (°F)	603
TC (°F)	546
ΔT	57
LOOP C TH (°F)	603
TC (°F)	546
ΔT	57
SUBCOOLING (°F)	49.7
CHARGING FLOW (GPM)	50
LETDOWN FLOW (GPM)	42
REACTOR POWER	100
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	598
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	829		
FEED (PPH)	3.3		
STEAM (PPH)	3.3		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A	N	B	A	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	O	B	O				
COND PUMP	A	O	B	O				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	O	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG	N							
OFFSITE	E							
EMER. BUS E1	E	E2	E					
FROM: OFFSITE	E	D.G.	A					

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 0930

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	6.6
LOWER (MPH)	4.6
WIND DIR. UPPER (° FROM)	214
LOWER (° FROM)	217
AIR TEMPERATURE (°F)	55.7
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	8
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.1K
R-14B "I" PLT VNT (CPM)	47
R-14C "NG" PLT VNT (CPM)	449
R-15 COND. AIR EJEC. (CPM)	8K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	3.5K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.6
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2235
PZR LEVEL (%)	52.7
TAVE (°F)	573.7
LOOP A TH (°F)	601
TC (°F)	547
ΔT	54
LOOP B TH (°F)	601
TC (°F)	547
ΔT	54
LOOP C TH (°F)	601
TC (°F)	547
ΔT	54
SUBCOOLING (°F)	51.7
CHARGING FLOW (GPM)	60
LETDOWN FLOW (GPM)	42
REACTOR POWER	95
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	596
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	842		
FEED (PPH)	3.2		
STEAM (PPH)	3.15		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	842		
FEED (PPH)	3.2		
STEAM (PPH)	3.15		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	53	NR(%)	52
PRESS (PSIG)	842		
FEED (PPH)	3.2		
STEAM (PPH)	3.15		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A	N	B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91			
FEED PUMP	A	O	B	O
COND PUMP	A	O	B	O
AFW MOTOR	A	A	B	A
AFW STEAM	A			
MSIV	A	O	B	O	C	O

ELECTRICAL

EDG	A	A	B	A
DS/DG	N			
OFFSITE	E			
EMER. BUS E1	E	E2	E	
FROM: OFFSITE	E	D.G.	A	

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 0945

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	5.0
LOWER (MPH)	4.3
WIND DIR. UPPER (° FROM)	218
LOWER (° FROM)	213
AIR TEMPERATURE (°F)	59.6
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	8
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.46K
R-14B "I" PLT VNT (CPM)	71
R-14C "NG" PLT VNT (CPM)	800
R-15 COND. AIR EJEC. (CPM)	10.6K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	3.5K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	.4
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2235
PZR LEVEL (%)	43.7
TAVE (°F)	565.3
LOOP A TH (°F)	587
TC (°F)	546
ΔT	41
LOOP B TH (°F)	587
TC (°F)	546
ΔT	41
LOOP C TH (°F)	587
TC (°F)	546
ΔT	41
SUBCOOLING (°F)	65
CHARGING FLOW (GPM)	67
LETDOWN FLOW (GPM)	42
REACTOR POWER	70
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	585
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A			
LEV.-WR(%)	55	NR(%)	52
PRESS (PSIG)	866		
FEED (PPH)	2.3		
STEAM (PPH)	2.2		
ACT. (Uci/ml)			
S/G B			
LEV.-WR(%)	55	NR(%)	52
PRESS (PSIG)	866		
FEED (PPH)	2.3		
STEAM (PPH)	2.2		
ACT. (Uci/mi)			
S/G C			
LEV.-WR(%)	55	NR(%)	52
PRESS (PSIG)	866		
FEED (PPH)	2.3		
STEAM (PPH)	2.2		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O	
CHG PUMP	A		B	O	C	O	
SI PUMP	A	A	B	A	C	N	
CS PUMP	A	A	B	A			
RHR PUMP	A	A	B	A			
HVH 1	O	2	O	3	O	4	O

SECONDARY

CST LEVEL (%)	91						
FEED PUMP	A	O	B	O			
COND PUMP	A	O	B	O			
AFW MOTOR	A	A	B	A			
AFW STEAM	A						
MSIV	A	O	B	O	C	O	

ELECTRICAL

EDG	A	A	B	A			
DS/DG							
OFFSITE	E						
EMER. BUS	E1	E	E2	E			
FROM:	OFFSITE	E	D.G.	A			

FANS

HVE 1A	A	1B	A				
HVE 2A	O	2B	A				
HVE 5A	A	5B	A				
HVE 15	O	15A	A				

LEGEND:

OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1000

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	6.1
LOWER (MPH)	4.7
WIND DIR. UPPER (° FROM)	213
LOWER (° FROM)	210
AIR TEMPERATURE (°F)	61.5
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	7
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.9K
R-14B "I" PLT VNT (CPM)	104
R-14C "NG" PLT VNT (CPM)	1.3K
R-15 COND. AIR EJEC. (CPM)	14.9K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	3.2K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.4
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2236
PZR LEVEL (%)	30.9
TAVE (°F)	554
LOOP A TH (°F)	565
TC (°F)	545
ΔT	20
LOOP B TH (°F)	565
TC (°F)	545
ΔT	20
LOOP C TH (°F)	565
TC (°F)	545
ΔT	20
SUBCOOLING (°F)	87.7
CHARGING FLOW (GPM)	69
LETDOWN FLOW (GPM)	42
REACTOR POWER	30
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	563
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	59
NR(%)	52
PRESS (PSIG)	917
FEED (PPH)	1.1
STEAM (PPH)	.9
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	59
NR(%)	52
PRESS (PSIG)	917
FEED (PPH)	1.1
STEAM (PPH)	.9
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	59
NR(%)	52
PRESS (PSIG)	917
FEED (PPH)	1.1
STEAM (PPH)	.9
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	O	B	A				
COND PUMP	A	O	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	O	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS E1	E	E2	E					
FROM: OFFSITE	E	D.G.	A					

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1015

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	7.7
LOWER (MPH)	5.7
WIND DIR. UPPER (° FROM)	210
LOWER (° FROM)	212
AIR TEMPERATURE (°F)	61.9
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	6
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	62
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	2.5K
R-14B "I" PLT VNT (CPM)	142
R-14C "NG" PLT VNT (CPM)	1.8K
R-15 COND. AIR EJEC. (CPM)	16.5K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.8K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.4
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	91

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2186
PZR LEVEL (%)	18.2
TAVE (°F)	547
LOOP A TH (°F)	547
TC (°F)	544
ΔT	3
LOOP B TH (°F)	547
TC (°F)	547
ΔT	0
LOOP C TH (°F)	547
TC (°F)	547
ΔT	0
SUBCOOLING (°F)	102.5
CHARGING FLOW (GPM)	136
LETDOWN FLOW (GPM)	40
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	547
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	54	NR(%)	33
PRESS (PSIG)	843		
FEED (PPH)	0		
STEAM (PPH)	.15		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	66	NR(%)	40
PRESS (PSIG)	900		
FEED (PPH)	0		
STEAM (PPH)	0		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	66	NR(%)	40
PRESS (PSIG)	900		
FEED (PPH)	0		
STEAM (PPH)	0		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O			
CHG PUMP	A		B	O	C	O			
SI PUMP	A	A	B	A	C	N			
CS PUMP	A	A	B	A					
RHR PUMP	A	A	B	A					
HVH 1	O	2	O	3	O	4	O		

SECONDARY

CST LEVEL (%)	91								
FEED PUMP	A	A	B	A					
COND PUMP	A	A	B	A					
AFW MOTOR	A	A	B	A					
AFW STEAM	A								
MSIV	A	ISOL	B	O	C	O			

ELECTRICAL

EDG	A	A	B	A					
DS/DG									
OFFSITE	E								
EMER. BUS	E1	E	E2	E					
FROM:	OFFSITE	E	D.G.	A					

FANS

HVE	1A	A	1B	A					
HVE	2A	O	2B	A					
HVE	5A	A	5B	A					
HVE	15	O	15A	A					

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1030

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	6.5
LOWER (MPH)	4.9
WIND DIR. UPPER (° FROM)	217
LOWER (° FROM)	215
AIR TEMPERATURE (°F)	62.9
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	6
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	5.1
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	61
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.9K
R-14B "I" PLT VNT (CPM)	101
R-14C "NG" PLT VNT (CPM)	1.2K
R-15 COND. AIR EJEC. (CPM)	10.9K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.5K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	90

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	2050
PZR LEVEL (%)	37.2
TAVE (°F)	535
LOOP A TH (°F)	535
TC (°F)	532
ΔT	3
LOOP B TH (°F)	535
TC (°F)	535
ΔT	0
LOOP C TH (°F)	535
TC (°F)	534
ΔT	1
SUBCOOLING (°F)	105.3
CHARGING FLOW (GPM)	96
LETDOWN FLOW (GPM)	66
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	535
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	38
NR(%)	2
PRESS (PSIG)	780
FEED (PPH)	0
STEAM (PPH)	.13
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	66
NR(%)	40
PRESS (PSIG)	910
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	66
NR(%)	40
PRESS (PSIG)	910
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS
N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1045

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	8.0
LOWER (MPH)	6.0
WIND DIR. UPPER (° FROM)	216
LOWER (° FROM)	210
AIR TEMPERATURE (°F)	63.7
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	5
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	4
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	61
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.5K
R-14B "I" PLT VNT (CPM)	74
R-14C "NG" PLT VNT (CPM)	827
R-15 COND. AIR EJEC. (CPM)	7.2K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.2K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	90

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	1875
PZR LEVEL (%)	24.5
TAVE (°F)	522
LOOP A TH (°F)	522
TC (°F)	520
ΔT	2
LOOP B TH (°F)	522
TC (°F)	521
ΔT	1
LOOP C TH (°F)	522
TC (°F)	521
ΔT	1
SUBCOOLING (°F)	105.8
CHARGING FLOW (GPM)	132
LETDOWN FLOW (GPM)	83
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	522
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	16	NR(%)	0
PRESS (PSIG)	705		
FEED (PPH)	0		
STEAM (PPH)	.15		
ACT. (Uci/ml)			

S/G B

LEV.-WR(%)	67	NR(%)	40
PRESS (PSIG)	812		
FEED (PPH)	0		
STEAM (PPH)	.05		
ACT. (Uci/mi)			

S/G C

LEV.-WR(%)	67	NR(%)	40
PRESS (PSIG)	812		
FEED (PPH)	0		
STEAM (PPH)	.05		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	O	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1100

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	7.2
LOWER (MPH)	5.7
WIND DIR. UPPER (° FROM)	212
LOWER (° FROM)	206
AIR TEMPERATURE (°F)	64.8
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	5
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	3
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	61
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.2K
R-14B "I" PLT VNT (CPM)	56
R-14C "NG" PLT VNT (CPM)	561
R-15 COND. AIR EJEC. (CPM)	4.8K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	2.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	89

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	1167
PZR LEVEL (%)	46
TAVE (°F)	508
LOOP A TH (°F)	508
TC (°F)	506
ΔT	2
LOOP B TH (°F)	508
TC (°F)	507
ΔT	1
LOOP C TH (°F)	508
TC (°F)	507
ΔT	1
SUBCOOLING (°F)	46.3
CHARGING FLOW (GPM)	132
LETDOWN FLOW (GPM)	60
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	508
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	63
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	65
NR(%)	39
PRESS (PSIG)	716
FEED (PPH)	0
STEAM (PPH)	.05
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	65
NR(%)	39
PRESS (PSIG)	716
FEED (PPH)	0
STEAM (PPH)	.05
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH	1	O	2	O	3	O	4	O

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	O	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM: OFFSITE	E	D.G.	A					

FANS

HVE	1A	A	1B	A				
HVE	2A	O	2B	A				
HVE	5A	A	5B	A				
HVE	15	O	15A	A				

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1115

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	6.2
LOWER (MPH)	5.6
WIND DIR. UPPER (° FROM)	216
LOWER (° FROM)	210
AIR TEMPERATURE (°F)	65.7
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.1
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	5
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	2
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	61
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	1.0K
R-14B "I" PLT VNT (CPM)	44
R-14C "NG" PLT VNT (CPM)	385
R-15 COND. AIR EJEC. (CPM)	3.2K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.7K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	0.3
R-31B "B" MN STM (MR/HR)	0.4
R-31C "C" MN STM (MR/HR)	0.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	89

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	656
PZR LEVEL (%)	28.9
TAVE (°F)	432
LOOP A TH (°F)	432
TC (°F)	428
ΔT	4
LOOP B TH (°F)	432
TC (°F)	431
ΔT	1
LOOP C TH (°F)	432
TC (°F)	431
ΔT	1
SUBCOOLING (°F)	66.5
CHARGING FLOW (GPM)	140
LETDOWN FLOW (GPM)	51
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	432
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	70
NR(%)	42
PRESS (PSIG)	336
FEED (PPH)	0
STEAM (PPH)	.02
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	70
NR(%)	42
PRESS (PSIG)	336
FEED (PPH)	0
STEAM (PPH)	.02
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH	1	O	2	O	3	O	4	O

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	O	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE	1A	A	1B	A				
HVE	2A	O	2B	A				
HVE	5A	A	5B	A				
HVE	15	O	15A	A				

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1130

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	7.9
LOWER (MPH)	6.1
WIND DIR. UPPER (° FROM)	210
LOWER (° FROM)	216
AIR TEMPERATURE (°F)	66.7
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.6
R-2 CONT. AREA (MR/HR)	11
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	5
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	7
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	928
R-14B "I" PLT VNT (CPM)	36
R-14C "NG" PLT VNT (CPM)	268
R-15 COND. AIR EJEC. (CPM)	2.1K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.5K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	24
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	5
R-32B CV HI RG (R/HR)	6
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	88

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	410
PZR LEVEL (%)	38.9
TAVE (°F)	396
LOOP A TH (°F)	396
TC (°F)	394
ΔT	2
LOOP B TH (°F)	396
TC (°F)	396
ΔT	0
LOOP C TH (°F)	396
TC (°F)	396
ΔT	0
SUBCOOLING (°F)	54.5
CHARGING FLOW (GPM)	79
LETDOWN FLOW (GPM)	33
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	396
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	70
NR(%)	42
PRESS (PSIG)	221
FEED (PPH)	0
STEAM (PPH)	.01
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	70
NR(%)	42
PRESS (PSIG)	221
FEED (PPH)	0
STEAM (PPH)	.01
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH	1	O	2	O	3	O	4	O

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	O	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE	1A	A	1B	A				
HVE	2A	O	2B	A				
HVE	5A	A	5B	A				
HVE	15	O	15A	A				

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1145

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	8.1
LOWER (MPH)	6.1
WIND DIR. UPPER (° FROM)	216
LOWER (° FROM)	218
AIR TEMPERATURE (°F)	67.3
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.5
R-2 CONT. AREA (MR/HR)	21
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	9
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	851
R-14B "I" PLT VNT (CPM)	30
R-14C "NG" PLT VNT (CPM)	191
R-15 COND. AIR EJEC. (CPM)	1.4K
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.4K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	25
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	88

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	360
PZR LEVEL (%)	24
TAVE (°F)	354
LOOP A TH (°F)	354
TC (°F)	352
ΔT	2
LOOP B TH (°F)	354
TC (°F)	354
ΔT	0
LOOP C TH (°F)	354
TC (°F)	353
ΔT	1
SUBCOOLING (°F)	84.2
CHARGING FLOW (GPM)	70
LETDOWN FLOW (GPM)	25
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	354
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	125
FEED (PPH)	0
STEAM (PPH)	.01
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	125
FEED (PPH)	0
STEAM (PPH)	.01
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	O	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1200

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	8.1
LOWER (MPH)	6.3
WIND DIR. UPPER (° FROM)	226
LOWER (° FROM)	221
AIR TEMPERATURE (°F)	68.1
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.4
R-2 CONT. AREA (MR/HR)	28
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	23
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	800
R-14B "I" PLT VNT (CPM)	27
R-14C "NG" PLT VNT (CPM)	140
R-15 COND. AIR EJEC. (CPM)	935
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.2K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	44
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	87

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	364
PZR LEVEL (%)	23
TAVE (°F)	327
LOOP A TH (°F)	327
TC (°F)	326
ΔT	1
LOOP B TH (°F)	327
TC (°F)	327
ΔT	0
LOOP C TH (°F)	327
TC (°F)	327
ΔT	0
SUBCOOLING (°F)	112.5
CHARGING FLOW (GPM)	119
LETDOWN FLOW (GPM)	28
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	327
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	83
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	83
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____

SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1215

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	7.5
LOWER (MPH)	5.3
WIND DIR. UPPER (° FROM)	220
LOWER (° FROM)	223
AIR TEMPERATURE (°F)	69.1
STABILITY CLASS	D

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.3
R-2 CONT. AREA (MR/HR)	37
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	45
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	766
R-14B "I" PLT VNT (CPM)	25
R-14C "NG" PLT VNT (CPM)	106
R-15 COND. AIR EJEC. (CPM)	624
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.2K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	45
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	87

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	360
PZR LEVEL (%)	22
TAVE (°F)	330
LOOP A TH (°F)	330
TC (°F)	330
ΔT	0
LOOP B TH (°F)	330
TC (°F)	330
ΔT	0
LOOP C TH (°F)	330
TC (°F)	330
ΔT	0
SUBCOOLING (°F)	108
CHARGING FLOW (GPM)	80
LETDOWN FLOW (GPM)	28
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	330
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	83
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	83
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH	1	O	2	O	3	O	4	O

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE	1A	A	1B	A				
HVE	2A	O	2B	A				
HVE	5A	A	5B	A				
HVE	15	O	15A	A				

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1230

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	9.9
LOWER (MPH)	6.2
WIND DIR. UPPER (° FROM)	222
LOWER (° FROM)	218
AIR TEMPERATURE (°F)	69.6
STABILITY CLASS	C

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.2
R-2 CONT. AREA (MR/HR)	44
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	72.2
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	744
R-14B "I" PLT VNT (CPM)	23
R-14C "NG" PLT VNT (CPM)	84
R-15 COND. AIR EJEC. (CPM)	418
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	51
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	86

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	365
PZR LEVEL (%)	23
TAVE (°F)	325
LOOP A TH (°F)	325
TC (°F)	325
ΔT	0
LOOP B TH (°F)	325
TC (°F)	325
ΔT	0
LOOP C TH (°F)	325
TC (°F)	325
ΔT	0
SUBCOOLING (°F)	114
CHARGING FLOW (GPM)	70
LETDOWN FLOW (GPM)	30
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	325
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	72
NR(%)	44
PRESS (PSIG)	80
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	71
NR(%)	43
PRESS (PSIG)	82
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A					
HVE 2A	O	2B	A					
HVE 5A	A	5B	A					
HVE 15	O	15A	A					

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1245

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	8.7
LOWER (MPH)	6.6
WIND DIR. UPPER (° FROM)	226
LOWER (° FROM)	222
AIR TEMPERATURE (°F)	69.8
STABILITY CLASS	C

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.2
R-2 CONT. AREA (MR/HR)	48
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	0.8
R-7 IN-CORE INST (MR/HR)	104
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	729
R-14B "I" PLT VNT (CPM)	22
R-14C "NG" PLT VNT (CPM)	69
R-15 COND. AIR EJEC. (CPM)	418
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	55
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	87

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	365
PZR LEVEL (%)	23
TAVE (°F)	325
LOOP A TH (°F)	325
TC (°F)	325
ΔT	0
LOOP B TH (°F)	325
TC (°F)	325
ΔT	0
LOOP C TH (°F)	325
TC (°F)	325
ΔT	0
SUBCOOLING (°F)	114
CHARGING FLOW (GPM)	65
LETDOWN FLOW (GPM)	30
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	325
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A			
LEV.-WR(%)	0	NR(%)	0
PRESS (PSIG)	10		
FEED (PPH)	0		
STEAM (PPH)	0		
ACT. (Uci/ml)			
S/G B			
LEV.-WR(%)	72	NR(%)	44
PRESS (PSIG)	80		
FEED (PPH)	0		
STEAM (PPH)	0		
ACT. (Uci/mi)			
S/G C			
LEV.-WR(%)	72	NR(%)	44
PRESS (PSIG)	80		
FEED (PPH)	0		
STEAM (PPH)	0		
ACT. (Uci/mi)			

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME _____
RESET: TIME _____
CS ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. A ACTUATED: TIME _____
RESET: TIME _____
CONT. ISO. B ACTUATED: TIME _____
RESET: TIME _____
SPRAY ADD TANK LEVEL (%) 61
SI COLD-LEG FLOW (GPM) 0
SI HOT-LEG INJECT START _____

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH	1	O	2	O	3	O	4	O

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

SAFETY PARAMETER DISPLAY SYSTEM/PLANT STATUS

EMERGENCY CLASSIFICATION (CIRCLE)
UNUSUAL EVENT SITE AREA EMERGENCY
ALERT GENERAL EMERGENCY

Date/Time: 3/30/94 / 1300

Completed By: _____

ENVIRONMENTAL SYSTEMS

WIND SPEED UPPER (MPH)	8.7
LOWER (MPH)	6.2
WIND DIR. UPPER (° FROM)	224
LOWER (° FROM)	225
AIR TEMPERATURE (°F)	70.5
STABILITY CLASS	C

AREA RADIATION MONITORS

R-1 CONTROL ROOM (MR/HR)	0.2
R-2 CONT. AREA (MR/HR)	48
R-3 HP WORK AREA (MR/HR)	0.15
R-4 CHG. PUMP RM (MR/HR)	
R-5 SPENT FUEL PIT (MR/HR)	0.7
R-6 SAMPLING ROOM (MR/HR)	.8
R-7 IN-CORE INST (MR/HR)	135
R-8 DRUM. RM. (MR/HR)	1.5
R-9 FAILED FUEL (MR/HR)	
R-33 MON BLDG (MR/HR)	0.35

PROCESS RADIATION MONITORS

R-11 CV VENT PART. (CPM)	20K
R-12 CV VENT GAS (CPM)	1.2K
R-14A "P" PLT VNT (CPM)	719
R-14B "I" PLT VNT (CPM)	21
R-14C "NG" PLT VNT (CPM)	59
R-15 COND. AIR EJEC. (CPM)	282
R-16 CV FAN CW (CPM)	290
R-17 COMP. CW (CPM)	290
R-18 WASTE DISPOSAL (CPM)	16.5K
R-19A S/G A BLOWDOWN (CPM)	1.0K
R-19B S/G B BLOWDOWN (CPM)	1.0K
R-19C S/G C BLOWDOWN (CPM)	1.0K
R-20 FUEL HDLG BASE (CPM)	40
R-21 FUEL HDLG UPPER (CPM)	25

ACCIDENT RADIATION MONITORS

R-30 F.H. BASE HI RG (MR/HR)	0.5
R-31A "A" MN STM (MR/HR)	55
R-31B "B" MN STM (MR/HR)	.4
R-31C "C" MN STM (MR/HR)	.6
R-32A CV HI RG (R/HR)	1
R-32B CV HI RG (R/HR)	1
R-14D PLT VNT GAS (MID) (CPM)	10
R-14E PLT VNT GAS (HI) (CPM)	10
R-37 CONDENSATE POLISHER (CPM)	115

CONTAINMENT STATUS

PRESSURE (PSIG)	0.2
TEMPERATURE (°F)	110
HYDROGEN CONC. (%)	0
SUMP LEVEL (INCHES)	0
RWST LEVEL (%)	87

PRIMARY SYSTEM

RCS PRESSURE (PSIG)	365
PZR LEVEL (%)	23
TAVE (°F)	325
LOOP A TH (°F)	325
TC (°F)	325
ΔT	0
LOOP B TH (°F)	325
TC (°F)	325
ΔT	0
LOOP C TH (°F)	325
TC (°F)	325
ΔT	0
SUBCOOLING (°F)	114
CHARGING FLOW (GPM)	65
LETDOWN FLOW (GPM)	30
REACTOR POWER	0
ACTIVITY:	
GROSS (Uci/mi)	
I^{131} (Uci/mi)	
AVG 5 HOTTEST T/Cs	325
BORON CONC. (PPM)	

SECONDARY SYSTEM

S/G A

LEV.-WR(%)	0
NR(%)	0
PRESS (PSIG)	10
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/ml)	

S/G B

LEV.-WR(%)	72
NR(%)	44
PRESS (PSIG)	80
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

S/G C

LEV.-WR(%)	72
NR(%)	44
PRESS (PSIG)	80
FEED (PPH)	0
STEAM (PPH)	0
ACT. (Uci/mi)	

PRI/SEC. LK. RT (GPM) _____

ENGINEERED SAFETY FEATURES

SI ACTUATED: TIME	
RESET: TIME	
CS ACTUATED: TIME	
RESET: TIME	
CONT. ISO. A ACTUATED: TIME	
RESET: TIME	
CONT. ISO. B ACTUATED: TIME	
RESET: TIME	
SPRAY ADD TANK LEVEL (%)	61
SI COLD-LEG FLOW (GPM)	0
SI HOT-LEG INJECT START	

EQUIPMENT STATUS

N = NOT AVAILABLE
A = AVAILABLE (NOT OPERATING)
O = OPERATING
E = ENERGIZED

PRIMARY

RCP	A	O	B	O	C	O		
CHG PUMP	A		B	O	C	O		
SI PUMP	A	A	B	A	C	N		
CS PUMP	A	A	B	A				
RHR PUMP	A	A	B	A				
HVH 1	O	2	O	3	O	4	O	

SECONDARY

CST LEVEL (%)	91							
FEED PUMP	A	A	B	A				
COND PUMP	A	A	B	A				
AFW MOTOR	A	A	B	A				
AFW STEAM	A							
MSIV	A	ISOL	B	O	C	O		

ELECTRICAL

EDG	A	A	B	A				
DS/DG								
OFFSITE	E							
EMER. BUS	E1	E	E2	E				
FROM:	OFFSITE	E	D.G.	A				

FANS

HVE 1A	A	1B	A
HVE 2A	O	2B	A
HVE 5A	A	5B	A
HVE 15	O	15A	A

LEGEND:
OSH = OFF SCALE HIGH
OSL = OFF SCALE LOW
OOS = OUT OF SERVICE
ISOL = ISOLATED

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

3.3 METEOROLOGICAL INFORMATION

CON-94-0222
RNPD-94-03-R0

FORECAST DISCUSSION FOR H. B. ROBINSON NUCLEAR PLANT

07:00 EST 3-30-94

A strong area of high pressure will push moisture from the Atlantic over the region today and tomorrow. This will give us a mixture of sun and clouds and at times today, skies will be cloudy. The chance of rain is very low since there are no weather features to act on the moisture to produce rain. Afternoon temperatures will be mild and winds will be from the south to southwest.

-END DISCUSSION-

CP&L

CAROLINA POWER & LIGHT COMPANY

ONSITE METEOROLOGICAL DATA

Date: March 30, 1994

Robinson

Time (EST)	0830	0845
Upper Speed (mph)	7.1	5.7
Upper Direc. (DEG)	233	228
Lower Speed (mph)	3.7	3.8
Lower Direc. (DEG)	229	230
AMB Temp. (°F)	46.1	48.2
ΔT (°C/100m)	-.55	-.63
Stability Class	D	D

Time (EST)	0900	0915	0930	0945
Upper Speed (mph)	5.6	6.3	6.6	5.0
Upper Direc. (DEG)	218	226	214	218
Lower Speed (mph)	4.2	4.0	4.6	4.3
Lower Direc. (DEG)	220	215	217	213
AMB Temp. (°F)	50.5	51.7	55.7	59.6
ΔT (°C/100m)	-.69	-.74	-.83	-.89
Stability Class	D	D	D	D

CP&L

CAROLINA POWER & LIGHT COMPANY

ONSITE METEOROLOGICAL DATA

Date: March 30, 1994

Robinson

Time (EST)	1000	1015	1030	1045
Upper Speed (mph)	6.1	7.7	6.5	8.0
Upper Direc. (DEG)	213	210	217	216
Lower Speed (mph)	4.7	5.7	4.9	6.0
Lower Direc. (DEG)	210	212	215	210
AMB Temp. (°F)	61.5	61.9	62.9	63.7
ΔT (°C/100m)	-.98	-1.11	-1.15	-1.33
Stability Class	D	D	D	D

Time (EST)	1100	1115	1130	1145
Upper Speed (mph)	7.2	6.2	7.9	8.1
Upper Direc. (DEG)	212	216	210	216
Lower Speed (mph)	5.7	5.6	6.1	6.1
Lower Direc. (DEG)	206	210	216	218
AMB Temp. (°F)	64.8	65.7	66.7	67.3
ΔT (°C/100m)	-1.38	-1.46	-1.47	-1.44
Stability Class	D	D	D	D

CP&L

CAROLINA POWER & LIGHT COMPANY

ONSITE METEOROLOGICAL DATA

Date: March 30, 1994

Robinson

Time (EST)	1200	1215	1230	1245
Upper Speed (mph)	8.1	7.5	9.9	8.7
Upper Direc. (DEG)	226	220	222	226
Lower Speed (mph)	6.3	5.3	6.2	6.6
Lower Direc. (DEG)	221	223	218	222
AMB Temp. (°F)	68.1	69.1	69.6	69.8
ΔT (°C/100m)	-1.48	-1.47	-1.53	-1.59
Stability Class	D	D	C	C

Time (EST)	1300	1315	1330	1345
Upper Speed (mph)	8.7	8.7	10.3	7.8
Upper Direc. (DEG)	224	226	224	227
Lower Speed (mph)	6.2	6.1	5.9	6.0
Lower Direc. (DEG)	225	222	218	221
AMB Temp. (°F)	70.5	70.7	70.7	71.0
ΔT (°C/100m)	-1.68	-1.63	-1.52	-1.59
Stability Class	C	C	C	C

CP&L

CAROLINA POWER & LIGHT COMPANY

METEOROLOGICAL FORECAST FORM

Date: March 30, 1994 Time Issued: 0800 EST

Issued By: _____ Received By: _____

Forecast Location: Robinson Nuclear Project

A) Next 1 Hour

1) Wind Direction: Sector SW Deg. 225

2) Winds Should Remain (Steady; Shifting; Variable)
2a) Variation Should Be ± 10 Deg.

3) Wind Velocity: 3 to 5 (MPH)

4) Stability Class D

5) Precipitation Activity Will Be (None, Scattered, Steady)

6) Precipitation Type (Rain, Rainshowers, Thunderstorms, Ice, Snow)

7) Precipitation Intensity (Light, Moderate, Severe)

B) Next 3 Hours:

Winds: SW 4 - 6 mph

Precipitation: None

Stability Class: D

C) Remarks: _____

CP&L

CAROLINA POWER & LIGHT COMPANY

METEOROLOGICAL FORECAST FORM

Date: March 30, 1994 Time Issued: 0900 EST

Issued By: _____ Received By: _____

Forecast Location: Robinson Nuclear Project

A) Next 1 Hour

1) Wind Direction: Sector SW Deg. 220

2) Winds Should Remain (Steady; Shifting; Variable)
2a) Variation Should Be ± 10 Deg.

3) Wind Velocity: 4 to 6 (MPH)

4) Stability Class D

5) Precipitation Activity Will Be (None, Scattered, Steady)

6) Precipitation Type (Rain, Rainshowers, Thunderstorms, Ice, Snow)

7) Precipitation Intensity (Light, Moderate, Severe)

B) Next 3 Hours:

Winds: SW 4 - 6 mph

Precipitation: None

Stability Class: D

C) Remarks: _____

CP&L

CAROLINA POWER & LIGHT COMPANY

METEOROLOGICAL FORECAST FORM

Date: March 30, 1994 Time Issued: 1000 EST

Issued By: _____ Received By: _____

Forecast Location: Robinson Nuclear Project

A) Next 1 Hour

1) Wind Direction: Sector SSW Deg. 210

2) Winds Should Remain (Steady; Shifting; Variable)
2a) Variation Should Be ± 10 Deg.

3) Wind Velocity: 4 to 6 (MPH)

4) Stability Class D

5) Precipitation Activity Will Be (None, Scattered, Steady)

6) Precipitation Type (Rain, Rainshowers, Thunderstorms, Ice, Snow)

7) Precipitation Intensity (Light, Moderate, Severe)

B) Next 3 Hours:

Winds: SSW 4 - 6 mph

Precipitation: None

Stability Class: D → C

C) Remarks: _____

CP&L

CAROLINA POWER & LIGHT COMPANY

METEOROLOGICAL FORECAST FORM

Date: March 30, 1994 Time Issued: 1100 EST

Issued By: _____ Received By: _____

Forecast Location: Robinson Nuclear Project

A) Next 1 Hour

1) Wind Direction: Sector SSW Deg. 210

2) Winds Should Remain (Steady; Shifting; Variable)
2a) Variation Should Be ± 10 Deg.

3) Wind Velocity: 4 to 6 (MPH)

4) Stability Class D

5) Precipitation Activity Will Be (None, Scattered, Steady)

6) Precipitation Type (Rain, Rainshowers, Thunderstorms, Ice, Snow)

7) Precipitation Intensity (Light, Moderate, Severe)

B) Next 3 Hours:

Winds: SW 4 - 6 mph

Precipitation: None

Stability Class: D → C

C) Remarks: _____

CP&L

CAROLINA POWER & LIGHT COMPANY

METEOROLOGICAL FORECAST FORM

Date: March 30, 1994 Time Issued: 1200 EST

Issued By: _____ Received By: _____

Forecast Location: Robinson Nuclear Project

A) Next 1 Hour

1) Wind Direction: Sector SW Deg. 220

2) Winds Should Remain (Steady; Shifting; Variable)
2a) Variation Should Be ± 10 Deg.

3) Wind Velocity: 4 to 6 (MPH)

4) Stability Class D → C

5) Precipitation Activity Will Be (None, Scattered, Steady)

6) Precipitation Type (Rain, Rainshowers, Thunderstorms, Ice, Snow)

7) Precipitation Intensity (Light, Moderate, Severe)

B) Next 3 Hours:

Winds: SW 4 - 6 mph

Precipitation: None

Stability Class: C

C) Remarks: _____

CP&L

CAROLINA POWER & LIGHT COMPANY

METEOROLOGICAL FORECAST FORM

Date: March 30, 1994 Time Issued: 1300 EST

Issued By: _____ Received By: _____

Forecast Location: Robinson Nuclear Project

A) Next 1 Hour

1) Wind Direction: Sector SW Deg. 220

2) Winds Should Remain (Steady; Shifting; Variable)
2a) Variation Should Be ± 10 Deg.

3) Wind Velocity: 4 to 6 (MPH)

4) Stability Class C

5) Precipitation Activity Will Be (None, Scattered, Steady)

6) Precipitation Type (Rain, Rainshowers, Thunderstorms, Ice, Snow)

7) Precipitation Intensity (Light, Moderate, Severe)

B) Next 3 Hours:

Winds: SW 4 - 6 mph

Precipitation: None

Stability Class: C

C) Remarks: _____

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

3.4 RADIOLOGICAL INFORMATION

Radiological Release Design Parameters

Assumptions:

Mean Wind Direction = 212° degrees

Mean Wind Velocity = 5.9 mph

Stability Class = D

Failed Fuel 9% at 1130

Release Rates - See attached figure.

Plume - See attached figures for onsite and offsite at peak release.

Note: Onsite plume is sculptured to represent structure effects of containment, Unit 1 Boiler structure, Unit 1 stack and the Radwaste Building.

CAROLINA POWER AND LIGHT COMPANY

ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

3.4A RADIOCHEMISTRY DATA

CON-94-0222
RNPD-94-03-R0

ROBINSON PROJECT EXERCISE MARCH 1994

PRIMARY SYSTEM ACTIVITY 04:16 PM 01/25/94 SHEET 1

NUCLIDE	09:15 AM NORMAL uCi/ml	09:30 AM NORMAL uCi/ml	09:45 AM NORMAL uCi/ml	10:00 AM NORMAL uCi/ml	10:15 AM SHUTDOWN uCi/ml	10:30 AM SHUTDOWN uCi/ml	10:45 AM SHUTDOWN uCi/ml	11:00 AM SHUTDOWN uCi/ml	11:15 AM ACCIDENT uCi/ml	11:30 AM ACCIDENT uCi/ml	11:45 AM ACCIDENT uCi/ml	12:00 PM ACCIDENT uCi/ml	12:15 PM ACCIDENT uCi/ml	12:30 PM ACCIDENT uCi/ml	12:45 PM ACCIDENT uCi/ml	01:00 PM ACCIDENT uCi/ml	01:15 PM ACCIDENT uCi/ml	01:30 PM ACCIDENT uCi/ml
I-131	1.46E-05	1.46E-05	1.46E-05	1.46E-05	1.42E-05	1.38E-05	1.34E-05	1.30E-05	1.29E-05	4.01E+01	4.91E+01	5.37E+01	5.30E+01	5.23E+01	5.08E+01	4.93E+01	4.78E+01	4.67E+01
I-132	2.50E-04	2.50E-04	2.50E-04	2.50E-04	2.25E-04	2.02E-04	1.82E-04	1.63E-04	1.50E-04	6.17E+00	7.11E+00	7.29E+00	6.67E+00	6.09E+00	5.47E+00	4.91E+00	4.40E+00	3.98E+00
I-133	1.30E-04	1.30E-04	1.30E-04	1.30E-04	1.25E-04	1.21E-04	1.17E-04	1.13E-04	1.10E-04	2.45E+01	2.99E+01	3.24E+01	3.18E+01	3.11E+01	3.00E+01	2.89E+01	2.78E+01	2.69E+01
I-134	4.10E-04	4.10E-04	4.10E-04	4.10E-04	3.26E-04	2.58E-04	2.05E-04	1.63E-04	1.32E-04	5.69E+00	5.95E+00	5.54E+00	4.48E+00	3.63E+00	2.88E+00	2.27E+00	1.80E+00	1.44E+00
I-135	1.95E-04	1.95E-04	1.95E-04	1.95E-04	1.85E-04	1.75E-04	1.66E-04	1.57E-04	1.51E-04	1.23E+01	1.47E+01	1.58E+01	1.52E+01	1.46E+01	1.38E+01	1.31E+01	1.23E+01	1.18E+01
TOTAL I	1.00E-03	1.00E-03	1.00E-03	1.00E-03	8.75E-04	7.70E-04	6.83E-04	6.09E-04	5.56E-04	8.88E+01	1.07E+02	1.15E+02	1.11E+02	1.08E+02	1.03E+02	9.84E+01	9.41E+01	9.08E+01
I-131 EQ	1.57E-04	1.57E-04	1.57E-04	1.57E-04	1.45E-04	1.34E-04	1.25E-04	1.16E-04	1.09E-04	5.00E+01	6.10E+01	6.64E+01	6.53E+01	6.41E+01	6.21E+01	5.99E+01	5.79E+01	5.64E+01
KR-83M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KR-85M	1.60E-05	1.60E-05	1.60E-05	1.60E-05	1.50E-05	1.40E-05	1.31E-05	1.22E-05	1.16E-05	5.41E-01	6.43E-01	6.80E-01	6.46E-01	6.14E-01	5.73E-01	5.35E-01	4.99E-01	4.69E-01
KR-85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.90E-01	6.01E-01	6.57E-01	6.49E-01	6.41E-01	6.24E-01	6.05E-01	5.87E-01	5.75E-01
KR-87	3.50E-03	3.50E-03	3.50E-03	3.50E-03	2.97E-03	2.52E-03	2.14E-03	1.82E-03	1.57E-03	5.50E-01	6.03E-01	5.89E-01	5.08E-01	4.38E-01	3.71E-01	3.14E-01	2.66E-01	2.27E-01
KR-88	2.00E-04	2.00E-04	2.00E-04	2.00E-04	1.83E-04	1.67E-04	1.53E-04	1.40E-04	1.30E-04	1.19E+00	1.39E+00	1.44E+00	1.34E+00	1.25E+00	1.14E+00	1.04E+00	9.47E-01	8.71E-01
KR-89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.05E-01	5.40E-02	2.56E-02	9.33E-04	3.40E-05	1.22E-06	4.36E-08	1.56E-09	5.64E-11
XE-131M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-01	1.79E-01	1.96E-01	1.93E-01	1.91E-01	1.85E-01	1.80E-01	1.74E-01	1.70E-01
XE-133M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-01	4.44E-01	4.85E-01	4.77E-01	4.70E-01	4.55E-01	4.41E-01	4.26E-01	4.16E-01
XE-133	9.40E-05	9.40E-05	9.40E-05	9.40E-05	9.14E-05	8.87E-05	8.62E-05	8.38E-05	8.28E-05	2.46E+01	3.01E+01	3.29E+01	3.25E+01	3.20E+01	3.11E+01	3.02E+01	2.92E+01	2.86E+01
XE-135M	1.10E-02	1.10E-02	1.10E-02	1.10E-02	5.49E-03	2.74E-03	1.37E-03	6.83E-04	3.46E-04	2.91E-01	2.15E-01	1.44E-01	7.28E-02	3.69E-02	1.84E-02	9.16E-03	4.56E-03	2.29E-03
XE-135	1.50E-04	1.50E-04	1.50E-04	1.50E-04	1.43E-04	1.37E-04	1.31E-04	1.25E-04	1.21E-04	1.33E+00	1.61E+00	1.73E+00	1.68E+00	1.63E+00	1.56E+00	1.49E+00	1.42E+00	1.36E+00
XE-138	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.70E-01	1.15E+00	1.22E+00	1.15E+00	1.09E+00	1.02E+00	9.50E-01	8.85E-01	8.31E-01
TOTAL NG	1.50E-02	1.50E-02	1.50E-02	1.50E-02	8.90E-03	5.67E-03	3.89E-03	2.86E-03	2.26E-03	3.07E+01	3.70E+01	4.01E+01	3.92E+01	3.84E+01	3.71E+01	3.57E+01	3.44E+01	3.35E+01
SR-89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-01	2.32E-01	2.50E-01	2.42E-01	2.35E-01	2.24E-01	2.14E-01	2.04E-01	1.96E-01
TE-132	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-01	4.03E-01	4.40E-01	4.33E-01	4.27E-01	4.14E-01	4.01E-01	3.89E-01	3.79E-01
BA-140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E-01	5.04E-01	5.51E-01	5.44E-01	5.37E-01	5.22E-01	5.06E-01	4.91E-01	4.80E-01
ZR-97	4.00E-06	4.00E-06	4.00E-06	4.00E-06	3.51E-06	3.08E-06	2.71E-06	2.38E-06	2.12E-06	3.52E-01	3.98E-01	4.00E-01	3.56E-01	3.18E-01	2.79E-01	2.44E-01	2.14E-01	1.89E-01
CE-143	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-01	3.86E-01	4.05E-01	3.79E-01	3.56E-01	3.28E-01	3.02E-01	2.78E-01	2.58E-01
ND-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-01	1.98E-01	2.17E-01	2.14E-01	2.11E-01	2.05E-01	1.99E-01	1.93E-01	1.89E-01
CS-134	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.32E-02	1.14E-01	1.25E-01	1.24E-01	1.22E-01	1.19E-01	1.15E-01	1.12E-01	1.09E-01
CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.02E-02	3.70E-02	4.04E-02	4.00E-02	3.95E-02	3.84E-02	3.72E-02	3.61E-02	3.54E-02
TOTAL	4.00E-06	4.00E-06	4.00E-06	4.00E-06	3.51E-06	3.08E-06	2.71E-06	2.38E-06	2.12E-06	1.90E+00	2.27E+00	2.43E+00	2.33E+00	2.25E+00	2.13E+00	2.02E+00	1.92E+00	1.84E+00
GRAND	1.60E-02	1.60E-02	1.60E-02	1.60E-02	9.78E-03	6.44E-03	4.57E-03	3.47E-03	2.82E-03	1.21E+02	1.46E+02	1.57E+02	1.53E+02	1.48E+02	1.42E+02	1.36E+02	1.30E+02	1.26E+02

ROBINSON PROJECT EXERCISE MARCH 1994

STEAM GENERATOR ACTIVITY 04:16 PM 01/25/94 SHEET 2

NUCLIDE 1)	09:15 AM SGTR (uCi/ml)	09:30 AM SGTR (uCi/ml)	09:45 AM SGTR (uCi/ml)	10:00 AM SGTR (uCi/ml)	10:15 AM SGTR (uCi/ml)	10:30 AM SGTR (uCi/ml)	10:45 AM SGTR (uCi/ml)	11:00 AM SGTR (uCi/ml)	11:15 AM ACCIDENT (uCi/ml)	11:30 AM ACCIDENT (uCi/ml)	11:45 AM ACCIDENT (uCi/ml)	12:00 PM ACCIDENT (uCi/ml)	12:15 PM ACCIDENT (uCi/ml)	12:30 PM ACCIDENT (uCi/ml)	12:45 PM ACCIDENT (uCi/ml)	01:00 PM ACCIDENT (uCi/ml)	01:15 PM ACCIDENT (uCi/ml)	01:30 PM ACCIDENT (uCi/ml)
I-131	9.58E-07	1.77E-06	2.34E-06	3.28E-06	3.95E-06	2.55E-06	2.03E-06	1.75E-06	5.09E-07	6.35E-01	1.07E+00	1.67E+00	2.13E+00	2.44E+00	2.41E+00	2.37E+00	2.26E+00	2.56E+00
I-132	1.64E-05	3.02E-05	4.01E-05	5.61E-05	6.66E-05	4.18E-05	3.20E-05	2.65E-05	6.79E-06	9.77E-02	1.57E-01	2.34E-01	2.82E-01	3.07E-01	2.86E-01	2.61E-01	2.32E-01	2.48E-01
I-133	8.53E-06	1.57E-05	2.09E-05	2.92E-05	3.51E-05	2.26E-05	1.79E-05	1.54E-05	4.41E-06	3.89E-01	6.52E-01	1.01E+00	1.28E+00	1.46E+00	1.44E+00	1.40E+00	1.33E+00	1.50E+00
I-134	2.69E-05	4.96E-05	6.58E-05	9.20E-05	1.07E-04	6.47E-05	4.68E-05	3.66E-05	7.90E-06	9.01E-02	1.34E-01	1.86E-01	2.07E-01	2.10E-01	1.79E-01	1.47E-01	1.17E-01	1.14E-01
I-135	1.28E-05	2.36E-05	3.13E-05	4.38E-05	5.25E-05	3.35E-05	2.63E-05	2.24E-05	6.24E-06	1.94E-01	3.22E-01	4.95E-01	6.19E-01	6.98E-01	6.76E-01	6.49E-01	6.05E-01	6.71E-01
TOTAL	6.56E-05	1.21E-04	1.60E-04	2.24E-04	2.65E-04	1.65E-04	1.25E-04	1.03E-04	2.59E-05	1.41E+00	2.34E+00	3.60E+00	4.52E+00	5.12E+00	4.99E+00	4.83E+00	4.55E+00	5.09E+00
KR-83M	1.03E-05	1.90E-05	2.51E-05	3.52E-05	4.20E-05	2.66E-05	2.06E-05	1.74E-05	4.68E-06	7.91E-01	1.33E+00	2.07E+00	2.63E+00	3.00E+00	2.96E+00	2.90E+00	2.76E+00	3.11E+00
KR-85M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KR-85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KR-87	1.05E-06	1.94E-06	2.57E-06	3.59E-06	4.30E-06	2.73E-06	2.13E-06	1.80E-06	4.91E-07	8.57E-03	1.41E-02	2.15E-02	2.66E-02	2.97E-02	2.85E-02	2.70E-02	2.49E-02	2.74E-02
KR-88	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.76E-03	1.31E-02	2.05E-02	2.61E-02	2.99E-02	2.95E-02	2.91E-02	2.78E-02	3.15E-02
KR-89	2.30E-04	4.23E-04	5.61E-04	7.85E-04	9.22E-04	5.69E-04	4.24E-04	3.41E-04	8.03E-05	8.74E-03	1.35E-02	1.93E-02	2.24E-02	2.36E-02	2.10E-02	1.82E-02	1.54E-02	1.57E-02
XE-131M	1.31E-05	2.42E-05	3.21E-05	4.49E-05	5.35E-05	3.38E-05	2.60E-05	2.17E-05	5.72E-06	1.89E-02	3.06E-02	4.60E-02	5.61E-02	6.18E-02	5.82E-02	5.40E-02	4.88E-02	5.26E-02
XE-133M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.25E-03	1.99E-03	1.63E-03	1.03E-03	7.05E-04	4.17E-04	2.29E-04	1.27E-04	9.35E-05
XE-133	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-03	3.90E-03	6.09E-03	7.75E-03	8.89E-03	8.78E-03	8.64E-03	8.25E-03	9.35E-03
XE-135M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.75E-03	9.69E-03	1.51E-02	1.92E-02	2.20E-02	2.17E-02	2.13E-02	2.03E-02	2.29E-02
XE-135	6.17E-06	1.14E-05	1.51E-05	2.11E-05	2.54E-05	1.64E-05	1.30E-05	1.13E-05	3.27E-06	3.90E-01	6.57E-01	1.03E+00	1.31E+00	1.49E+00	1.48E+00	1.45E+00	1.39E+00	1.57E+00
XE-138	7.22E-04	1.33E-03	1.76E-03	2.47E-03	2.67E-03	1.49E-03	9.63E-04	6.77E-04	1.05E-04	4.65E-03	5.28E-03	5.83E-03	5.11E-03	4.20E-03	2.83E-03	1.75E-03	1.06E-03	8.25E-04
TOTAL	9.82E-04	1.81E-03	2.40E-03	3.36E-03	3.72E-03	2.14E-03	1.45E-03	1.07E-03	1.99E-04	1.24E+00	2.08E+00	3.23E+00	4.10E+00	4.68E+00	4.60E+00	4.51E+00	4.29E+00	4.84E+00
SR-89	9.82E-04	1.81E-03	2.40E-03	3.36E-03	3.72E-03	2.14E-03	1.45E-03	1.07E-03	1.99E-04	4.86E-01	8.09E-01	1.25E+00	1.59E+00	1.81E+00	1.77E+00	1.73E+00	1.65E+00	1.85E+00
TE-132	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BA-140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-03	5.07E-03	7.83E-03	9.84E-03	1.11E-02	1.09E-02	1.05E-02	9.88E-03	1.10E-02
ZR-97	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-03	8.78E-03	1.37E-02	1.74E-02	1.99E-02	1.97E-02	1.93E-02	1.84E-02	2.09E-02
CE-143	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.51E-03	1.10E-02	1.72E-02	2.18E-02	2.50E-02	2.47E-02	2.44E-02	2.33E-02	2.63E-02
ND-147	2.63E-07	4.84E-07	6.42E-07	8.98E-07	1.06E-06	6.62E-07	5.00E-07	4.09E-07	1.01E-07	5.58E-03	8.81E-03	1.29E-02	1.53E-02	1.65E-02	1.50E-02	1.35E-02	1.17E-02	1.23E-02
CS-134	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.21E-03	8.49E-03	1.28E-02	1.58E-02	1.75E-02	1.66E-02	1.55E-02	1.41E-02	1.54E-02
CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.56E-03	4.32E-03	6.75E-03	8.59E-03	9.84E-03	9.73E-03	9.57E-03	9.14E-03	1.04E-02
TOTAL	9.82E-04	1.81E-03	2.40E-03	3.36E-03	3.72E-03	2.14E-03	1.45E-03	1.07E-03	1.99E-04	5.14E-01	8.56E-01	1.33E+00	1.67E+00	1.91E+00	1.87E+00	1.83E+00	1.73E+00	1.95E+00
GRAND	2.03E-03	3.74E-03	4.96E-03	6.94E-03	7.71E-03	4.44E-03	3.02E-03	2.24E-03	4.24E-04	3.16E+00	5.27E+00	8.16E+00	1.03E+01	1.17E+01	1.15E+01	1.12E+01	1.06E+01	1.19E+01

ROBINSON PROJECT EXERCISE MARCH 1994

01/25/94 04:16 PM

PRIMARY SAMPLE EXPOSURE RATES 04:16 PM 01/25/94 SHEET 3 PAGE 1

	08:30 AM	08:45 AM	09:00 AM	09:15 AM	09:30 AM	09:45 AM	10:00 AM	10:15 AM	10:30 AM	10:45 AM	11:00 AM	11:15 AM
UNDILUTED & UNSHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
UNDILUTED & SHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
PASS LIQUID SAMPLE (mR/hr on Contact)												
UNDILUTED & UNSHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
UNDILUTED & SHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & UNSHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & SHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
STRIPPED GAS SAMPLE REGULAR & PASS (mR/hr on contact)												
UNDILUTED & UNSHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
UNDILUTED & SHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & UNSHIELDED	0	0	0	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & SHIELDED	0	0	0	0	0	0	0	0	0	0	0	0

CONDENSED STEAM SAMPLE EXPOSURE RATES

CONDENSED STEAM SAMPLE (mR/hr on Contact)	0	0	0	0	0	0	0	0	0	0	0	0

ROBINSON PROJECT EXERCISE MARCH 1994

01/25/94 04:16 PM

PRIMARY SAMPLE EXPOSURE RATSHEET 3 PAGE 2

	11:30 AM	11:45 AM	12:00 PM	12:15 PM	12:30 PM	12:45 PM	01:00 PM	01:15 PM	01:30 PM
UNDILUTED & UNSHIELDED	14020	16397	17144	16094	15168	14113	13149	12291	11620
UNDILUTED & SHIELDED	11	13	14	13	12	11	11	10	9
PASS LIQUID SAMPLE (mR/hr on Contact)									
UNDILUTED & UNSHIELDED	4314	5045	5275	4952	4667	4342	4046	3782	3575
UNDILUTED & SHIELDED	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & UNSHIELDED	6	7	8	7	7	6	6	5	5
DILUTED 1000:1 & SHIELDED	0	0	0	0	0	0	0	0	0
STRIPPED GAS SAMPLE REGULAR & PASS (mR/hr on contact)									
UNDILUTED & UNSHIELDED	2	2	2	2	2	2	2	2	2
UNDILUTED & SHIELDED	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & UNSHIELDED	0	0	0	0	0	0	0	0	0
DILUTED 1000:1 & SHIELDED	0	0	0	0	0	0	0	0	0

CONDENSED STEAM SAMPLE EXPOSURE RATES

CONDENSED STEAM SAMPLE (mR/hr on Contact)	192	312	473	582	648	620	588	543	599

CAROLINA POWER AND LIGHT COMPANY

ROBINSON NUCLEAR PROJECT DEPARTMENT

1994 DEFERRED EXERCISE

3.4B ONSITE RADIOLOGICAL INFORMATION

CON-94-0222
RNPD-94-03-R0

ROBINSON PROJECT EXERCISE MARCH 1994

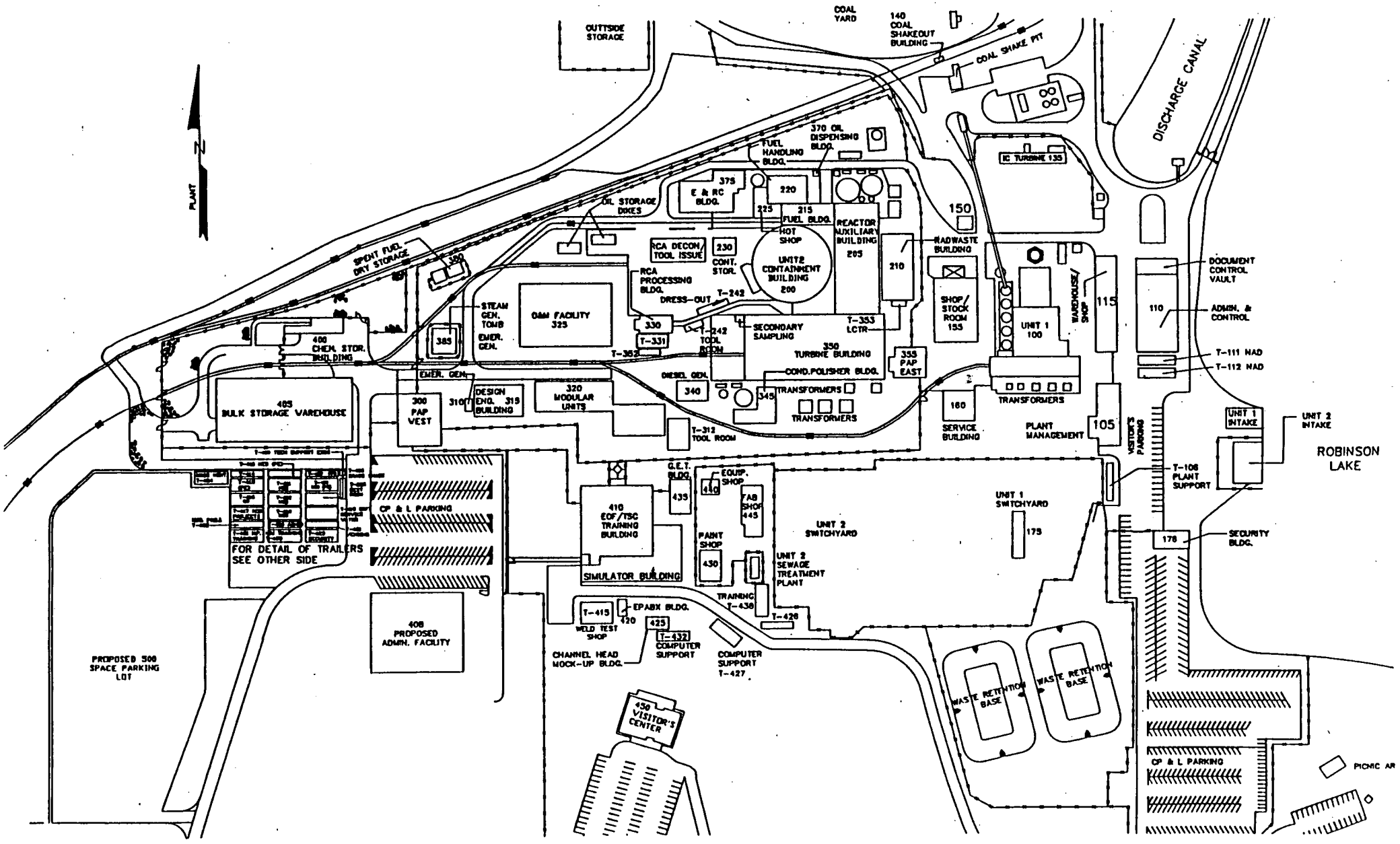
NUCLIDE	09:15 AM CONT CHEM. uCi/ml	09:30 AM CONT CHEM. uCi/ml	09:45 AM CONT CHEM. uCi/ml	10:00 AM CONT CHEM. uCi/ml	10:15 AM CONT CHEM. uCi/ml	10:30 AM CONT CHEM. uCi/ml	10:45 AM CONT CHEM. uCi/ml	11:00 AM CONT CHEM. uCi/ml	11:15 AM CONT CHEM. uCi/ml	11:30 AM CONT CHEM. uCi/ml	11:45 AM CONT CHEM. uCi/ml	12:00 PM CONT CHEM. uCi/ml	12:15 PM CONT CHEM. uCi/ml	12:30 PM CONT CHEM. uCi/ml	12:45 PM CONT CHEM. uCi/ml	01:00 PM CONT CHEM. uCi/ml	01:15 PM CONT CHEM. uCi/ml	01:30 PM CONT CHEM. uCi/ml
I-131	1.35E-15	1.35E-15	1.35E-15	1.35E-15	1.30E-15	1.26E-15	1.21E-15	1.17E-15	1.15E-15	2.52E-10	3.10E-10	3.37E-10	3.30E-10	3.23E-10	3.12E-10	3.00E-10	2.88E-10	2.80E-10
I-132	4.25E-15	4.25E-15	4.25E-15	4.25E-15	3.39E-15	2.69E-15	2.13E-15	1.69E-15	1.37E-15	5.85E-11	6.18E-11	5.75E-11	4.66E-11	3.77E-11	2.99E-11	2.37E-11	1.87E-11	1.50E-11
I-133	2.02E-15	2.02E-15	2.02E-15	2.02E-15	1.92E-15	1.82E-15	1.72E-15	1.63E-15	1.57E-15	1.26E-10	1.53E-10	1.64E-10	1.58E-10	1.52E-10	1.44E-10	1.36E-10	1.28E-10	1.22E-10
I-134	4.25E-15	4.25E-15	4.25E-15	4.25E-15	3.38E-15	2.68E-15	2.13E-15	1.69E-15	1.37E-15	5.85E-11	6.17E-11	5.75E-11	4.66E-11	3.77E-11	2.99E-11	2.36E-11	1.87E-11	1.49E-11
I-135	1.04E-14	1.04E-14	1.04E-14	1.04E-14	9.10E-15	8.00E-15	7.10E-15	6.33E-15	5.78E-15	9.12E-10	1.11E-09	1.19E-09	1.15E-09	1.12E-09	1.07E-09	1.02E-09	9.77E-10	9.43E-10
TOTAL	2.23E-14	2.23E-14	2.23E-14	2.23E-14	1.91E-14	1.64E-14	1.43E-14	1.25E-14	1.12E-14	1.41E-09	1.69E-09	1.81E-09	1.73E-09	1.67E-09	1.58E-09	1.50E-09	1.43E-09	1.37E-09
KR-83M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KR-85M	6.21E-14	7.61E-14	8.96E-14	1.03E-13	1.14E-13	1.24E-13	1.33E-13	1.40E-13	1.47E-13	5.57E-10	1.20E-09	1.85E-09	2.44E-09	2.98E-09	3.45E-09	3.87E-09	4.23E-09	4.55E-09
KR-85	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.04E-10	1.12E-09	1.80E-09	2.46E-09	3.12E-09	3.77E-09	4.39E-09	4.99E-09	5.58E-09
KR-87	1.19E-11	1.39E-11	1.58E-11	1.73E-11	1.82E-11	1.84E-11	1.83E-11	1.78E-11	1.72E-11	5.80E-10	1.13E-09	1.59E-09	1.91E-09	2.11E-09	2.22E-09	2.26E-09	2.25E-09	2.19E-09
KR-88	7.51E-13	9.12E-13	1.06E-12	1.20E-12	1.32E-12	1.41E-12	1.48E-12	1.54E-12	1.58E-12	1.23E-09	2.58E-09	3.91E-09	5.06E-09	6.03E-09	6.84E-09	7.50E-09	8.02E-09	8.43E-09
KR-89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E-10	6.33E-11	2.86E-11	2.02E-12	1.09E-13	5.28E-15	2.40E-16	1.04E-17	4.43E-19
XE-131M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-10	3.34E-10	5.35E-10	7.33E-10	9.29E-10	1.12E-09	1.30E-09	1.48E-09	1.66E-09
XE-133M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-10	8.29E-10	1.32E-09	1.81E-09	2.29E-09	2.75E-09	3.19E-09	3.62E-09	4.04E-09
XE-133	3.86E-13	4.82E-13	5.78E-13	6.74E-13	7.67E-13	8.57E-13	9.44E-13	1.03E-12	1.11E-12	2.53E-08	5.62E-08	9.00E-08	1.23E-07	1.56E-07	1.88E-07	2.19E-07	2.48E-07	2.77E-07
XE-135M	2.16E-11	2.24E-11	2.28E-11	2.30E-11	1.74E-11	1.18E-11	7.44E-12	4.52E-12	2.67E-12	3.00E-10	3.75E-10	3.40E-10	2.49E-10	1.66E-10	1.04E-10	6.28E-11	3.69E-11	2.13E-11
XE-135	6.00E-13	7.44E-13	8.85E-13	1.02E-12	1.15E-12	1.27E-12	1.38E-12	1.49E-12	1.58E-12	1.37E-09	3.00E-09	4.73E-09	6.38E-09	7.94E-09	9.40E-09	1.08E-08	1.20E-08	1.32E-08
XE-138	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.97E-10	2.14E-09	3.30E-09	4.36E-09	5.30E-09	6.14E-09	6.87E-09	7.50E-09	8.06E-09
TOTAL	2.26E-11	2.36E-11	2.43E-11	2.47E-11	1.94E-11	1.39E-11	9.77E-12	7.04E-12	5.37E-12	2.83E-08	6.26E-08	9.97E-08	1.36E-07	1.72E-07	2.06E-07	2.39E-07	2.72E-07	3.03E-07
SR-89	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-12	2.40E-12	2.59E-12	2.52E-12	2.44E-12	2.33E-12	2.22E-12	2.12E-12	2.03E-12
TE-132	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-12	4.17E-12	4.56E-12	4.50E-12	4.44E-12	4.31E-12	4.17E-12	4.04E-12	3.94E-12
BA-140	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.23E-12	5.22E-12	5.72E-12	5.65E-12	5.58E-12	5.42E-12	5.26E-12	5.10E-12	4.99E-12
ZR-97	4.15E-17	4.15E-17	4.15E-17	4.15E-17	3.65E-17	3.20E-17	2.81E-17	2.47E-17	2.21E-17	3.62E-12	4.12E-12	4.14E-12	3.70E-12	3.30E-12	2.90E-12	2.54E-12	2.22E-12	1.96E-12
CE-143	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.38E-12	4.01E-12	4.20E-12	3.94E-12	3.69E-12	3.41E-12	3.14E-12	2.89E-12	2.68E-12
ND-147	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-12	2.05E-12	2.25E-12	2.22E-12	2.19E-12	2.13E-12	2.07E-12	2.01E-12	1.96E-12
CS-134	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E-13	1.18E-12	1.30E-12	1.28E-12	1.27E-12	1.23E-12	1.20E-12	1.16E-12	1.14E-12
CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.10E-13	3.83E-13	4.20E-13	4.15E-13	4.10E-13	3.99E-13	3.87E-13	3.75E-13	3.67E-13
TOTAL	4.15E-17	4.15E-17	4.15E-17	4.15E-17	3.65E-17	3.20E-17	2.81E-17	2.47E-17	2.21E-17	9.94E-12	1.17E-11	1.23E-11	1.16E-11	1.09E-11	1.01E-11	9.32E-12	8.65E-12	8.11E-12

Robinson [redacted]ise, March 1994

On-Site Survey Map

As Read

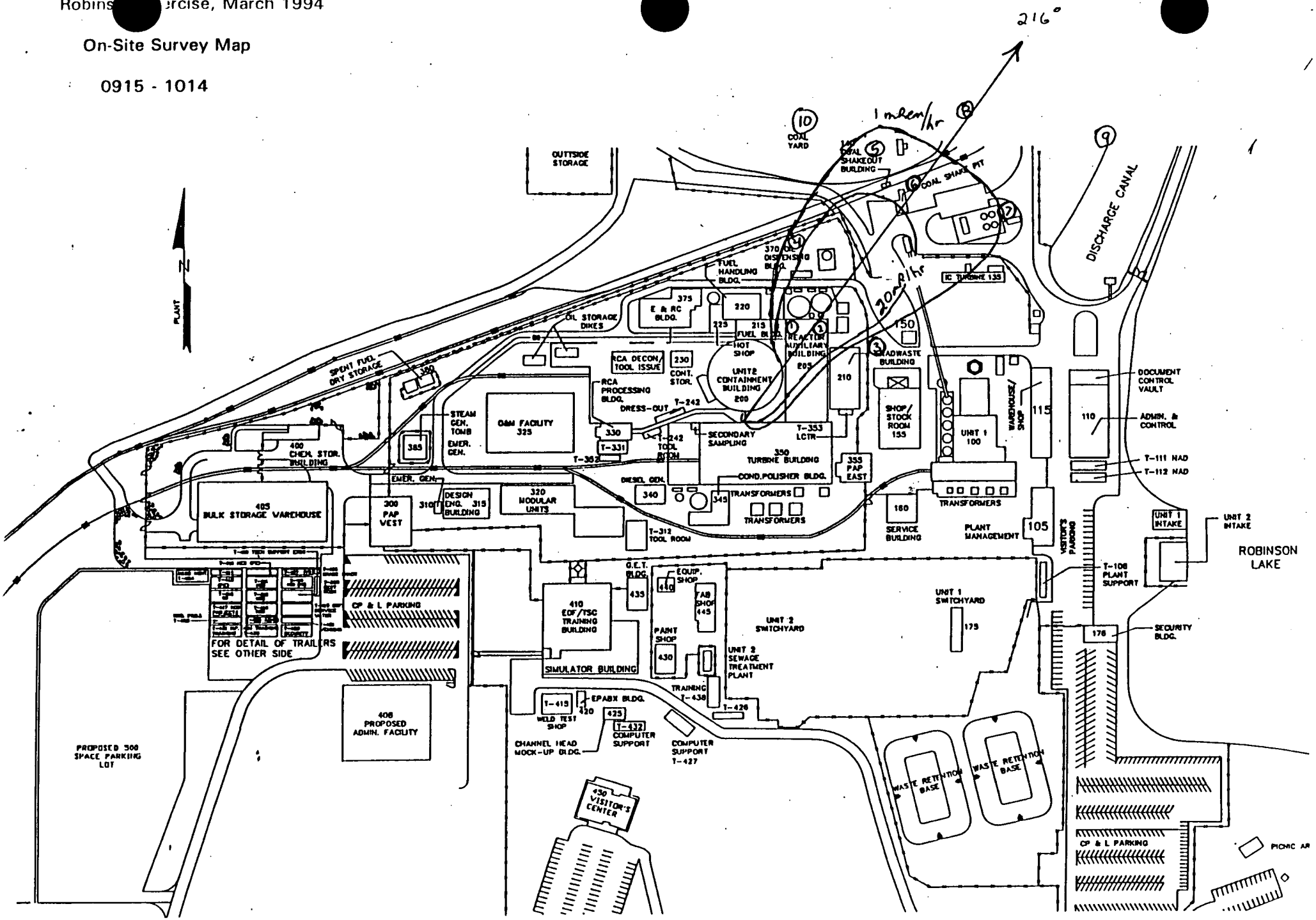
Start - 0914



Robins[redacted]ercise, March 1994

On-Site Survey Map

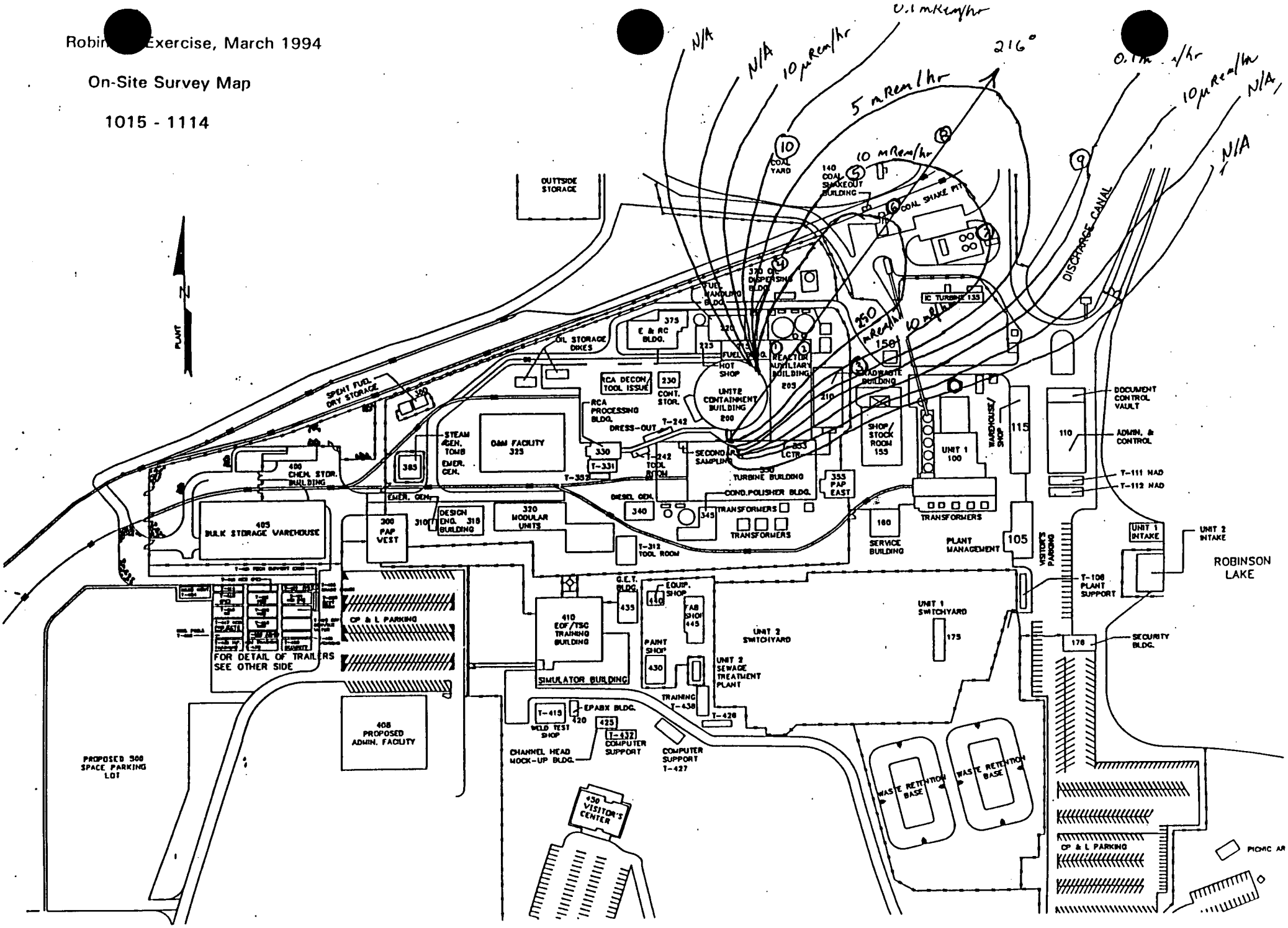
0915 - 1014



Robin[redacted] Exercise, March 1994

On-Site Survey Map

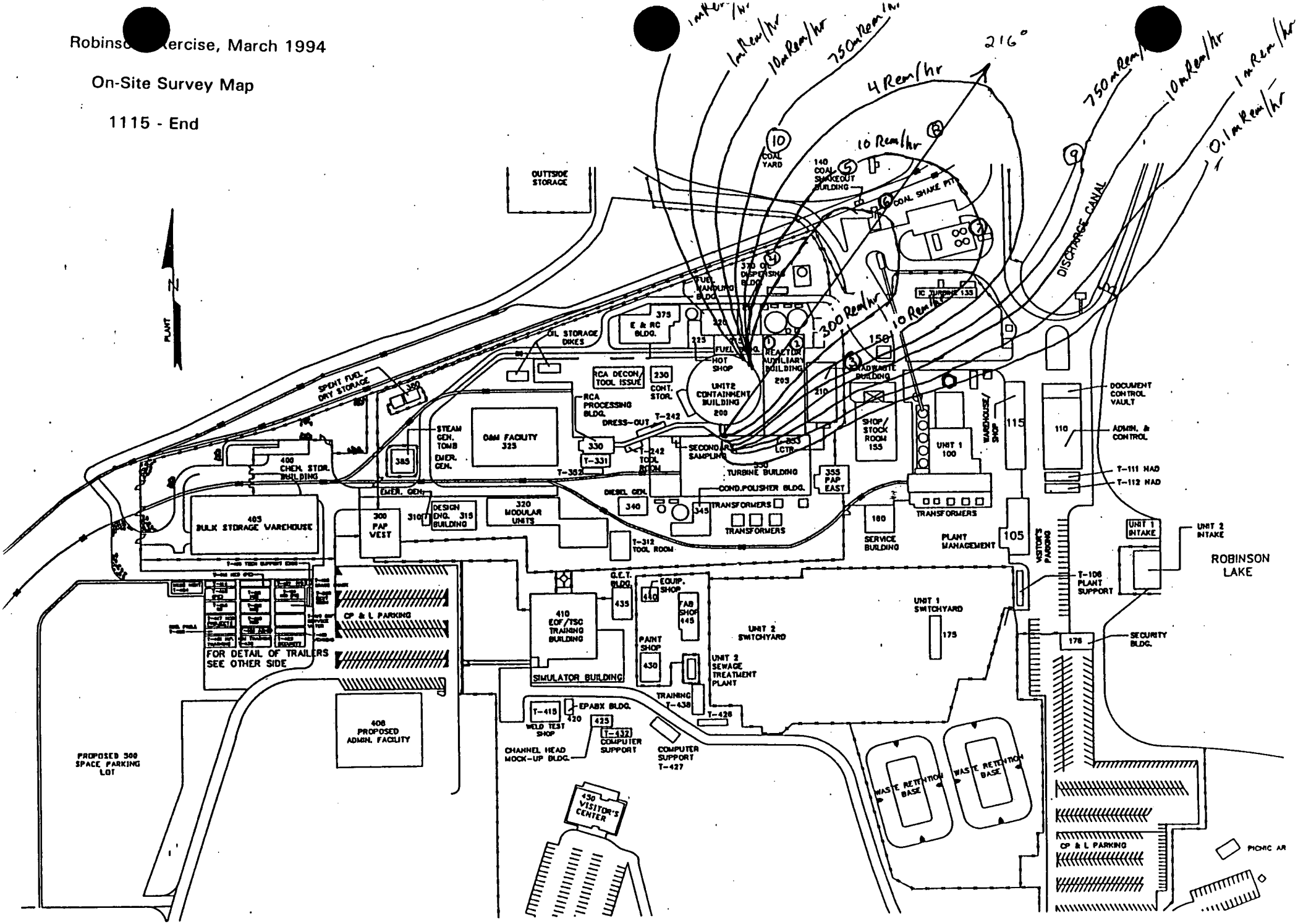
1015 - 1114



Robinson Exercise, March 1994

On-Site Survey Map

1115 - End



ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 08:30 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

01/24/94 05:01 PM SHEET 1

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE	IODINE AIRBORNE	PART AIRBORNE	IODINE SURFACE	IODINE VEGETAT'N	PARTIC VEG	TLD DOSE
	Dose Rate	Dose Rat	LUD-19	HP-210	Dose Rate	Dose Rate	LUD-19	HP-210	HP-210	HP-210	HP-210						
SAMPLE POINT	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	cpm/cfm SAMPLE	cpm/cfm SAMPLE	mR/hr contact	uCi/cc	uCi/cc	uCi/m^2	pCi/g	pCi/g	mRem
1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 08:45 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

01/24/94 05:01 PM SHEET 2

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE	IODINE AIRBORNE	PART AIRBORNE	IODINE SURFACE	IODINE VEGETAT'N	PARTIC VEG	TLD DOSE
	Dose Rate	Dose Rat	LUD-19	HP-210	Dose Rate	Dose Rate	LUD-19	HP-210	HP-210	HP-210	HP-210						
SAMPLE POINT	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	cpm/cfm SAMPLE	cpm/cfm SAMPLE	mR/hr contact	uCi/cc	uCi/cc	uCi/m^2	pCi/g	pCi/g	mRem
1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 09:00 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.0	0.0	0	0.0	0.0	0.0
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0.0
2	0.0	0.0	0.0
3	0.0	0.0	0.0
4	0.0	0.0	0.0
5	0.0	0.0	0.0
6	0.0	0.0	0.0
7	0.0	0.0	0.0
8	0.0	0.0	0.0
9	0.0	0.0	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
8	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 09:15 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	6	5988.6	7186.3	479.1	7	7347.6	8817.1	587.8
2	6	5607.3	6728.7	448.6	7	6879.7	8255.7	550.4
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0
4	2	1727.0	2072.4	138.2	2	2118.9	2542.7	169.5
5	0	184.1	220.9	14.7	0	225.9	271.1	18.1
6	0	176.5	211.8	14.1	0	216.6	259.9	17.3
7	0	107.0	128.4	8.6	0	139.1	167.0	11.1
8	0	73.6	88.3	5.9	0	90.3	108.3	7.2
9	0	14.1	17.0	1.1	0	17.4	20.8	1.4
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.9	1332.1	0.0
2	0.8	1247.3	0.0
3	0.0	0.0	0.0
4	0.3	384.7	0.0
5	0.0	41.0	0.0
6	0.0	39.3	0.0
7	0.0	0.0	0.0
8	0.0	16.4	0.0
9	0.0	3.1	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	8.90E-09	1.33E-05	0.00E+00	0.00E+00	0.00E+00	0.0
2	8.33E-09	1.25E-05	0.00E+00	0.00E+00	0.00E+00	0.0
3	4.88E-14	7.31E-11	0.00E+00	0.00E+00	0.00E+00	0.0
4	2.57E-09	3.84E-06	0.00E+00	0.00E+00	0.00E+00	0.0
5	2.74E-10	4.10E-07	0.00E+00	0.00E+00	0.00E+00	0.0
6	2.62E-10	3.93E-07	0.00E+00	0.00E+00	0.00E+00	0.0
7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0
8	1.09E-10	1.64E-07	0.00E+00	0.00E+00	0.00E+00	0.0
9	2.10E-11	3.15E-08	0.00E+00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

01/24/94 05:01 PM SHEET 5

TIME: 09:30 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	12	12497.7	14997.3	999.8	15	15002.8	18003.4	1200.2
2	12	11702.0	14042.4	936.2	14	14047.5	16857.1	1123.8
3	0	0.1	0.1	0.0	0	0.1	0.1	0.0
4	4	3604.2	4325.0	288.3	4	4326.6	5191.9	346.1
5	0	384.2	461.1	30.7	0	461.3	553.5	36.9
6	0	368.4	442.1	29.5	0	442.2	530.7	35.4
7	0	197.3	236.8	15.8	0	256.5	307.8	20.5
8	0	153.5	184.3	12.3	0	184.3	221.2	14.7
9	0	29.5	35.4	2.4	0	35.4	42.5	2.8
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.6	2455.5	0.0
2	1.5	2299.2	0.0
3	0.0	0.0	0.0
4	0.5	708.1	0.0
5	0.1	75.5	0.0
6	0.0	72.4	0.0
7	0.0	0.0	0.0
8	0.0	30.2	0.0
9	0.0	5.8	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.64E-08	2.46E-05	2.67E-04	2.67E-01	4.00E+04	24.0
2	1.54E-08	2.30E-05	2.50E-04	2.50E-01	3.74E+04	22.4
3	9.00E-14	1.35E-10	1.47E-09	1.47E-06	2.19E-01	0.0
4	4.73E-09	7.08E-06	7.70E-05	7.70E-02	1.15E+04	6.9
5	5.04E-10	7.55E-07	8.21E-06	8.21E-03	1.23E+03	0.7
6	4.84E-10	7.24E-07	7.87E-06	7.87E-03	1.18E+03	0.7
7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.4
8	2.02E-10	3.02E-07	3.28E-06	3.28E-03	4.91E+02	0.3
9	3.88E-11	5.80E-08	6.31E-07	6.31E-04	9.44E+01	0.1
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 09:45 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	19	18782.3	22538.7	1502.6	22	22103.3	26524.0	1768.3
2	18	17586.4	21103.6	1406.9	21	20696.0	24835.2	1655.7
3	0	0.1	0.1	0.0	0	0.1	0.1	0.0
4	5	5416.5	6499.8	433.3	6	6374.3	7649.1	509.9
5	1	577.4	692.9	46.2	1	679.6	815.5	54.4
6	1	553.6	664.4	44.3	1	651.5	781.8	52.1
7	0	261.6	313.9	20.9	0	340.0	408.0	27.2
8	0	230.8	276.9	18.5	0	271.6	325.9	21.7
9	0	44.4	53.2	3.5	0	52.2	62.7	4.2
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	2.2	3255.3	0.0
2	2.0	3048.1	0.0
3	0.0	0.0	0.0
4	0.6	938.8	0.0
5	0.1	100.1	0.0
6	0.1	96.0	0.0
7	0.0	0.0	0.0
8	0.0	40.0	0.0
9	0.0	7.7	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	2.17E-08	3.26E-05	7.59E-04	7.59E-01	1.14E+05	73.9
2	2.04E-08	3.05E-05	7.11E-04	7.11E-01	1.06E+05	69.2
3	1.19E-13	1.79E-10	4.17E-09	4.17E-06	6.24E-01	0.0
4	6.27E-09	9.39E-06	2.19E-04	2.19E-01	3.28E+04	21.3
5	6.69E-10	1.00E-06	2.33E-05	2.33E-02	3.49E+03	2.3
6	6.41E-10	9.60E-07	2.24E-05	2.24E-02	3.35E+03	2.2
7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.2
8	2.67E-10	4.00E-07	9.33E-06	9.33E-03	1.40E+03	0.9
9	5.14E-11	7.69E-08	1.79E-06	1.79E-03	2.68E+02	0.2
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 10:00 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	28	28187.3	33824.7	2255.0	33	32833.7	39400.4	2626.7
2	26	26392.5	31671.0	2111.4	31	30743.1	36891.7	2459.4
3	0	0.2	0.2	0.0	0	0.2	0.2	0.0
4	8	8128.8	9754.6	650.3	9	9468.8	11362.5	757.5
5	1	866.6	1039.9	69.3	1	1009.5	1211.3	80.8
6	1	830.9	997.1	66.5	1	967.8	1161.4	77.4
7	0	366.0	439.1	29.3	0	475.7	570.9	38.1
8	0	346.3	415.6	27.7	0	403.4	484.1	32.3
9	0	66.6	79.9	5.3	0	77.6	93.1	6.2
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	3.0	4554,5	0.0
2	2.8	4264.5	0.0
3	0.0	0.0	0.0
4	0.9	1313.4	0.0
5	0.1	140.0	0.0
6	0.1	134.3	0.0
7	0.0	0.0	0.0
8	0.0	56.0	0.0
9	0.0	10.8	0.0
10	0.0	0:0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	3.04E-08	4.55E-05	1.41E-03	1.41E+00	2.11E+05	149.1
2	2.85E-08	4.26E-05	1.32E-03	1.32E+00	1.98E+05	139.6
3	1.67E-13	2.50E-10	7.75E-09	7.75E-06	1.16E+00	0.0
4	8.77E-09	1.31E-05	4.07E-04	4.07E-01	6.09E+04	43.0
5	9.35E-10	1.40E-06	4.34E-05	4.34E-02	6.50E+03	4.6
6	8.97E-10	1.34E-06	4.16E-05	4.16E-02	6.23E+03	4.4
7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.3
8	3.74E-10	5.60E-07	1.73E-05	1.73E-02	2.60E+03	1.8
9	7.19E-11	1.08E-07	3.33E-06	3.33E-03	4.99E+02	0.4
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 10:15 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE	IODINE AIRBORNE	PART AIRBORNE	IODINE SURFACE	IODINE VEGETAT'N	PARTIC VEG	TLD DOSE
	Dose Rate	Dose Rat	LUD-19	HP-210	Dose Rate	Dose Rate	LUD-19	HP-210	HP-210	HP-210	HP-210						
SAMPLE POINT	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	cpm/cfm SAMPLE	cpm/cfm SAMPLE	mR/hr contact	uCi/cc	uCi/cc	uCi/m^2	pCi/g	pCi/g	mRem
1	389	388536.8	466244.2	31082.9	499	499290.5	599148.6	39943.2	12.8	6080.8	0.0	1.28E-07	6.08E-05	2.32E-03	2.32E+00	3.48E+05	261.8
2	364	363797.8	436557.3	29103.8	467	467499.6	560999.5	37400.0	12.0	5693.6	0.0	1.20E-07	5.69E-05	2.18E-03	2.18E+00	3.26E+05	245.2
3	0	2.1	2.6	0.2	0	2.7	3.3	0.2	0.0	0.0	0.0	7.03E-13	3.34E-10	1.28E-08	1.28E-05	1.91E+00	0.0
4	112	112048.5	134458.2	8963.9	144	143988.3	172786.0	11519.1	3.7	1753.6	0.0	3.69E-08	1.75E-05	6.70E-04	6.70E-01	1.00E+05	75.5
5	12	11945.3	14334.4	955.6	15	15350.4	18420.4	1228.0	0.4	186.9	0.0	3.94E-09	1.87E-06	7.15E-05	7.15E-02	1.07E+04	8.0
6	11	11452.9	13743.5	916.2	15	14717.6	17661.1	1177.4	0.4	179.2	0.0	3.77E-09	1.79E-06	6.85E-05	6.85E-02	1.03E+04	7.7
7	9	8747.9	10497.5	699.8	11	11364.9	13637.8	909.2	0.2	22.8	0.0	2.03E-09	2.28E-07	0.00E+00	0.00E+00	0.00E+00	3.7
8	5	4773.4	5728.1	381.9	6	6134.1	7360.9	490.7	0.2	74.7	0.0	1.57E-09	7.47E-07	2.86E-05	2.86E-02	4.27E+03	3.2
9	1	917.9	1101.5	73.4	1	1179.6	1415.5	94.4	0.0	14.4	0.0	3.03E-10	1.44E-07	5.49E-06	5.49E-03	8.22E+02	0.6
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 10:30 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	191	190959.0	229150.8	15276.7	242	241652.3	289982.7	19332.2
2	179	178800.2	214560.3	14304.0	226	226265.7	271518.9	18101.3
3	0	1.0	1.3	0.1	0	1.3	1.6	0.1
4	55	55069.9	66083.8	4405.6	70	69689.1	83626.9	5575.1
5	6	5870.9	7045.1	469.7	7	7429.4	8915.3	594.4
6	6	5628.9	6754.7	450.3	7	7123.2	8547.8	569.9
7	4	4031.4	4837.7	322.5	5	5229.2	6275.1	418.3
8	2	2346.1	2815.3	187.7	3	2968.9	3562.6	237.5
9	0	451.1	541.4	36.1	1	570.9	685.1	45.7
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	6.1	2396.3	0.0
2	5.7	2243.7	0.0
3	0.0	0.0	0.0
4	1.8	691.0	0.0
5	0.2	73.7	0.0
6	0.2	70.6	0.0
7	0.1	12.7	0.0
8	0.1	29.4	0.0
9	0.0	5.7	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	6.10E-08	2.40E-05	6.17E-03	6.17E+00	5.30E+05	1816.0
2	5.71E-08	2.24E-05	5.77E-03	5.77E+00	4.97E+05	1700.3
3	3.35E-13	1.32E-10	3.38E-08	3.38E-05	2.91E+00	0.0
4	1.76E-08	6.91E-06	1.78E-03	1.78E+00	1.53E+05	523.7
5	1.88E-09	7.37E-07	1.90E-04	1.90E-01	1.63E+04	55.8
6	1.80E-09	7.06E-07	1.82E-04	1.82E-01	1.56E+04	53.5
7	1.22E-09	1.27E-07	6.08E-05	6.08E-02	6.83E+02	38.7
8	7.50E-10	2.94E-07	7.58E-05	7.58E-02	6.52E+03	22.3
9	1.44E-10	5.66E-08	1.46E-05	1.46E-02	1.25E+03	4.3
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 10:45 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE	IODINE AIRBORNE	PART AIRBORNE	IODINE SURFACE	IODINE VEGETAT'N	PARTIC VEG	TLD DOSE
	Dose Rate	Dose Rat	LUD-19	HP-210	Dose Rate	Dose Rate	LUD-19	HP-210	HP-210	HP-210	HP-210						
SAMPLE POINT	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	cpm/cfm SAMPLE	cpm/cfm SAMPLE	mR/hr contact	uCi/cc	uCi/cc	uCi/m^2	pCi/g	pCi/g	mRem
1	109	109222.0	131066.5	8737.8	135	134888.5	161866.2	10791.1	3.7	1539.4	0.0	3.70E-08	1.54E-05	8.00E-03	8.00E+00	6.02E+05	2579.8
2	102	102267.6	122721.2	8181.4	126	126299.8	151559.8	10104.0	3.5	1441.3	0.0	3.46E-08	1.44E-05	7.49E-03	7.49E+00	5.64E+05	2415.5
3	0	0.6	0.7	0.0	0	0.7	0.9	0.1	0.0	0.0	0.0	2.03E-13	8.45E-11	4.39E-08	4.39E-05	3.31E+00	0.0
4	31	31498.1	37797.7	2519.8	39	38899.9	46679.9	3112.0	1.1	443.9	0.0	1.07E-08	4.44E-06	2.31E-03	2.31E+00	1.74E+05	744.0
5	3	3358.0	4029.6	268.6	4	4147.1	4976.5	331.8	0.1	47.3	0.0	1.14E-09	4.73E-07	2.46E-04	2.46E-01	1.85E+04	79.3
6	3	3219.5	3863.4	257.6	4	3976.1	4771.3	318.1	0.1	45.4	0.0	1.09E-09	4.54E-07	2.36E-04	2.36E-01	1.78E+04	76.0
7	2	2068.2	2481.8	165.5	3	2674.6	3209.5	214.0	0.1	7.2	0.0	7.69E-10	7.17E-08	9.74E-05	9.74E-02	1.06E+03	54.8
8	1	1341.9	1610.2	107.3	2	1657.2	1988.6	132.6	0.0	18.9	0.0	4.54E-10	1.89E-07	9.82E-05	9.82E-02	7.40E+03	31.7
9	0	258.0	309.6	20.6	0	318.7	382.4	25.5	0.0	3.6	0.0	8.74E-11	3.64E-08	1.89E-05	1.89E-02	1.42E+03	6.1
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 11:00 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	276	276151.1	331381.3	22092.1	351	351341.2	421609.5	28107.3
2	259	258567.9	310281.5	20685.4	329	328970.6	394764.7	26317.6
3	0	1.5	1.8	0.1	0	1.9	2.3	0.2
4	80	79638.0	95565.7	6371.0	101	101321.8	121586.2	8105.7
5	8	8490.1	10188.1	679.2	11	10801.8	12962.1	864.1
6	8	8140.1	9768.1	651.2	10	10356.5	12427.8	828.5
7	6	5972.8	7167.3	477.8	8	7749.4	9299.3	620.0
8	3	3392.7	4071.2	271.4	4	4316.5	5179.7	345.3
9	1	652.4	782.9	52.2	1	830.0	996.0	66.4
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	9.6	1689.4	0.0
2	9.0	1581.9	0.0
3	0.0	0.0	0.0
4	2.8	487.2	0.0
5	0.3	51.9	0.0
6	0.3	49.8	0.0
7	0.0	3.7	0.0
8	0.1	20.8	0.0
9	0.0	4.0	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	9.65E-08	1.69E-05	9.11E-03	9.11E+00	6.48E+05	3016.7
2	9.03E-08	1.58E-05	8.53E-03	8.53E+00	6.07E+05	2824.6
3	5.29E-13	9.27E-11	5.00E-08	5.00E-05	3.56E+00	0.0
4	2.78E-08	4.87E-06	2.63E-03	2.63E+00	1.87E+05	870.0
5	2.97E-09	5.19E-07	2.80E-04	2.80E-01	1.99E+04	92.7
6	2.84E-09	4.98E-07	2.68E-04	2.68E-01	1.91E+04	88.9
7	4.49E-10	3.75E-08	1.20E-04	1.20E-01	1.28E+03	63.1
8	1.19E-09	2.08E-07	1.12E-04	1.12E-01	7.97E+03	37.1
9	2.28E-10	3.99E-08	2.15E-05	2.15E-02	1.53E+03	7.1
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 11:15 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	59	58508.7	70210.4	4680.7	68	68316.2	81979.5	5465.3
2	55	54783.3	65739.9	4382.7	64	63966.4	76759.7	5117.3
3	0	0.3	0.4	0.0	0	0.4	0.4	0.0
4	17	16873.1	20247.7	1349.8	20	19701.4	23641.7	1576.1
5	2	1798.8	2158.6	143.9	2	2100.3	2520.4	168.0
6	2	1724.7	2069.6	138.0	2	2013.8	2416.5	161.1
7	8	8175.6	9810.8	654.1	8	8407.4	10088.9	672.6
8	1	718.8	862.6	57.5	1	839.3	1007.2	67.1
9	0	138.2	165.9	11.1	0	161.4	193.7	12.9
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.8	273.6	0.1
2	1.7	256.2	0.1
3	0.0	0.0	0.0
4	0.5	78.9	0.0
5	0.1	8.4	0.0
6	0.1	8.1	0.0
7	2292.1	6709.0	0.0
8	0.0	3.4	0.0
9	0.0	0.6	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.76E-08	2.74E-06	1.20E-02	1.20E+01	6.99E+05	4121.3
2	1.65E-08	2.56E-06	1.12E-02	1.12E+01	6.55E+05	3858.9
3	9.68E-14	1.50E-11	6.59E-08	6.59E-05	3.84E+00	0.0
4	5.09E-09	7.89E-07	3.46E-03	3.46E+00	2.02E+05	1188.5
5	5.42E-10	8.41E-08	3.69E-04	3.69E-01	2.15E+04	126.7
6	5.20E-10	8.07E-08	3.54E-04	3.54E-01	2.06E+04	121.5
7	2.29E-05	6.71E-05	1.34E-04	1.34E-01	1.39E+03	87.0
8	2.17E-10	3.36E-08	1.47E-04	1.47E-01	8.59E+03	50.6
9	4.17E-11	6.46E-09	2.83E-05	2.83E-02	1.65E+03	9.7
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 11:30 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	232785	ERRATIC	ERRATIC	ERRATIC	302370	ERRATIC	ERRATIC	ERRATIC
2	217963	ERRATIC	ERRATIC	ERRATIC	283117	ERRATIC	ERRATIC	ERRATIC
3	1	1277.6	1533.1	102.2	2	1659.5	1991.4	132.8
4	67132	ERRATIC	ERRATIC	ERRATIC	87199	ERRATIC	ERRATIC	ERRATIC
5	7157	ERRATIC	ERRATIC	572546.2	9296	ERRATIC	ERRATIC	743693.2
6	6862	ERRATIC	ERRATIC	548944.2	8913	ERRATIC	ERRATIC	713036.0
7	5506	ERRATIC	ERRATIC	440481.9	7150	ERRATIC	ERRATIC	572014.5
8	2860	ERRATIC	ERRATIC	228793.6	3715	ERRATIC	ERRATIC	297185.1
9	550	549945.7	659934.9	43995.7	714	714336.9	857204.2	57146.9
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	107622.6	739732.6	0.1
2	100770.1	692632.2	0.1
3	0.6	4.1	0.0
4	31036.8	213328.4	0.0
5	3308.8	22742.6	0.0
6	3172.4	21805.1	0.0
7	5638.5	16512.7	3.5
8	1322.2	9088.1	0.0
9	254.3	1747.6	0.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.08E-03	7.40E-03	1.25E-02	1.25E+01	7.07E+05	4355.3
2	1.01E-03	6.93E-03	1.17E-02	1.17E+01	6.62E+05	4078.0
3	5.91E-09	4.06E-08	6.88E-08	6.88E-05	3.88E+00	0.0
4	3.10E-04	2.13E-03	3.61E-03	3.61E+00	2.04E+05	1256.0
5	3.31E-05	2.27E-04	3.85E-04	3.85E-01	2.17E+04	133.9
6	3.17E-05	2.18E-04	3.69E-04	3.69E-01	2.08E+04	128.4
7	5.64E-05	1.65E-04	6.88E-01	6.88E+02	2.03E+05	119.7
8	1.32E-05	9.09E-05	1.54E-04	1.54E-01	8.69E+03	53.5
9	2.54E-06	1.75E-05	2.96E-05	2.96E-02	1.67E+03	10.3
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 11:45 AM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	269487	ERRATIC	ERRATIC	ERRATIC	349726	ERRATIC	ERRATIC	ERRATIC
2	252328	ERRATIC	ERRATIC	ERRATIC	327458	ERRATIC	ERRATIC	ERRATIC
3	1	1479.0	1774.8	118.3	2	1919.4	2303.2	153.5
4	77716	ERRATIC	ERRATIC	ERRATIC	100856	ERRATIC	ERRATIC	ERRATIC
5	8285	ERRATIC	ERRATIC	662815.8	10752	ERRATIC	ERRATIC	860166.9
6	7944	ERRATIC	ERRATIC	635492.6	10309	ERRATIC	ERRATIC	824708.4
7	6376	ERRATIC	ERRATIC	510044.0	8271	ERRATIC	ERRATIC	661715.4
8	3311	ERRATIC	ERRATIC	264865.9	4297	ERRATIC	ERRATIC	343728.9
9	637	636652.0	763982.4	50932.2	826	826213.0	991455.6	66097.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	128803.7	1084700.5	163.1
2	120602.5	1015635.2	152.7
3	0.7	6.0	0.0
4	37145.2	312812.2	47.0
5	3960.0	33348.4	5.0
6	3796.7	31973.7	4.8
7	9450.8	27744.4	12.0
8	1582.4	13326.3	2.0
9	304.3	2562.6	0.4
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.29E-03	1.08E-02	3.23E+01	3.23E+04	2.29E+07	935496.3
2	1.21E-03	1.02E-02	3.02E+01	3.02E+04	2.14E+07	875931.2
3	7.07E-09	5.95E-08	1.77E-04	1.77E-01	1.26E+02	5.1
4	3.71E-04	3.13E-03	9.31E+00	9.31E+03	6.60E+06	269783.8
5	3.96E-05	3.33E-04	9.93E-01	9.93E+02	7.04E+05	28761.2
6	3.80E-05	3.20E-04	9.52E-01	9.52E+02	6.75E+05	27575.6
7	9.45E-05	2.77E-04	2.38E+00	2.38E+03	6.98E+05	22143.8
8	1.58E-05	1.33E-04	3.97E-01	3.97E+02	2.81E+05	11493.2
9	3.04E-06	2.56E-05	7.63E-02	7.63E+01	5.41E+04	2210.1
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 12:00 PM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	311481	ERRATIC	ERRATIC	ERRATIC	403809	ERRATIC	ERRATIC	ERRATIC
2	291648	ERRATIC	ERRATIC	ERRATIC	378098	ERRATIC	ERRATIC	ERRATIC
3	2	1709.5	2051.4	136.8	2	2216.2	2659.4	177.3
4	89827	ERRATIC	ERRATIC	ERRATIC	116453	ERRATIC	ERRATIC	ERRATIC
5	9576	ERRATIC	ERRATIC	766102.6	12415	ERRATIC	ERRATIC	993187.3
6	9182	ERRATIC	ERRATIC	734521.7	11903	ERRATIC	ERRATIC	952245.2
7	7366	ERRATIC	ERRATIC	589301.3	9548	ERRATIC	ERRATIC	763824.0
8	3827	ERRATIC	ERRATIC	306140.1	4961	ERRATIC	ERRATIC	396884.8
9	736	735861.7	883034.1	58868.9	954	953982.5	ERRATIC	76318.6
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	154282.3	1549875.2	358.2
2	144458.8	1451191.1	335.4
3	0.8	8.5	0.0
4	44492.8	446962.0	103.3
5	4743.3	47649.9	11.0
6	4547.8	45685.6	10.6
7	11943.2	35204.1	26.3
8	1895.5	19041.2	4.4
9	364.5	3661.5	0.8
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.54E-03	1.55E-02	7.09E+01	7.09E+04	5.54E+07	*********
2	1.44E-03	1.45E-02	6.64E+01	6.64E+04	5.19E+07	*********
3	8.47E-09	8.51E-08	3.89E-04	3.89E-01	3.04E+02	11.1
4	4.45E-04	4.47E-03	2.05E+01	2.05E+04	1.60E+07	580648.7
5	4.74E-05	4.76E-04	2.18E+00	2.18E+03	1.70E+06	61902.0
6	4.55E-05	4.57E-04	2.09E+00	2.09E+03	1.63E+06	59350.2
7	1.19E-04	3.52E-04	5.21E+00	5.21E+03	1.53E+06	47646.0
8	1.90E-05	1.90E-04	8.72E-01	8.72E+02	6.81E+05	24736.5
9	3.64E-06	3.66E-05	1.68E-01	1.68E+02	1.31E+05	4756.7
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 12:15 PM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	309377	ERRATIC	ERRATIC	ERRATIC	400464	ERRATIC	ERRATIC	ERRATIC
2	289678	ERRATIC	ERRATIC	ERRATIC	374966	ERRATIC	ERRATIC	ERRATIC
3	2	1697.9	2037.5	135.8	2	2197.8	2637.4	175.8
4	89220	ERRATIC	ERRATIC	ERRATIC	115488	ERRATIC	ERRATIC	ERRATIC
5	9512	ERRATIC	ERRATIC	760926.1	12312	ERRATIC	ERRATIC	984960.2
6	9119	ERRATIC	ERRATIC	729558.5	11804	ERRATIC	ERRATIC	944357.3
7	7310	ERRATIC	ERRATIC	584829.4	9463	ERRATIC	ERRATIC	757007.7
8	3801	ERRATIC	ERRATIC	304071.5	4920	ERRATIC	ERRATIC	393597.1
9	731	730889.5	877067.4	58471.2	946	946080.2	ERRATIC	75686.4
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	158647.7	1853201.4	592.0
2	148546.3	1735203.9	554.3
3	0.9	10.2	0.0
4	45751.7	534437.0	170.7
5	4877.5	56975.4	18.2
6	4676.5	54626.8	17.4
7	12873.4	38131.8	44.4
8	1949.1	22767.8	7.3
9	374.8	4378.1	1.4
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.59E-03	1.85E-02	1.17E+02	1.17E+05	1.02E+08	*********
2	1.49E-03	1.74E-02	1.10E+02	1.10E+05	9.54E+07	*********
3	8.71E-09	1.02E-07	6.43E-04	6.43E-01	5.59E+02	17.9
4	4.58E-04	5.34E-03	3.38E+01	3.38E+04	2.94E+07	939955.7
5	4.88E-05	5.70E-04	3.60E+00	3.60E+03	3.13E+06	100207.1
6	4.68E-05	5.46E-04	3.46E+00	3.46E+03	3.00E+06	96076.3
7	1.29E-04	3.81E-04	8.80E+00	8.80E+03	2.59E+06	77111.1
8	1.95E-05	2.28E-04	1.44E+00	1.44E+03	1.25E+06	40043.5
9	3.75E-06	4.38E-05	2.77E-01	2.77E+02	2.41E+05	7700.1
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 12:30 PM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	311406	ERRATIC	ERRATIC	ERRATIC	402494	ERRATIC	ERRATIC	ERRATIC
2	291578	ERRATIC	ERRATIC	ERRATIC	376866	ERRATIC	ERRATIC	ERRATIC
3	2	1709.1	2050.9	136.7	2	2209.0	2650.8	176.7
4	89805	ERRATIC	ERRATIC	ERRATIC	116073	ERRATIC	ERRATIC	ERRATIC
5	9574	ERRATIC	ERRATIC	765918.2	12374	ERRATIC	ERRATIC	989952.3
6	9179	ERRATIC	ERRATIC	734344.8	11864	ERRATIC	ERRATIC	949143.6
7	7352	ERRATIC	ERRATIC	588172.5	9504	ERRATIC	ERRATIC	760350.8
8	3826	ERRATIC	ERRATIC	306066.4	4945	ERRATIC	ERRATIC	395592.0
9	736	735684.6	882821.5	58854.8	951	950875.2	ERRATIC	76070.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	158647.7	1853201.4	832.3
2	148546.3	1735203.9	779.3
3	0.9	10.2	0.0
4	45751.7	534437.0	240.0
5	4877.5	56975.4	25.6
6	4676.5	54626.8	24.5
7	12873.4	38131.8	63.9
8	1949.1	22767.8	10.2
9	374.8	4378.1	2.0
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.59E-03	1.85E-02	1.65E+02	1.65E+05	1.58E+08	*********
2	1.49E-03	1.74E-02	1.54E+02	1.54E+05	1.48E+08	*********
3	8.71E-09	1.02E-07	9.05E-04	9.05E-01	8.65E+02	24.7
4	4.58E-04	5.34E-03	4.75E+01	4.75E+04	4.54E+07	*********
5	4.88E-05	5.70E-04	5.07E+00	5.07E+03	4.84E+06	138253.4
6	4.68E-05	5.46E-04	4.86E+00	4.86E+03	4.64E+06	132554.2
7	1.29E-04	3.81E-04	1.27E+01	1.27E+04	3.73E+06	106352.5
8	1.95E-05	2.28E-04	2.02E+00	2.02E+03	1.94E+06	55247.1
9	3.75E-06	4.38E-05	3.89E-01	3.89E+02	3.72E+05	10623.7
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 12:45 PM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	313436	ERRATIC	ERRATIC	ERRATIC	404523	ERRATIC	ERRATIC	ERRATIC
2	293479	ERRATIC	ERRATIC	ERRATIC	378767	ERRATIC	ERRATIC	ERRATIC
3	2	1720.2	2064.2	137.6	2	2220.1	2664.1	177.6
4	90390	ERRATIC	ERRATIC	ERRATIC	116659	ERRATIC	ERRATIC	ERRATIC
5	9636	ERRATIC	ERRATIC	770910.3	12437	ERRATIC	ERRATIC	994944.3
6	9239	ERRATIC	ERRATIC	739131.1	11924	ERRATIC	ERRATIC	953929.9
7	7394	ERRATIC	ERRATIC	591515.6	9546	ERRATIC	ERRATIC	763693.9
8	3851	ERRATIC	ERRATIC	308061.3	4970	ERRATIC	ERRATIC	397586.9
9	740	740479.6	888575.5	59238.4	956	955670.2	ERRATIC	76453.6
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	158647.7	1853201.4	1072.7
2	148546.3	1735203.9	1004.4
3	0.9	10.2	0.0
4	45751.7	534437.6	309.3
5	4877.5	56975.4	33.0
6	4676.5	54626.8	31.6
7	12873.4	38131.8	83.4
8	1949.1	22767.8	13.2
9	374.8	4378.1	2.5
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.59E-03	1.85E-02	2.12E+02	2.12E+05	2.13E+08	*********
2	1.49E-03	1.74E-02	1.99E+02	1.99E+05	2.00E+08	*********
3	8.71E-09	1.02E-07	1.17E-03	1.17E+00	1.17E+03	31.5
4	4.58E-04	5.34E-03	6.13E+01	6.13E+04	6.15E+07	*********
5	4.88E-05	5.70E-04	6.53E+00	6.53E+03	6.55E+06	176549.3
6	4.68E-05	5.46E-04	6.26E+00	6.26E+03	6.28E+06	169271.5
7	1.29E-04	3.81E-04	1.65E+01	1.65E+04	4.87E+06	135761.2
8	1.95E-05	2.28E-04	2.61E+00	2.61E+03	2.62E+06	70550.4
9	3.75E-06	4.38E-05	5.02E-01	5.02E+02	5.04E+05	13566.4
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 01:00 PM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	315466	ERRATIC	ERRATIC	ERRATIC	406553	ERRATIC	ERRATIC	ERRATIC
2	295379	ERRATIC	ERRATIC	ERRATIC	380667	ERRATIC	ERRATIC	ERRATIC
3	2	1731.3	2077.6	138.5	2	2231.3	2677.5	178.5
4	90976	ERRATIC	ERRATIC	ERRATIC	117244	ERRATIC	ERRATIC	ERRATIC
5	9699	ERRATIC	ERRATIC	775902.4	12499	ERRATIC	ERRATIC	999936.4
6	9299	ERRATIC	ERRATIC	743917.4	11984	ERRATIC	ERRATIC	958716.2
7	7436	ERRATIC	ERRATIC	594858.7	9588	ERRATIC	ERRATIC	767037.0
8	3876	ERRATIC	ERRATIC	310056.2	4995	ERRATIC	ERRATIC	399581.8
9	745	745274.6	894329.6	59622.0	960	960465.3	ERRATIC	76837.2
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	158647.7	1853201.4	1313.0
2	148546.3	1735203.9	1229.4
3	0.9	10.2	0.0
4	45751.7	534437.0	378.7
5	4877.5	56975.4	40.4
6	4676.5	54626.8	38.7
7	12873.4	38131.8	102.9
8	1949.1	22767.8	16.1
9	374.8	4378.1	3.1
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.59E-03	1.85E-02	2.60E+02	2.60E+05	2.69E+08	*********
2	1.49E-03	1.74E-02	2.43E+02	2.43E+05	2.52E+08	*********
3	8.71E-09	1.02E-07	1.43E-03	1.43E+00	1.47E+03	38.4
4	4.58E-04	5.34E-03	7.50E+01	7.50E+04	7.75E+07	*********
5	4.88E-05	5.70E-04	7.99E+00	7.99E+03	8.26E+06	215094.9
6	4.68E-05	5.46E-04	7.66E+00	7.66E+03	7.92E+06	206228.0
7	1.29E-04	3.81E-04	2.04E+01	2.04E+04	6.02E+06	165337.0
8	1.95E-05	2.28E-04	3.19E+00	3.19E+03	3.30E+06	85953.4
9	3.75E-06	4.38E-05	6.14E-01	6.14E+02	6.35E+05	16528.3
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 01:15 PM

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	317495	ERRATIC	ERRATIC	ERRATIC	408583	ERRATIC	ERRATIC	ERRATIC
2	297280	ERRATIC	ERRATIC	ERRATIC	382567	ERRATIC	ERRATIC	ERRATIC
3	2	1742.5	2091.0	139.4	2	2242.4	2690.9	179.4
4	91561	ERRATIC	ERRATIC	ERRATIC	117829	ERRATIC	ERRATIC	ERRATIC
5	9761	ERRATIC	ERRATIC	780894.5	12562	ERRATIC	ERRATIC	ERRATIC
6	9359	ERRATIC	ERRATIC	748703.8	12044	ERRATIC	ERRATIC	963502.5
7	7478	ERRATIC	ERRATIC	598201.8	9630	ERRATIC	ERRATIC	770380.1
8	3901	ERRATIC	ERRATIC	312051.0	5020	ERRATIC	ERRATIC	401576.6
9	750	750069.7	900083.6	60005.6	965	965260.3	ERRATIC	77220.8
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	158647.7	1853201.4	1553.4
2	148546.3	1735203.9	1454.5
3	0.9	10.2	0.0
4	45751.7	534437.0	448.0
5	4877.5	56975.4	47.8
6	4676.5	54626.8	45.8
7	12873.4	38131.8	122.4
8	1949.1	22767.8	19.1
9	374.8	4378.1	3.7
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.59E-03	1.85E-02	3.08E+02	3.08E+05	3.24E+08	*********
2	1.49E-03	1.74E-02	2.88E+02	2.88E+05	3.04E+08	*********
3	8.71E-09	1.02E-07	1.69E-03	1.69E+00	1.78E+03	45.3
4	4.58E-04	5.34E-03	8.87E+01	8.87E+04	9.35E+07	*********
5	4.88E-05	5.70E-04	9.46E+00	9.46E+03	9.97E+06	253890.0
6	4.68E-05	5.46E-04	9.07E+00	9.07E+03	9.56E+06	243423.9
7	1.29E-04	3.81E-04	2.42E+01	2.42E+04	7.16E+06	195079.9
8	1.95E-05	2.28E-04	3.78E+00	3.78E+03	3.98E+06	101456.3
9	3.75E-06	4.38E-05	7.27E-01	7.27E+02	7.66E+05	19509.4
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 ONSITE RELEASE DATA

TIME: 01:30 PM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

01/24/94 05:02 PM SHEET 21

ON SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rat OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	319525	ERRATIC	ERRATIC	ERRATIC	410612	ERRATIC	ERRATIC	ERRATIC
2	299180	ERRATIC	ERRATIC	ERRATIC	384468	ERRATIC	ERRATIC	ERRATIC
3	2	1753.6	2104.3	140.3	2	2253.5	2704.2	180.3
4	92146	ERRATIC	ERRATIC	ERRATIC	118415	ERRATIC	ERRATIC	ERRATIC
5	9824	ERRATIC	ERRATIC	785886.5	12624	ERRATIC	ERRATIC	ERRATIC
6	9419	ERRATIC	ERRATIC	753490.1	12104	ERRATIC	ERRATIC	968288.8
7	7519	ERRATIC	ERRATIC	601544.9	9672	ERRATIC	ERRATIC	773723.2
8	3926	ERRATIC	ERRATIC	314045.9	5045	ERRATIC	ERRATIC	403571.5
9	755	754864.7	905837.7	60389.2	970	970055.3	ERRATIC	77604.4
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	158647.7	1853201.4	1793.7
2	148546.3	1735203.9	1679.5
3	0.9	10.2	0.0
4	45751.7	534437.0	517.3
5	4877.5	56975.4	55.1
6	4676.5	54626.8	52.9
7	12873.4	38131.8	141.9
8	1949.1	22767.8	22.0
9	374.8	4378.1	4.2
10	0.0	0.0	0.0

OFF SITE LABORATORY DATA

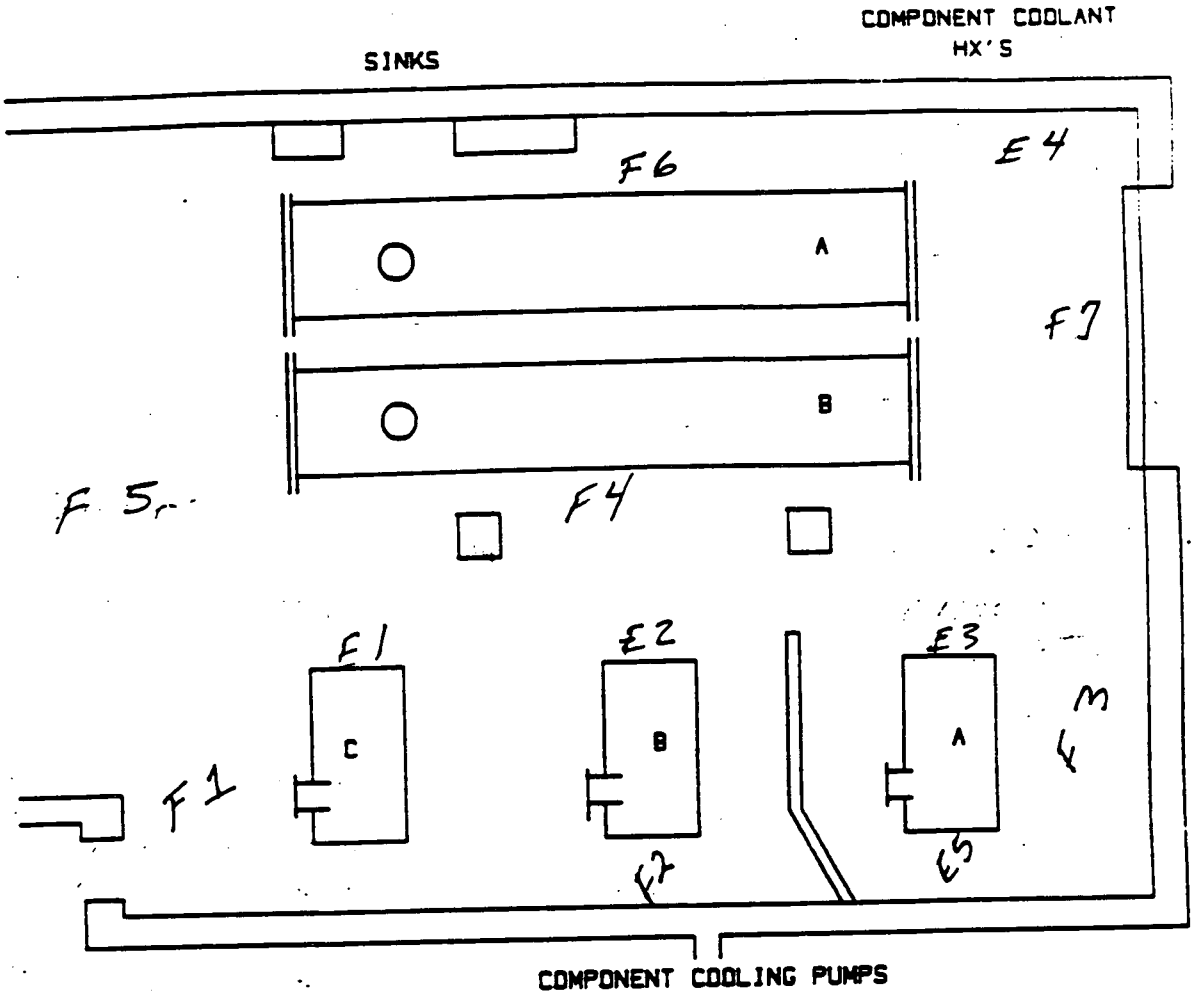
1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.59E-03	1.85E-02	3.55E+02	3.55E+05	3.80E+08	*********
2	1.49E-03	1.74E-02	3.33E+02	3.33E+05	3.56E+08	*********
3	8.71E-09	1.02E-07	1.95E-03	1.95E+00	2.09E+03	52.3
4	4.58E-04	5.34E-03	1.02E+02	1.02E+05	1.10E+08	*********
5	4.88E-05	5.70E-04	1.09E+01	1.09E+04	1.17E+07	292934.7
6	4.68E-05	5.46E-04	1.05E+01	1.05E+04	1.12E+07	280859.1
7	1.29E-04	3.81E-04	2.81E+01	2.81E+04	8.31E+06	224990.0
8	1.95E-05	2.28E-04	4.36E+00	4.36E+03	4.67E+06	117058.8
9	3.75E-06	4.38E-05	8.39E-01	8.39E+02	8.98E+05	22509.7
10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0

IN-PLANT SURVEYS

'OM OR AREA: COMPONENT COOLING WATER ROOM SURVEY #: _____ RWP #: ____



ERFORMED BY: _____ DATE: _____ TIME: ____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
E1	Floor			<2	<MDA	
F2				<2	<MDA	
F3				<2	<MDA	
F4				<2	<MDA	
F5				<2	<MDA	
F6				<2	100	
F7				<2	<MDA	
E1	'C' Pump			<2	<MDA	
E2	'B' Pump			<2	90	
E3	'A' Pump			<2	<MDA	
E4	Dipe			<2	125	
E5	Ladder			<2	<MDA	

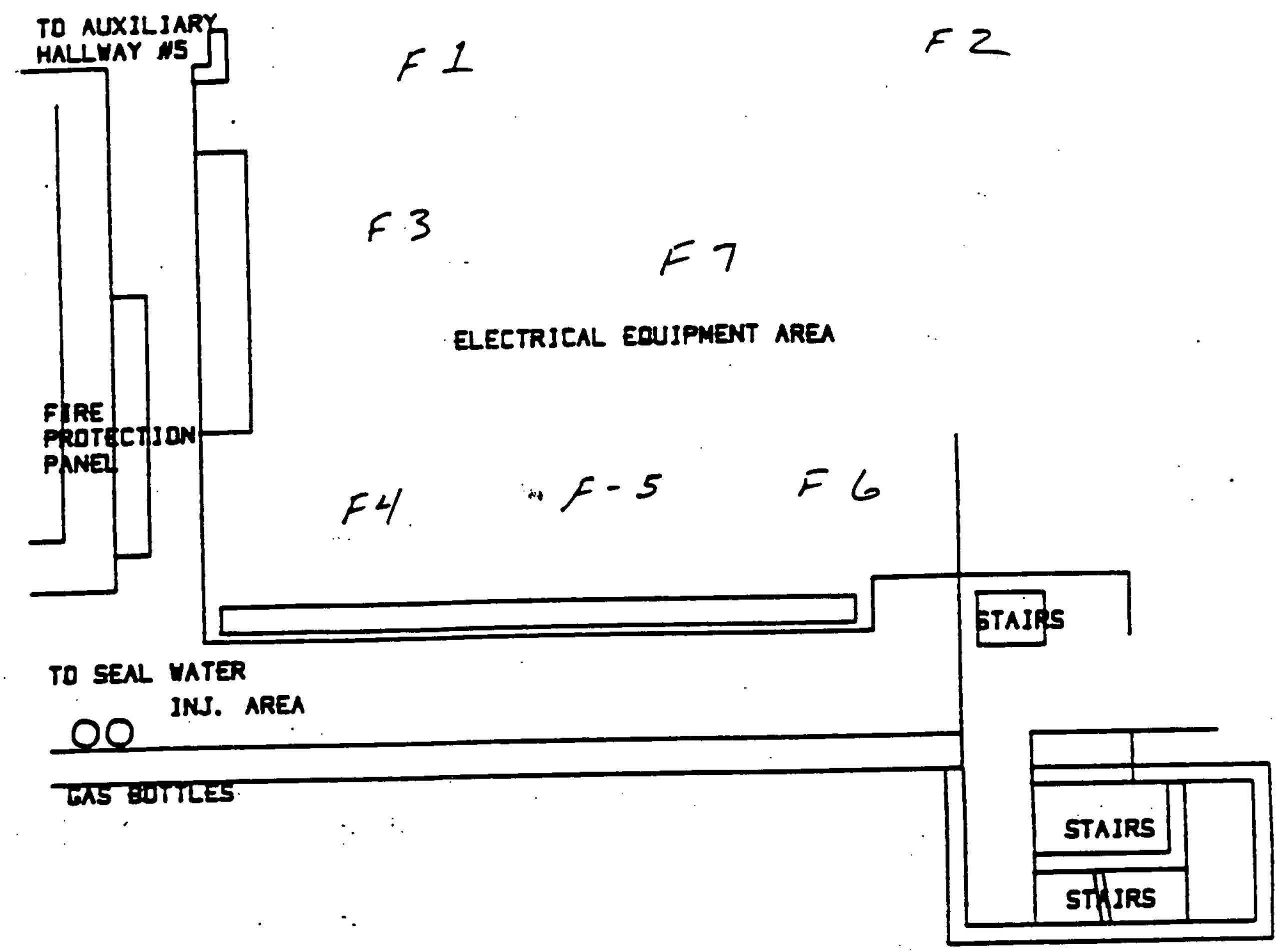
INSTRUMENT TYPE / SE
RO2A 12
TENN 0

ABBREVIATION
LHRA: Locked Hi-
HRA: Hi-Rad Are
HCA: Hi-Contam. Area
CA: Contaminat
CPEA: Contam. Pr Equip. Are
ARA: Airborne R
RA: Rad Area
RMA: Rad Materi
SOP: Step-Off P
E#: Equip. Loc
F#: Floor Loca
H#: Hot Spot L

COMMENTS: MDA = 78 dpm Drill Survey - 11/91 0800 - 1300 data

Page: 1

ROOM OR AREA: AUXILIARY BUILDING HALLWAY #4 SURVEY #:________ RWP #:____



PERFORMED BY:________ DATE:______ TIME:____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
F1	Floor			<2	<MDA	
F2	↓			<2	<MDA	
F3				<2	<MDA	
F4				<2	<MDA	
F5				<2	<MDA	
F6				<2	<MDA	
F7				<2	<MDA	

INSTRUMENT TYPE	SE
RD20	123
Trnn	03

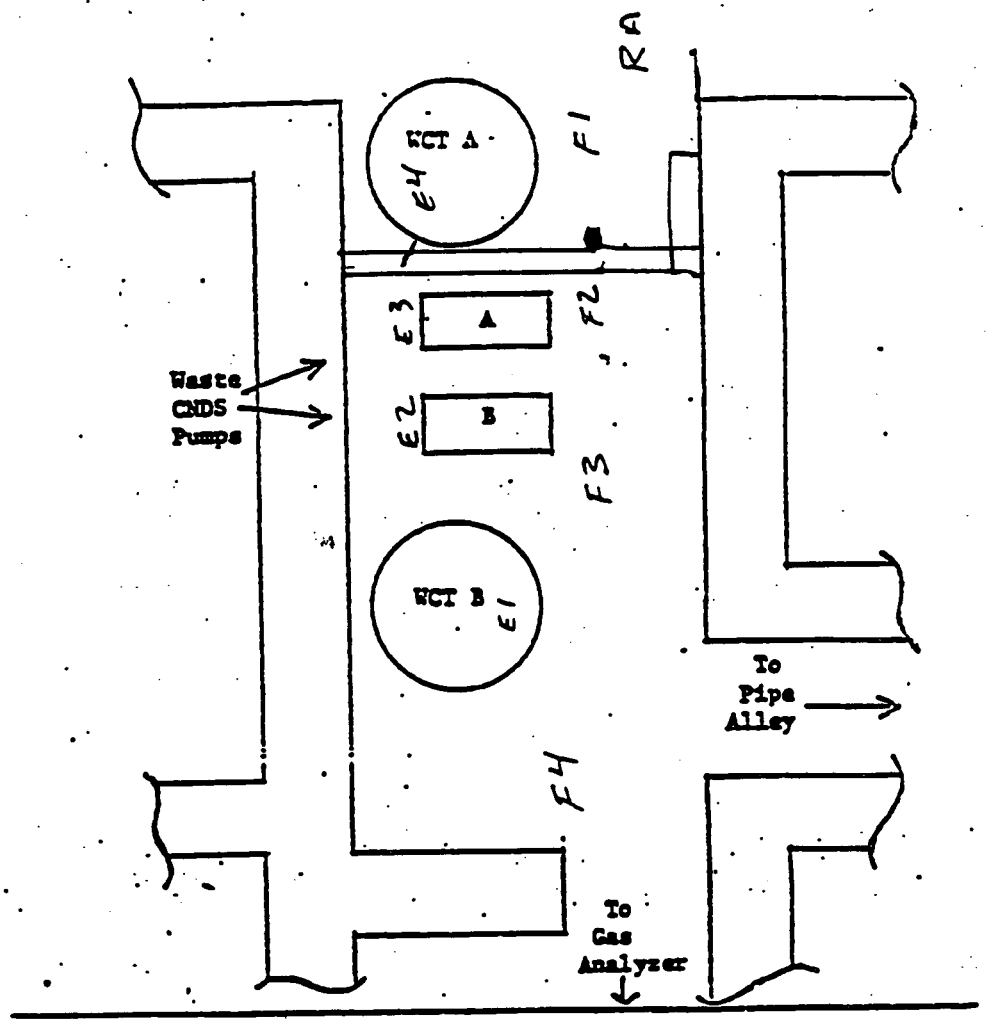
ABBREVIATION

LHRA: Locked Hi-R
HRA: Hi-Rad Area
HCA: Hi-Contamin Area
CA: Contaminat
CPEA: Contam. Pro Equip. Area
ARA: Airborne Ra
RA: Rad Area
RMA: Rad Materia
SOP: Step-Off Pa
E#: Equip. Loca
F#: Floor Loca
H#: Hot Spot L

Page:____

COMMENTS: MDA = 80 DRIFT SURVEY [illegible]

ROOM OR AREA: "A" and "B" WASTE CONDENSATE TANK AREA SURVEY #: _____ MAP #: ____



PERFORMED BY: _____ DATE: _____ TIME: ____

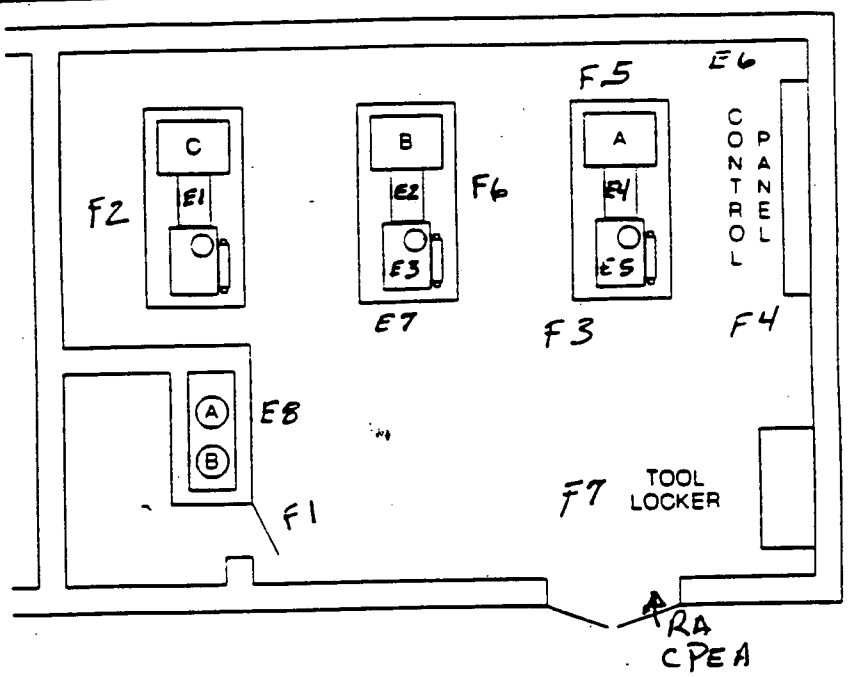
LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
E1	Floor			5	<MDA	
E2	/			5	<MDA	
E3	/			5	<MDA	
E4	//			5	<MDA	
E1	B WCT			30	100	
E2	B Pump			10	<MDA	
E3	A Pump-A			10	<MDA	
E4	A WCT			35	113	

INSTRUMENT TYPE / SER:
RO2A / 24
TENN / C

ABBREVIATION KE
LHRA: Locked Hi-Ra
HRA: Hi-Rad Area
HCA: Hi-Contamina Area
CA: Contaminatio
CPEA: Contam. Prod Equip. Area
ARA: Airborne Rad
RA: Rad Area
RMA: Rad Material
SUP: Step-Off Pad
E#: Equip. Locat
F#: Floor Locati
H#: Hot Spot Loc
Page: ____ of

COMMENTS: MDA - 50 Dpm Drill Survey 11/91 0800 - 1115

ROOM OR AREA: CHARGING PUMP ROOM SURVEY# _____ RWP# N/A



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			5	<MDA	
F2	↓			2	110	
F3	↓			5	<MDA	
F4	↓			2	↓	
F5	↓			<2	103	
F6	↓			<2	<MDA	
F7	↓			<2	161	
E1	"C" Charging Pump			<2	2412	
E2	"B" Charging Pump			2	210	
E3	↓ ↓ ↓			2	155	
E4	"A" Charging Pump			2	169	
E5	↓ ↓ ↓			2	1322	
E6	WDOL			2	974	
E7	Hanger Support			10	72	
E8	piping			12	1210	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2032
Jenn	#3

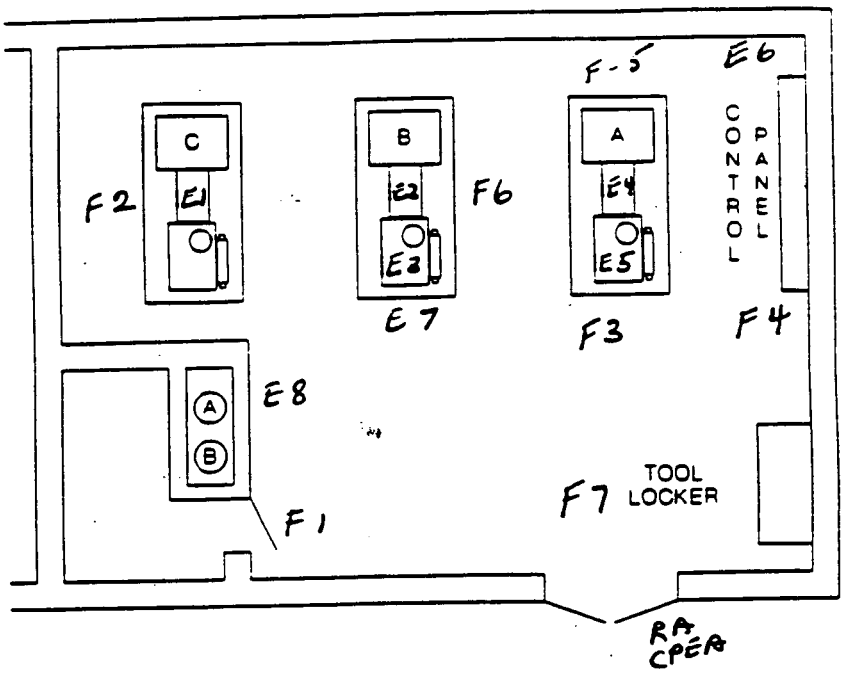
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: ____ of ____

Comments: MDA = 70 dpm DRill for 11/91 0800 TO 1115

90-4168

ROOM OR AREA: CHARGING PUMP ROOM SURVEY= _____ RWP= N/A



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	FLOOR			5600	<MDA	
F2	↓			5550	110	
F3	↓			6750	<MDA	
F4	↓			6620	↓	
F5	↓			6750	103	
F6	↓			6800	<MDA	
F7	↓			6630	161	
E1	"C" Charging Pump			5580	2412	
E2	"B" Charging Pump			6710	210	
E3	↓ ↓ ↓			6710	155	
E4	"A" Charging Pump			6740	169	
E5	↓ ↓ ↓			6740	1322	
E6	Wall			5610	979	
E7	Hanger Support			6720	72	
E8	Piping			6700	1210	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2032
Jean	#3

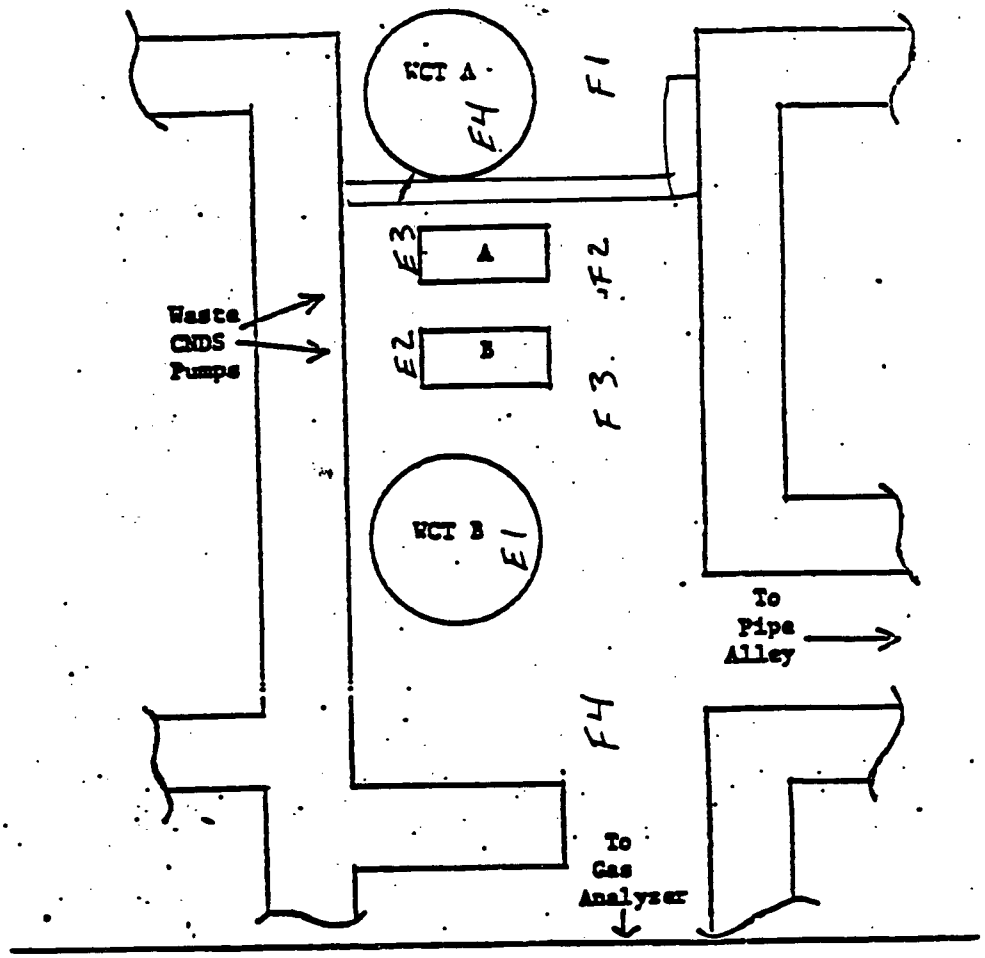
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70dpm Drill for 11/91 1116 to 1300

90-4168

ROOM OR AREA: "A" and "B" WASTE CONDENSATE TANK AREA SURVEY #: _____ RWP #: ____



PERFORMED BY: _____ DATE: _____ TIME: ____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
F1	FLOOR			[redacted] 1000	<MDA	
F2	↓			1000	<MDA	
F3				750	<MDA	
F4	↓			200	<MDA	
E1	B WCT			900	100	
E2	B PUMP			800	<MDA	
E3	A PUMP			900	<MDA	
E4	A WCT			1000	113	

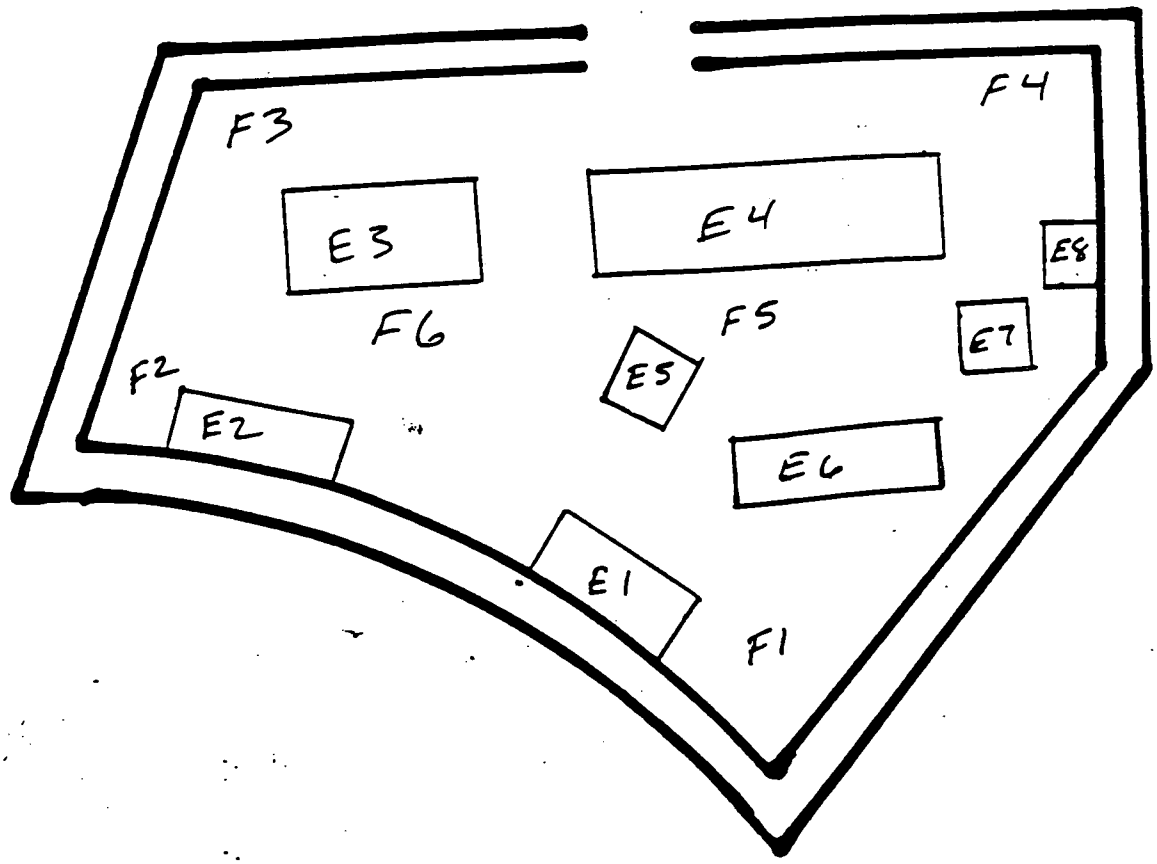
INSTRUMENT TYPE SER:

ABBREVIATION KE
LHRA: Locked Hi-Ra
HRA: Hi-Rad Area
HCA: Hi-Containa Area
CA: Contaminatio
CPEA: Contam. Proc Equip. Area
ARA: Airborne Rad
RA: Rad Area
RMA: Rad Material
SUP: Step-Off Pad
E#: Equip. Locat
F#: Floor Locati
H#: Hot Spot Loc

COMMENTS: MDA - 80 dpm Drill Survey 11/91 1116 - 1300

Page: ____ of

ROOM OR AREA: Rod Drive Room SURVEY #: _____ MAP #: _____



PERFORMED BY: _____ DATE: _____ TIME:

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	15" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			< 2	< MDA	
F2				< 2	< MDA	
F3				< 2	< MDA	
F4				< 2	< MDA	
F5				< 2	< MDA	
F6				< 2	< MDA	
E1				< 2	< MDA	
E2				< 2	< MDA	
E3				< 2	< MDA	
E4				< 2	< MDA	
E5				< 2	< MDA	
E6				< 2	< MDA	
E7				< 2	< MDA	
E8				< 2	< MDA	

DISTURBANCE TYPE

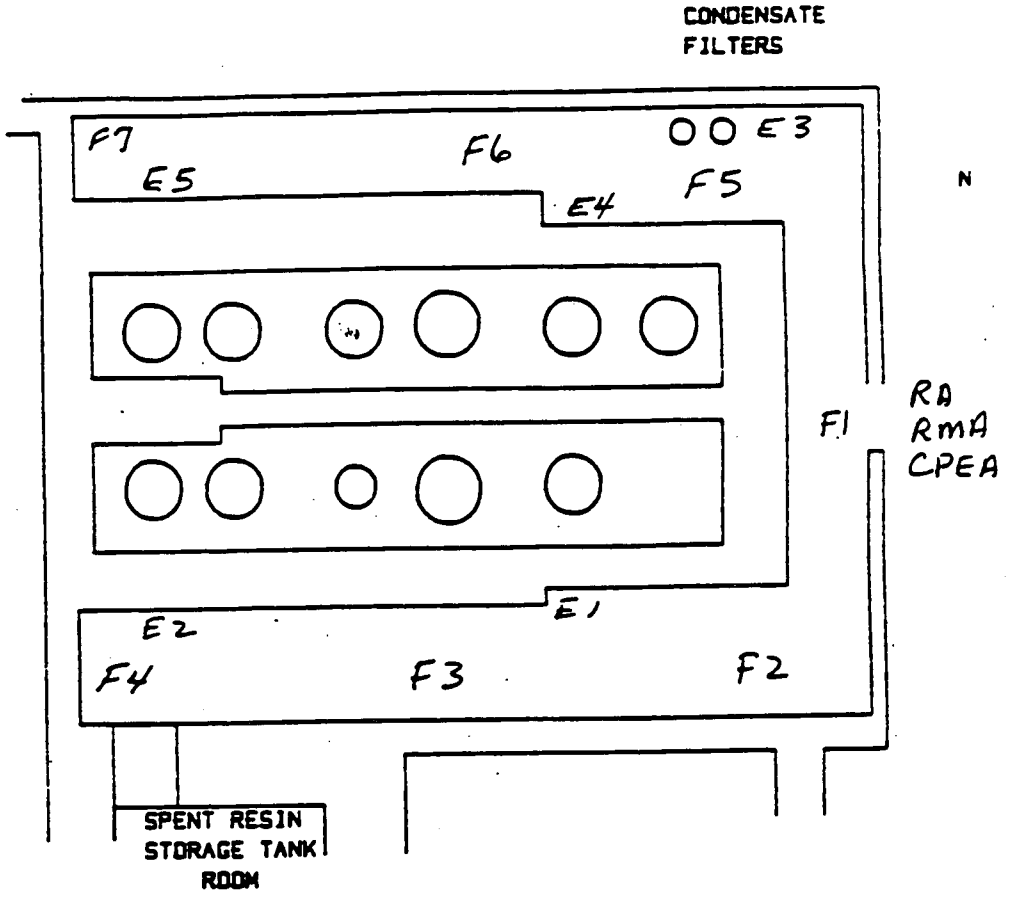
_____ -
_____ -
_____ -

ABBREVIATIONS

LLRA: Locked
HRA: Hi-Rad
HCA: Hi-Cont. Area
CA: Contam.
CPEA: Contam. Equip.
ARA: Airborn
RA: Rad Are
RMA: Rad Mat
SOP: Step-O
E#: Equip.
F#: Floor
H#: Hot Sp
Pene.

COMMENTS: MDA - 50 dpm Drill Survey 11/91 0800 - 1300

ROOM OR AREA: DEMINERALIZER ROOM SURVEY #: _____ RWP #: _____



PERFORMED BY: _____ DATE: _____ TIME: _____

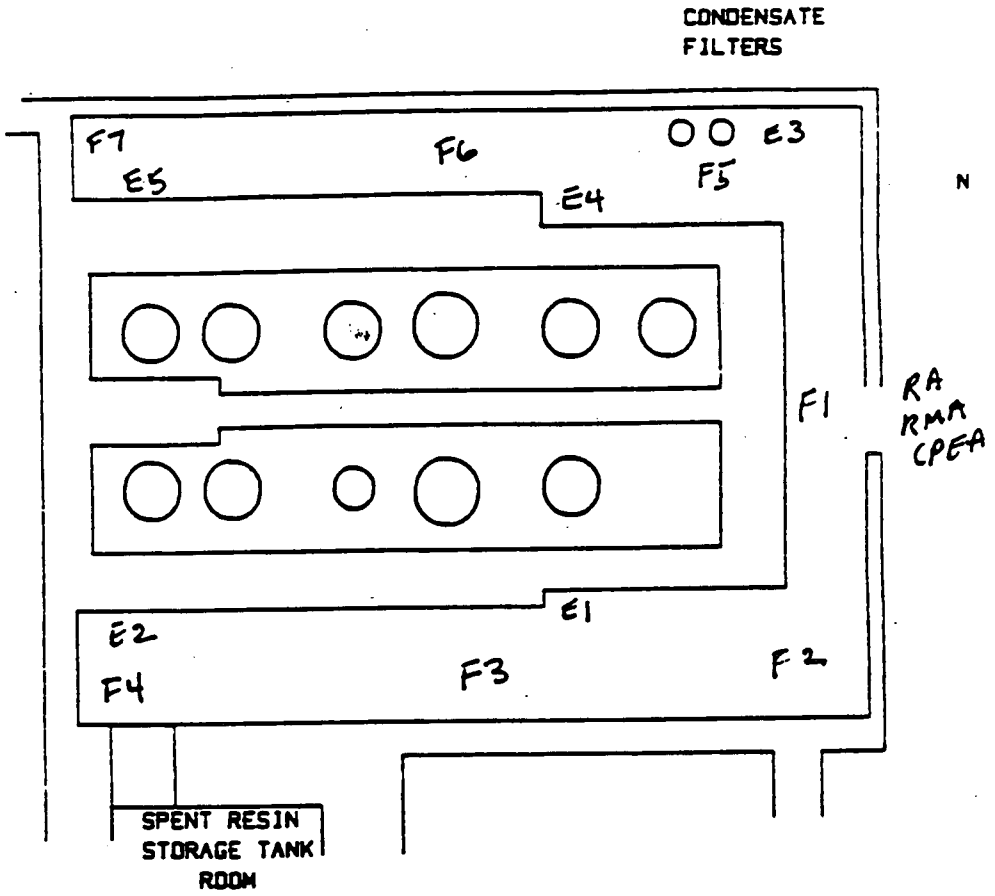
LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
F1	FLOOR			< 2	< MDA	
F2	↓			2	↓	
F3				4		
F4				18	150	
F5				6	< MDA	
F6				5	↓	
F7				8	100	
E1	PIPING			3	22	
E2	CVC 221 Pb SHIELDING	10		7	< MDA	
E3	FILTER HOUSING	38		5	230	
E4	PIPING			6	650	
E5	CVC-215 'A' Pb SHIELDING	20		6	< MDA	

INSTRUMENT TYPE / SERIAL
RO2A 249
JENN 03

ABBREVIATION KEY
LHRA: Locked Hi-Rad
HRA: Hi-Rad Area
HCA: Hi-Contaminati Area
CA: Contamination
CPEA: Contam. Proces Equip. Area
ARA: Airborne Rad A
RA: Rad Area
RMA: Rad Material A
SUP: Step-off Pad
E#: Equip. Locatic
F#: Floor Locatior
H#: Hot Spot Locat
Page: ____ of _

COMMENTS: MDA = 70 DPM, DRILL SURVEY NOV '91 0800-1115

ROOM OR AREA: DEMINERALIZER ROOM SURVEY #:_____ RWP #:_____



PERFORMED BY:_____ DATE:_____ TIME:_____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
F1	FLOOR			10,000	<MDA	
F2	"			9,300	"	
F3	"			9,800	"	
F4	"			11,000	150	
F5	"			10,500	<MDA	
F6	"			10,000	"	
F7	"			10,500	100	
E1	PIPING			9,700	23	
E2	CVC 221 Pb Shielding	1500		11,000	<MDA	
E3	Filter Housing			9,580	230	
G4	Piping			10,100	450	
E5	CVC-215 "A" Pb Shielding	1480		14,000	<MDA	

COMMENTS: MDA = 70 DPM, DRILL SURVEY NOV '91, 1116 - 1300

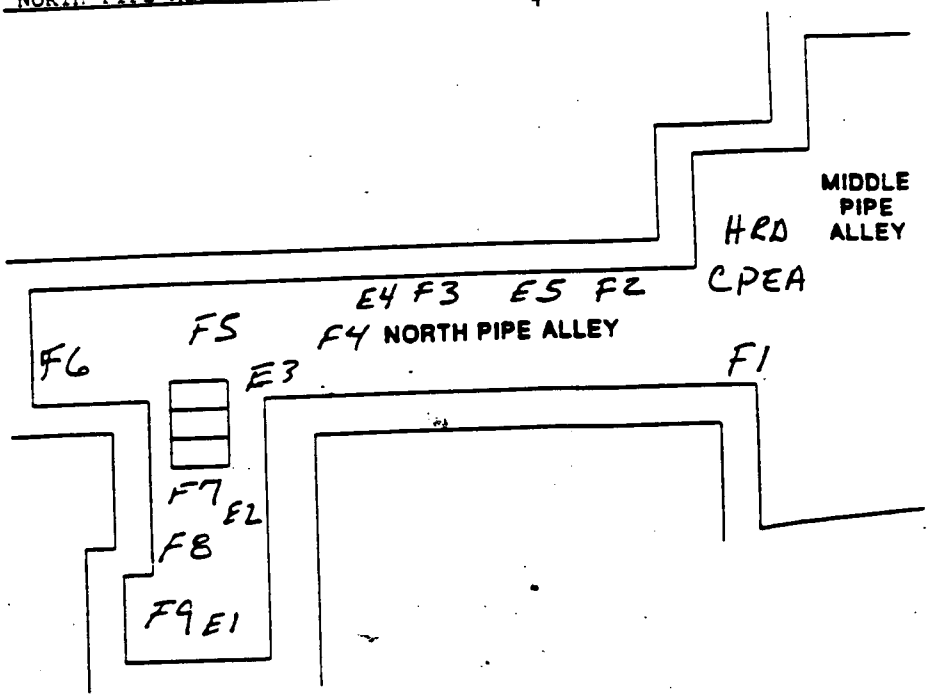
INSTRUMENT TYPE	SERIA

ABBREVIATION KEY

LHRA: Locked Hi-Rad
HRA: Hi-Rad Area
HCA: Hi-Contaminati Area
CA: Contamination
CPEA: Contam. Proces Equip. Area
ARA: Airborne Rad A
RA: Rad Area
RMA: Rad Material A
SDP: Step-Off Pad
E#: Equip. Locatic
F#: Floor Location
H#: Hot Spot Locat

Page:____ of _

ROOM OR AREA: NORTH PIPE ALLEY SURVEY= Drill RWP= _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	FLOOR			80	30	
F2				100	15	
F3				140	95	
F4				120	70	
F5				80	55	
F6				2	50	
F7				24	170	
F8				30	105	
F9				20	40	
E1	WD LINE			80	460	
E2	WD VALVE			30	1160	
E3	WD VALVE			80	190	
E4	RHR LINE			120	170	
E5	RHR LINE			140	65	

INSTRUMENT TYPE	SERIAL NO
RO2A	2049
TENN	3

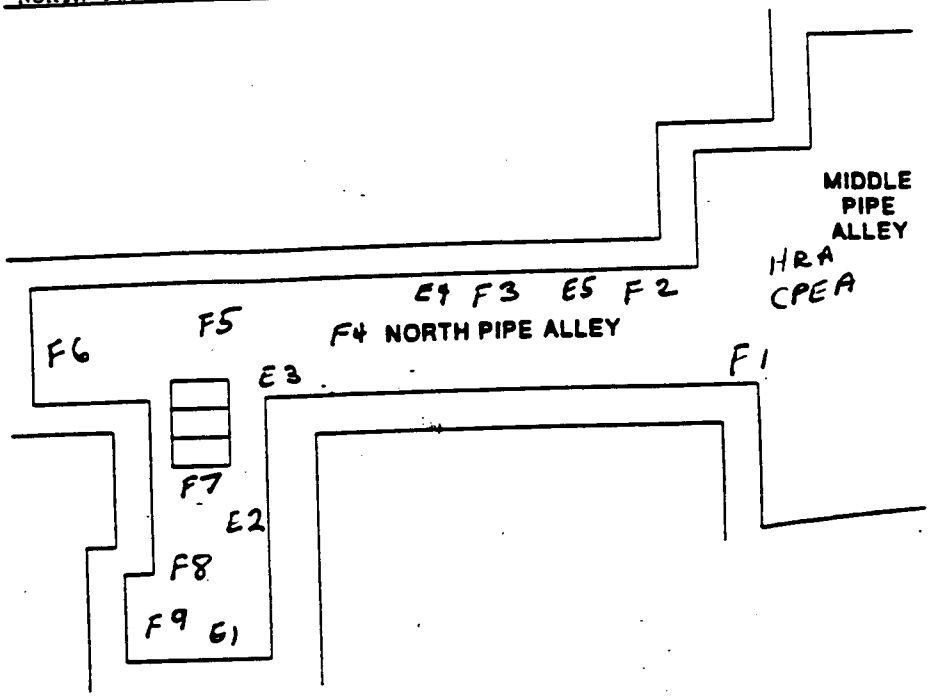
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70 dpm, Drill Survey NOV 91 0800-1115

90-4168

ROOM OR AREA: NORTH PIPE ALLEY SURVEY= Drill RWP= _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	FLOOR			9200	30	
F2	↓			9400	15	
F3	↓			7100	95	
F4	↓			3300	70	
F5	↓			1800	55	
F6	↓			300	50	
F7	↓			40	170	
F8	↓			35	105	
F9	↓			22	40	
E1	WD LINE			80	460	
E2	WD Valve			30	1160	
E3	↓ ↓			2100	190	
E4	RHR LINE			5900	170	
E5	↓ ↓			7600	65	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2049
Jean	3

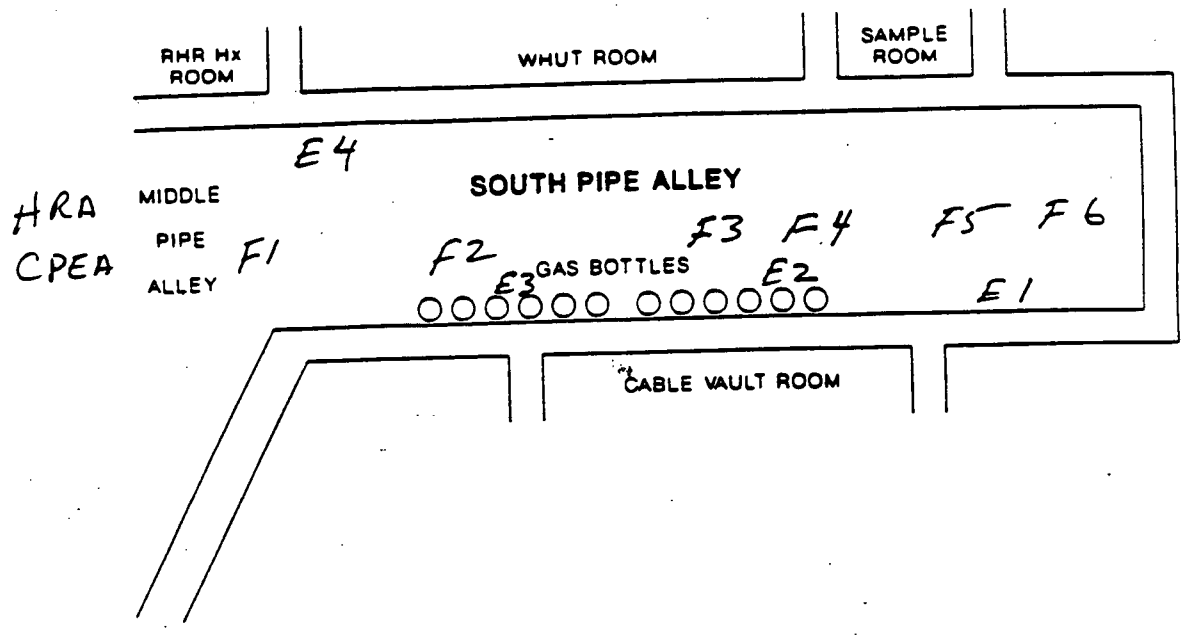
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70dpm, Drill Survey, Nov. '91 1116-1300

90-4168

ROOM OR AREA: SOUTH PIPE ALLEY AREA SURVEY# DRill RWP# _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			10	80	
F2				4	5	
F3				2.	65	
F4				2	25	
F5				2	55	
F6	↓			2	40	
E1	Sample Valve			<2	309	
E2	Gas Bottle			<2	25	
E3	↓			2	2485	
E4	PAGE			8	55	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2049
TCNN	3

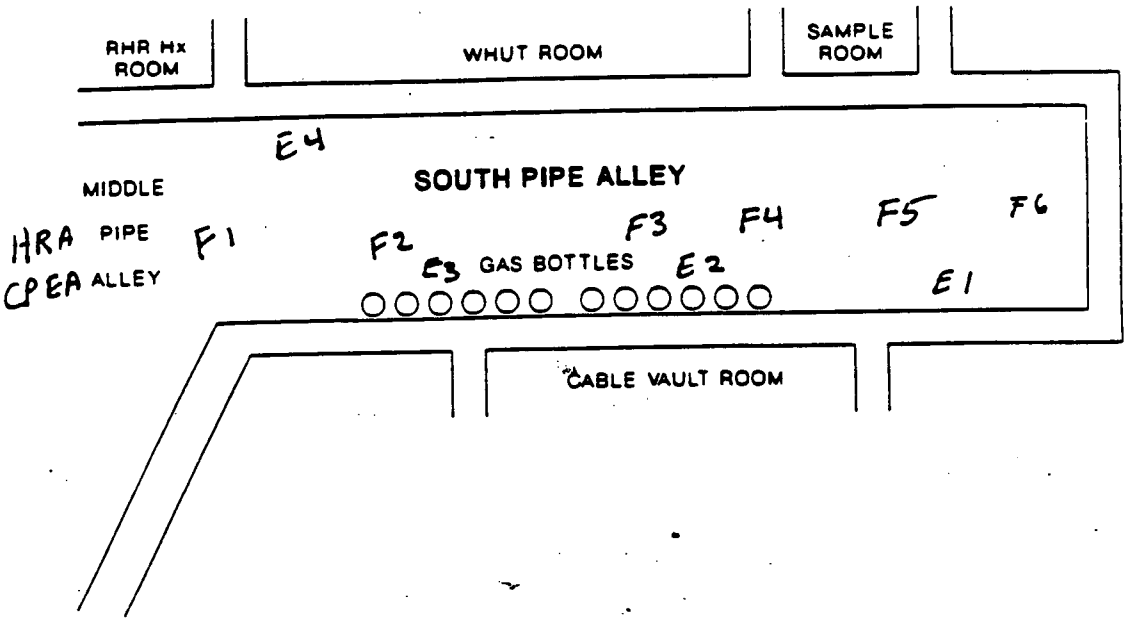
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70 dpm / DRill Survey NOV 91 0800-0914

90-4168

ROOM OR AREA: SOUTH PIPE ALLEY AREA SURVEY# _____ RWP# _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	FLOOR			100	80	
F2	↓			85	5	
F3				80	65	
F4				80	25	
F5				75	55	
F6	↓			73	40	
E1	Sample valve			40	309	
E2	Gas Bottle			42	25	
E3	↓			43	2985	
E4	Page			84	55	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2049
Jean	3

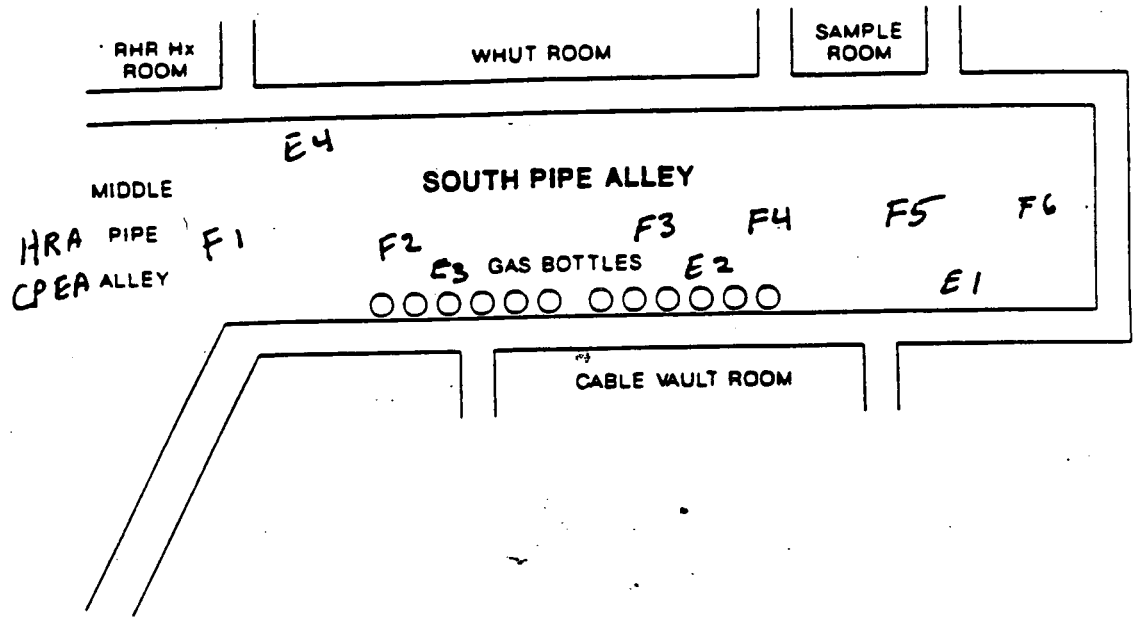
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70 dpm, Drill Survey Nov 91 0915-1115

90-4168

ROOM OR AREA: SOUTH PIPE ALLEY AREA SURVEY# _____ RWP# _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	FLOOR			10000	80	
F2	↓			8100	5	
F3				5900	65	
F4				3800	25	
E5				2400	55	
F6	↓			1700	40	
E1	Sample valve			2000	309	
E2	Gas Bottle			4600	25	
E3	↓			7200	2985	
E4	Page			4200	55	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2049
Jean	3

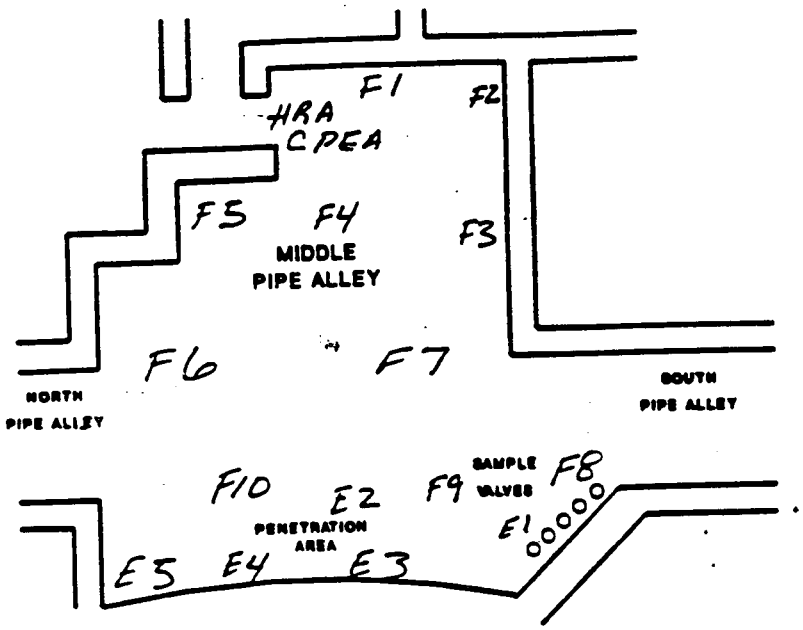
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70dpm, Drill Survey Nov 91 1116-1300

90-4168

ROOM OR AREA: MIDDLE PIPE ALLEY SURVEY# DRill RWP# _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			6	80	
F2				8	105	
F3				30	25	
F4				30	15	
F5				20	15	
F6				20	85	
F7				80	105	
F8				100	95	
F9				80	50	
F10				80	55	
E1	Sample Panel			20	390	
E2	Blow down Valve			80	32000	
E3	West WALL			20	19,180	
E4	VCT - Valve			24	19,433	
E5	ADV Flange			30	12,240	

INSTRUMENT TYPE	SERIAL NO.
Ram	3
RO2A	2049

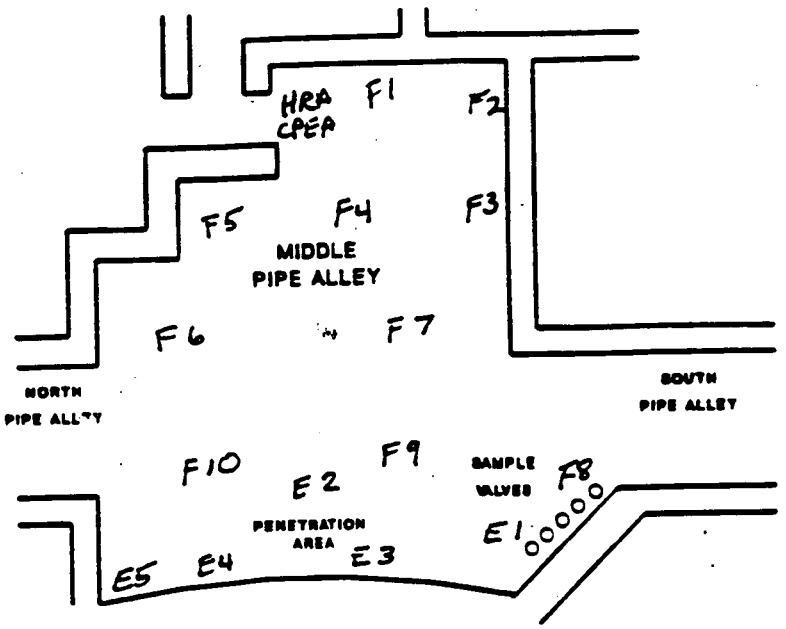
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
S#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70 dpm, DRill Survey Nov 91 0800-0914

90-4168

ROOM OR AREA: MIDDLE PIPE ALLEY SURVEY# Drill RWP#



PERFORMED BY: DATE: TIME:

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			6	80	
F2	↓			8	105	
F3				32	25	
F4				32	15	
F5				20	15	
F6				25	85	
F7				95	105	
F8				120	95	
F9				100	50	
F10	↓			95	55	
E1	Sample Panel			25	390	
E2	Blowdown Valve			190	32000	
E3	West Wall			60	19180	
E4	VCT - Valve			45	19433	
E5	ADV Flange			40	12,290	

INSTRUMENT TYPE	SERIAL NO
Ikna	3
RO2A	2049

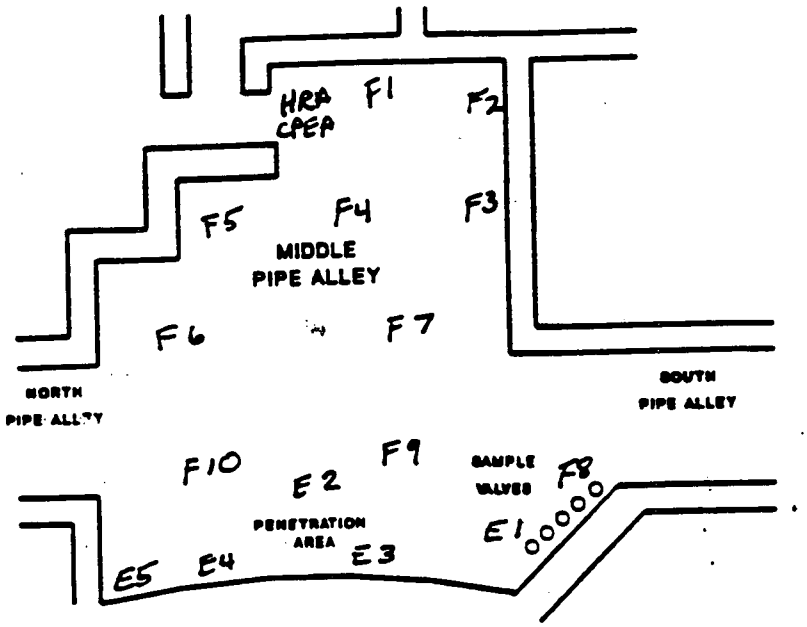
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
B#: Hot Spot Loc.
IC: Internal Contamination

Page: ____ of ____

Comments: NDA = 70 dpm, Drill Survey Nov '91 0915-1115

90-4168

ROOM OR AREA: MIDDLE PIPE ALLEY SURVEY# Drill RWP# _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	FLOOR			9000	80	
F2				9100	105	
F3				9600	25	
F4				9600	15	
F5				9400	15	
F6				10,300	85	
F7				10,400	105	
F8				10,700	95	
F9				11,200	50	
F10				11,100	55	
E1	Sample Panel			10,500	390	
E2	Blowdown Valve			11,200	32000	
E3	West Wall			11,100	19180	
E4	VCT - Valve			11,100	19433	
E5	ADV Flange			10,900	12,290	

INSTRUMENT TYPE	SERIAL NO
Ikna	3
RO2A	2049

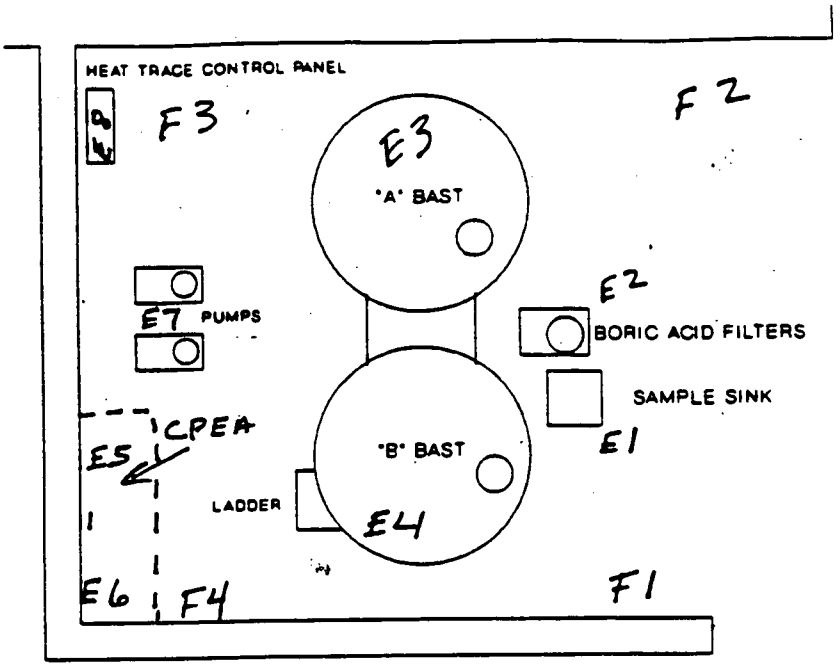
ABBREVIATION KEY
LERA: Locked Bi-Rad Area
ERA: Bi-Rad Area
BCA: Bi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc
IC: Internal Contamination

Page: ____ of ____

Comments: MDA = 70 dpm, Drill Survey Nov '91 1116 - 1300

90-4168

ROOM OR AREA: BORIC ACID TANK AREA SURVEY#: _____ RWP#: _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			2	<MDA	
F2	↓			↓	106	
F3					91	
F4	↓			↓	87	
E1	Sample Sink	5		3	<MDA	
E2	Boric Acid filters			10	6019	
E3	"A" BAST			10	133	
E4	"B" BAST			4	168	
E5	CVCS Piping			4	5600	
E6	↓			4	230	
E7	Pumps			3	141	
E8	Heat trace Panel			2	149	

INSTRUMENT TYPE	SERIAL NO.
RO2A	2049
Jenn	01

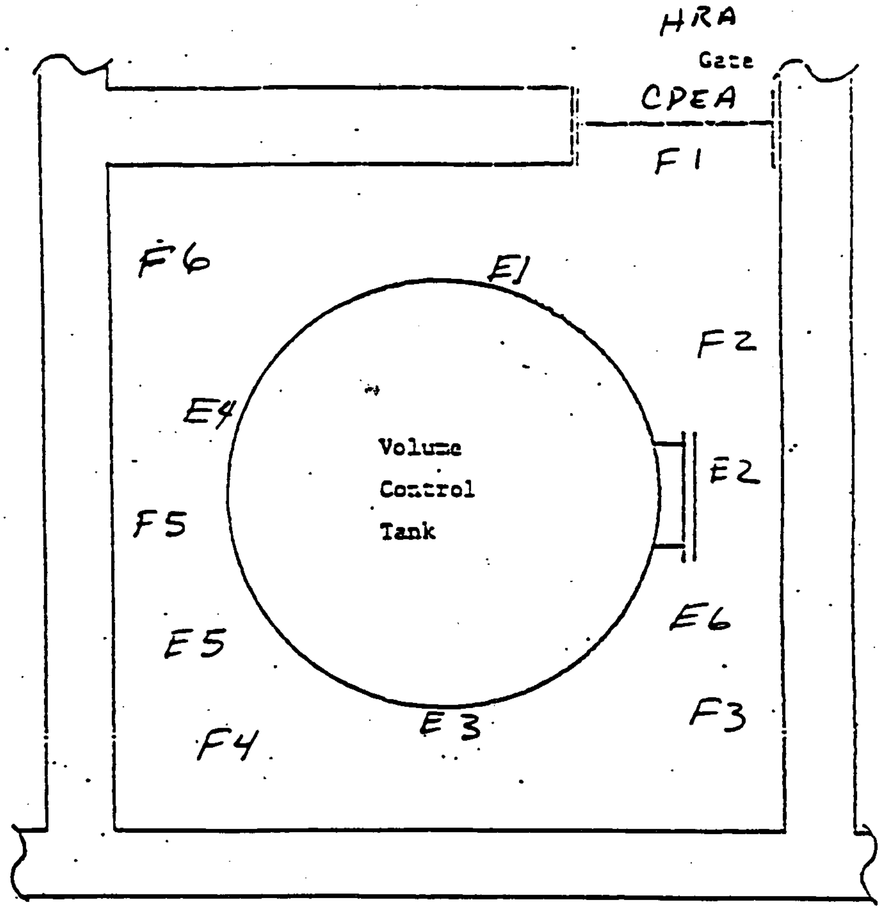
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA - 80 dpm, Drill Survey 11/91 0800 - 1300

90-4168

ROOM OR AREA: Volume Control Tank Room SURVEY #: Drill RWP #: ______



PERFORMED BY: ______ DATE: ______ TIME: ______

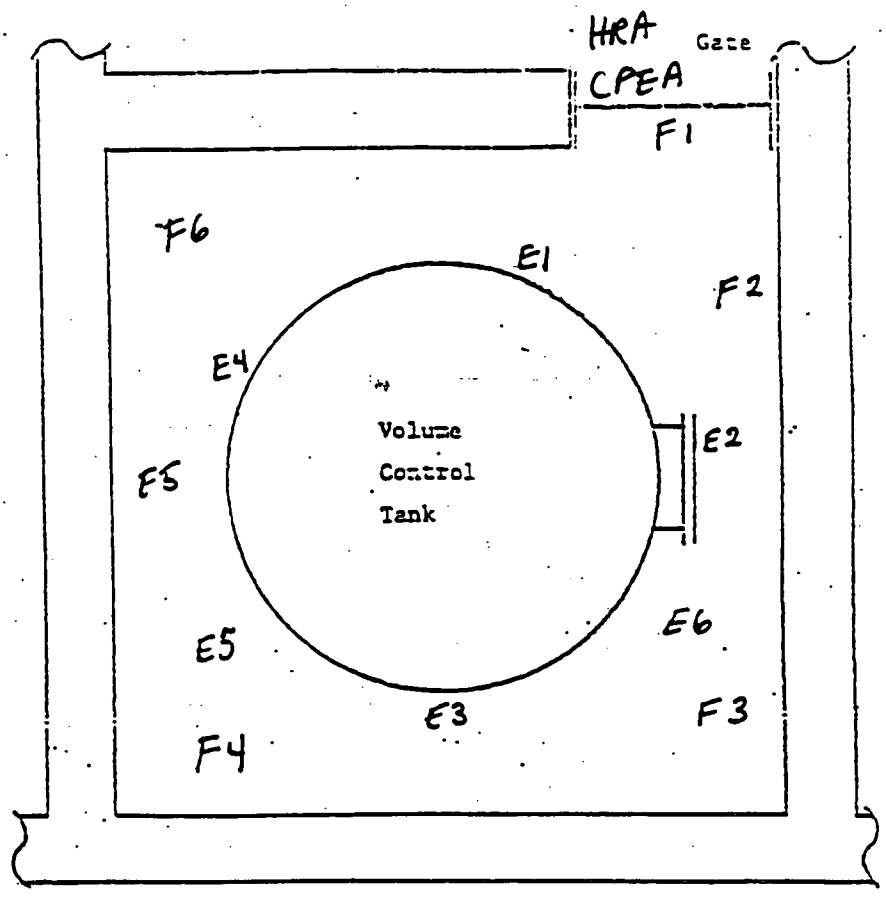
LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
F1	Floor			35	119	
F2	↓			100	188	
F3	↓			100	110	
F4	↓			60	<MDA	
F5	↓			40	81	
F6	↓			40	177	
E1	TANK	20		20	<MDA	
E2	MANWAY	15		15	<MDA	
E3	TANK (BOTTOM)	160		100	500	
E4	↓ ↓	300		150	81	
E5	pipe	100		100	166	
E6	pipe	40		90	223	

COMMENTS: MDA = 70 dpm, Drill Survey 0800-1115

INSTRUMENT TYPE: R02A, Tenn
SERIAL #: 2484, C3

ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off-Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Location
Page: ____ of ____

ROOM OR AREA: Volume Control Tank Room SURVEY #: Drill RWP #: _____



PERFORMED BY: _____ DATE: _____ TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
F1	FLOOR			10,000	119	
F2	↓			10,000	188	
F3				10,000	110	
F4				10,000	<MDA	
F5				10,000	81	
F6	↓			10,000	177	
E1	TANK	15,000		10,000	<MDA	
E2	MANWAY	15,000			<MDA	
E3	TANK (BOTTOM)	15,000			500	
E4	↓ ↓	15,000			81	
E5	PIPE	15,000			166	
E6	PIPE	15,000		↓	223	

COMMENTS: MDA = 70 dPM, Drill Survey 1116 - 1300

INSTRUMENT

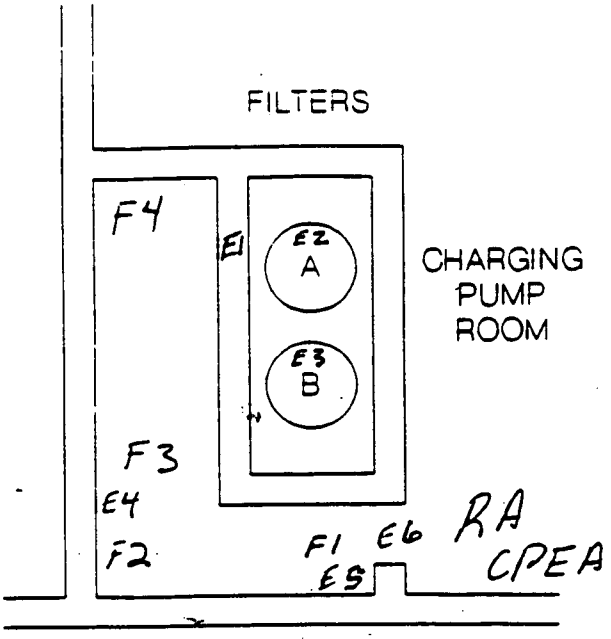
TYPE	SERIAL #
RO2A	2484
Teva	03

ABBREVIATION KEY

LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SDP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Location

Page: ____ of ____

ROOM OR AREA: SEAL WATER INJECTION FILTER AREA SURVEY= DRill RWP= _____



PERFORMED BY: _____ DATE: NOV '91 TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			15	<MDA	
F2	↓			10	84	
F3				5	106	
F4	↓			6	<MDA	
E1	Filter Cubicle wall			20	350	
E2	"A" Filter Housing			120	1347	
E3	"B" Filter Housing			40	1545	
E4	DIPING			5	198	
E5	DRain Pipe			15	100	
E6	Door interior			15	<MDA	

INSTRUMENT TYPE	SERIAL NO.
RO2A	1436
6112B	24303
Teami	04

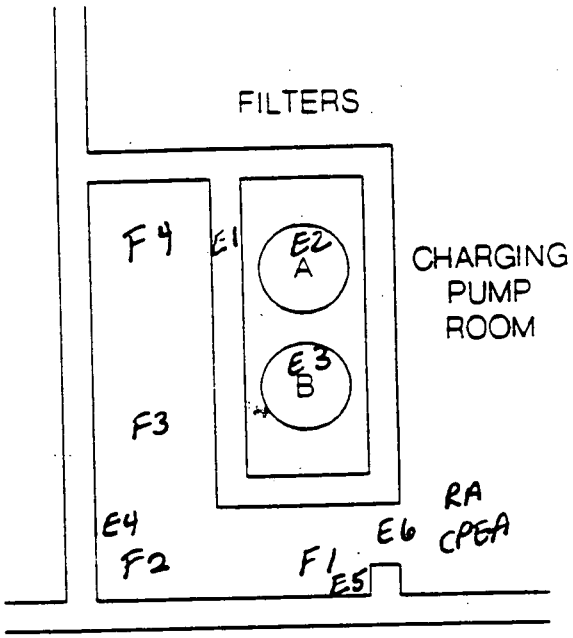
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA= 70 dpm, DRill Survey NOV '91 0800-1115

90-4168

ROOM OR AREA: SEAL WATER INJECTION FILTER AREA SURVEY# Dr. 11 RWP# _____



PERFORMED BY: _____ DATE: Nov '91 TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm²	AIRBORNE MPC FRAC.
F1	Floor			8,000	<MDA	
F2	↓			7500	84	
F3				8100	106	
F4	↓			7900	<MDA	
E1	Filter Cubicle Wall			9100	350	
E2	"A" Filter Housing			NA	1347	
E3	"B" Filter Housing			NA	1545	
E4	Piping			8000	198	
E5	Drain Pipe			9000	100	
E6	Door interior			8000	<MDA	

INSTRUMENT TYPE	SERIAL NO.
RO2A	1436
6112B	24303
Jean	04

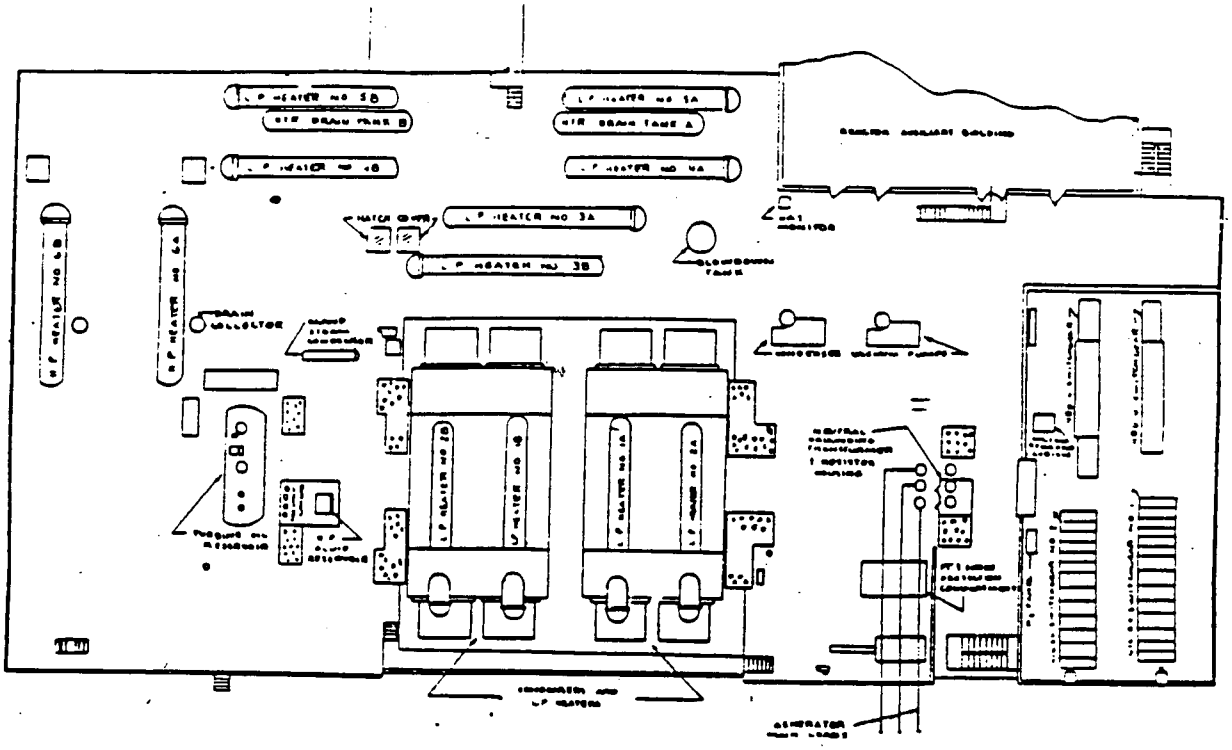
ABBREVIATION KEY
LHRA: Locked Hi-Rad Area
HRA: Hi-Rad Area
HCA: Hi-Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Loc.
IC: Internal Contamination

Page: _____ of _____

Comments: MDA = 70 dpm, Drill Survey Nov '91, 1116-1300

SURVEY MAP & DATA TABLE

ROOM OR AREA: _____ SURVEY #: _____ MAP #: _____



PERFORMED BY: _____ DATE: 11-26-91 TIME: _____

LOCATION	DESCRIPTION	CONTACT mR/HR	CONTACT mrad/HR	18" mR/HR	SMEAR dpm/100cm2	AIRBORNE MPC FRAC.

INSTRUMENT TYPE	SERIAL

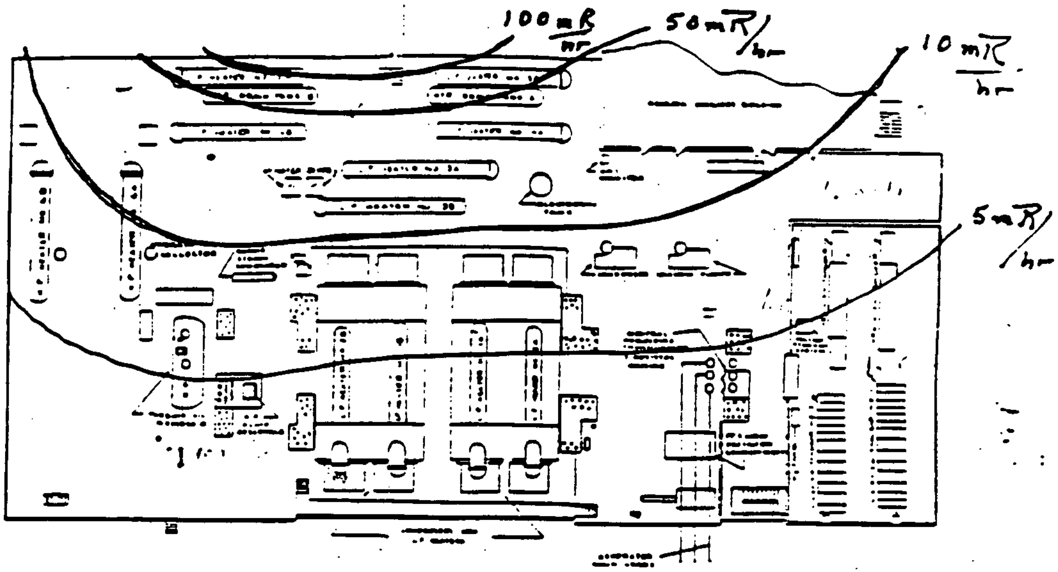
ABBREVIATION LEGEND:
LHRA: Locked Hi-Rad
HRA: Hi-Rad Area
HCA: Hi-Contaminat Area
CA: Contamination
CPEA: Contam. Proce Equip. Area
ARA: Airborne Rad
RA: Rad Area
RMA: Rad Material
SOP: Step-Off Pad
EB: Equip. Locati
FB: Floor Locatio
HS: Hot Spot Loc

Page: ___ of

COMMENTS: _____

0800 -- 1114 All Areas As Read

ROOM OR AREA: ______________________ SURVEY #: ________ Page ___



PERFORMED BY: ______________________ DATE: ________ TIME: ________

LOCA-TION	DESCRIPTION	CONTACT mR/HR	CONTACT mRAD/HR	18" mR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.

INSTRUMENT TYPE	SERIAL

ABBREVIATION KEY

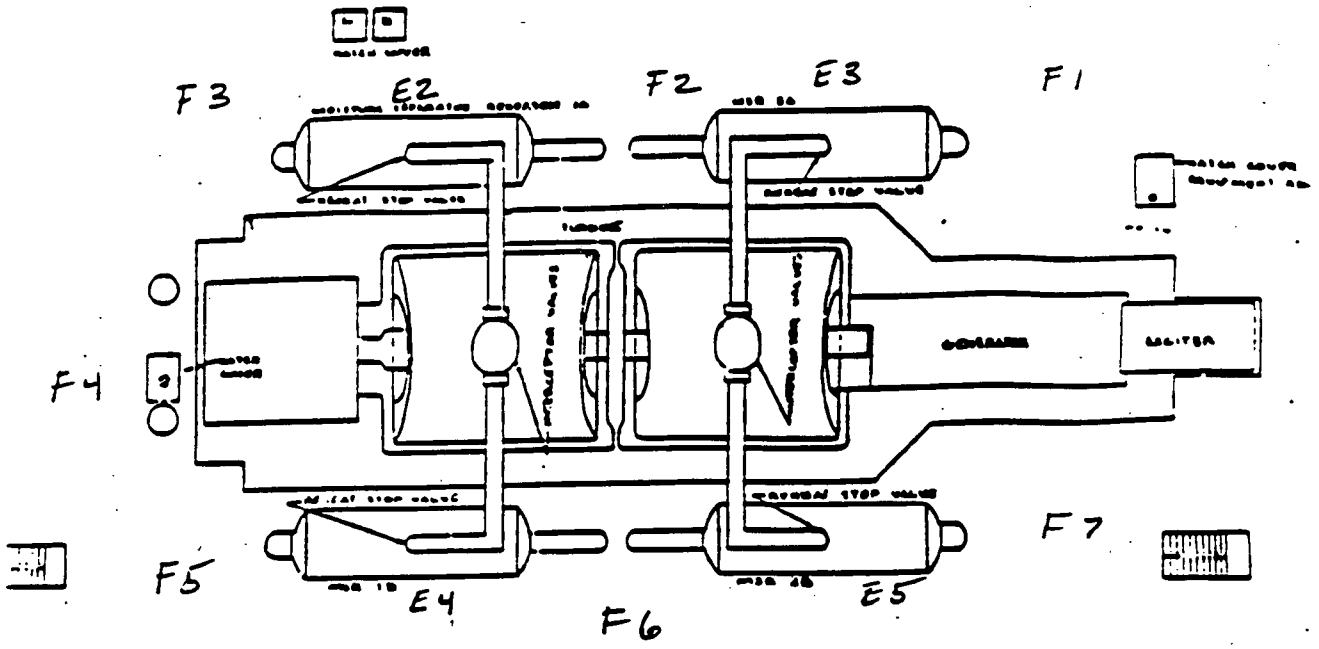
LHRA: Locked High Rad Area
HRA: High Rad Area
HCA: High Contamination Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
EL: Equip. Location
FL: Floor Location
HS: Hot Spot Location

Page: ___ of ___

COMMENTS: ______________________

1115 to Drill Termination

ROOM OR AREA: TURBINE DECK SURVEY: _____ PAGE: _____



PERFORMED BY: _____ DATE: Nov 91 TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
E1	TURBINE DECK			1<2	<MDA	
E2						
E3						
E4						
E5						
F6						
F7						
E1	SG PORVS					
E2	MSR 1A					
E3	MSR 2A					
E4	MSR 1B					
E5	MSR 2B					

INSTRUMENT

TYPE	SERIAL #
RO2A	1436
6112B	241303
Jean	3

ABBREVIATION KEY

- LRA: Locked High Rad Area
- HRA: High Rad Area
- HCA: High Contamination Area
- CA: Contamination Area
- CPEA: Contam. Process Equip. Area
- ARA: Airborne Rad Area
- RA: Rad Area
- RMA: Rad Material Area
- SOP: Step-Off Pad
- E#: Equip. Location
- F#: Floor Location
- H#: Hot Spot Location

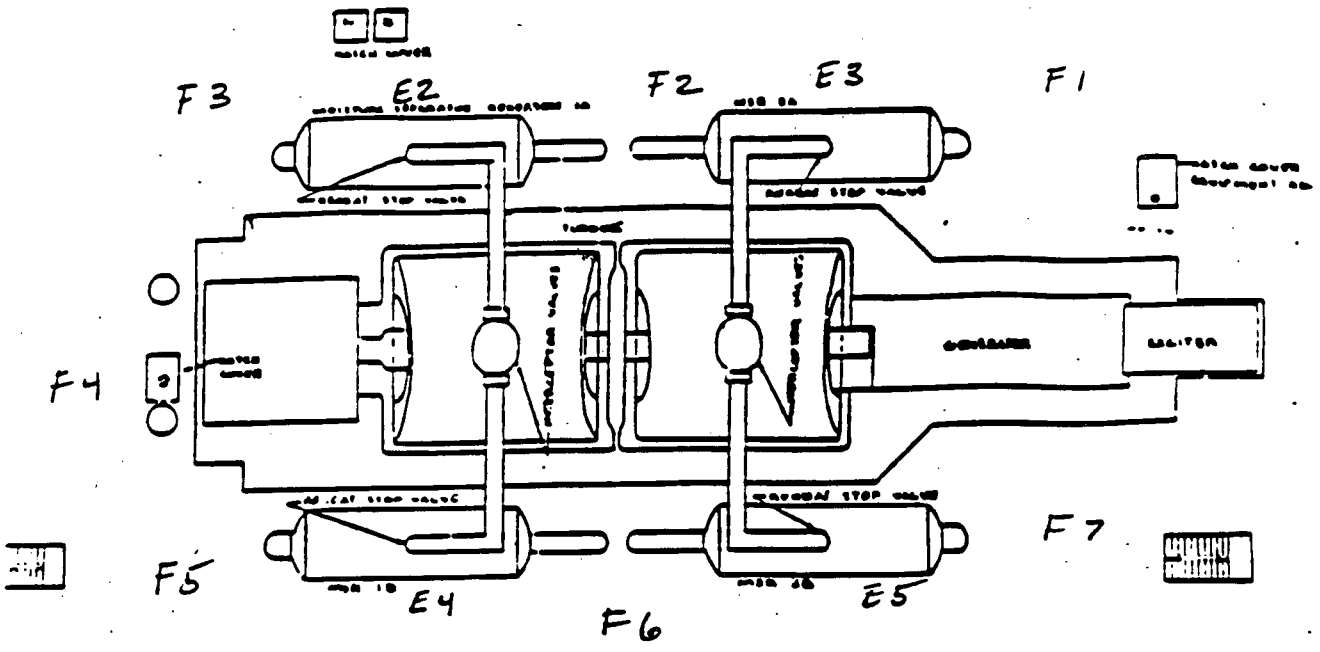
Page: ___ of ___

COMMENTS: MDA = 70 dpm, Drill Survey Nov. '91 0800-1008

FMS:87-5782

ROOM OR AREA: TURBINE DECK SURVEY # _____ MAP # _____

E1



PERFORMED BY: _____ DATE: Nov 91 TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
E1	TURBINE DECK			<2	<MDA	
E2						
E3						
E4						
E5						
E6						
E7						
E1	SG PORVS			10		
E2	MSR 1A			<2		
E3	MSR 2A					
E4	MSR 1B					
E5	MSR 2B					

INSTRUMENT

TYPE	SERIAL #
RO2A	1436
6112B	241303
Ican	3

ABBREVIATION KEY

- LHRA: Locked - High Rad Area
- HRA: High Rad Area
- HCA: High Contaminated Area
- CA: Contamination Area
- CPEA: Contam. Process Equip. Area
- ARA: Airborne Rad Area
- RA: Rad Area
- RMA: Rad Material Area
- SOP: Step-Off Pad
- E#: Equip. Location
- F#: Floor Location
- H#: Hot Spot Location

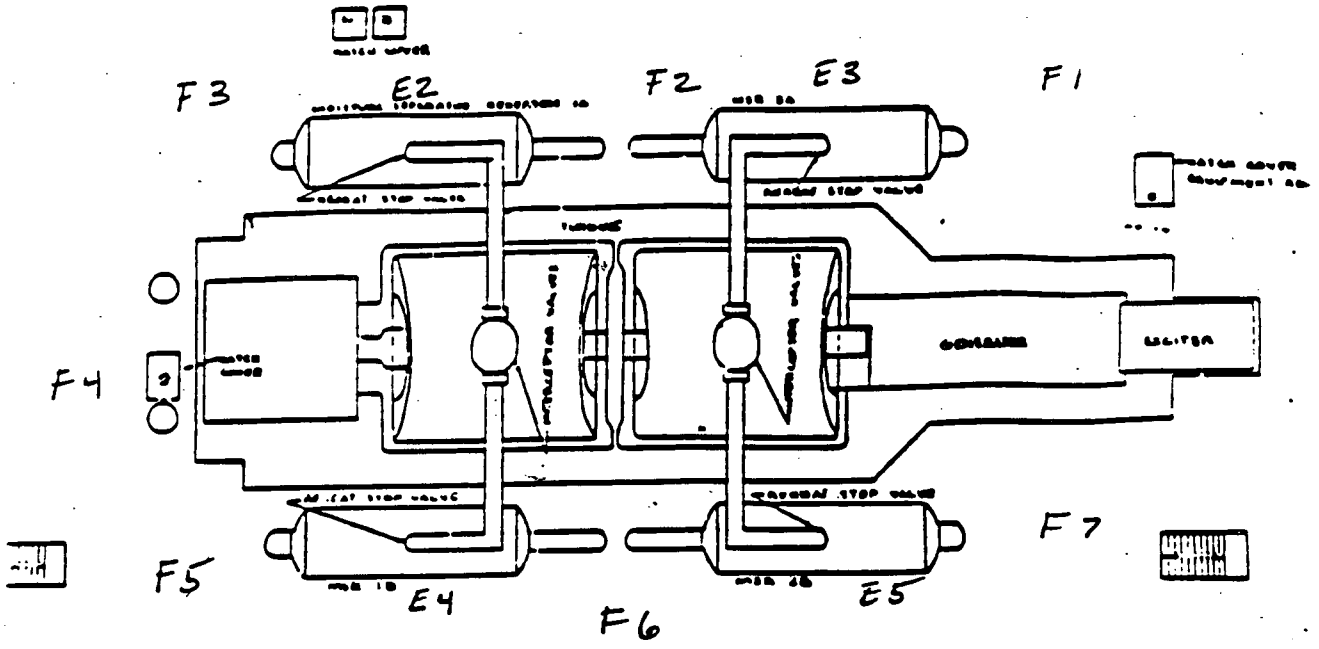
Page: ____ of ____

COMMENTS: MDA = 70 dpm, Daily Survey Nov. '91 1009-1115

FMS:87-5782

ROOM OR AREA: TURBINE DECK SURVEY # _____ MAP # _____

E1



PERFORMED BY: _____ DATE: Nov 91 TIME: _____

LOCATION	DESCRIPTION	CONTACT MR/HR	CONTACT MRAD/HR	18" MR/HR	SMEAR DPM/100cm2	AIRBORNE MPC FRAC.
E1	TURBINE DECK			2	500	
E2	↓			10	2000	
E3				4	750	
E4				<2	<MDA	
E5				↓	↓	
E6				↓	↓	
E7	↓			↓	↓	
E1	SG PORVs			50000	2000	
E2	MSR 1A			4	900	
E3	MSR 2A			4	950	
E4	MSR 1B			<2	<MDA	
E5	MSR 2B			<2	↓	

INSTRUMENT

TYPE	SERIAL #
RO2A	1436
6112B	213203
Jean	3

ABBREVIATION KEY

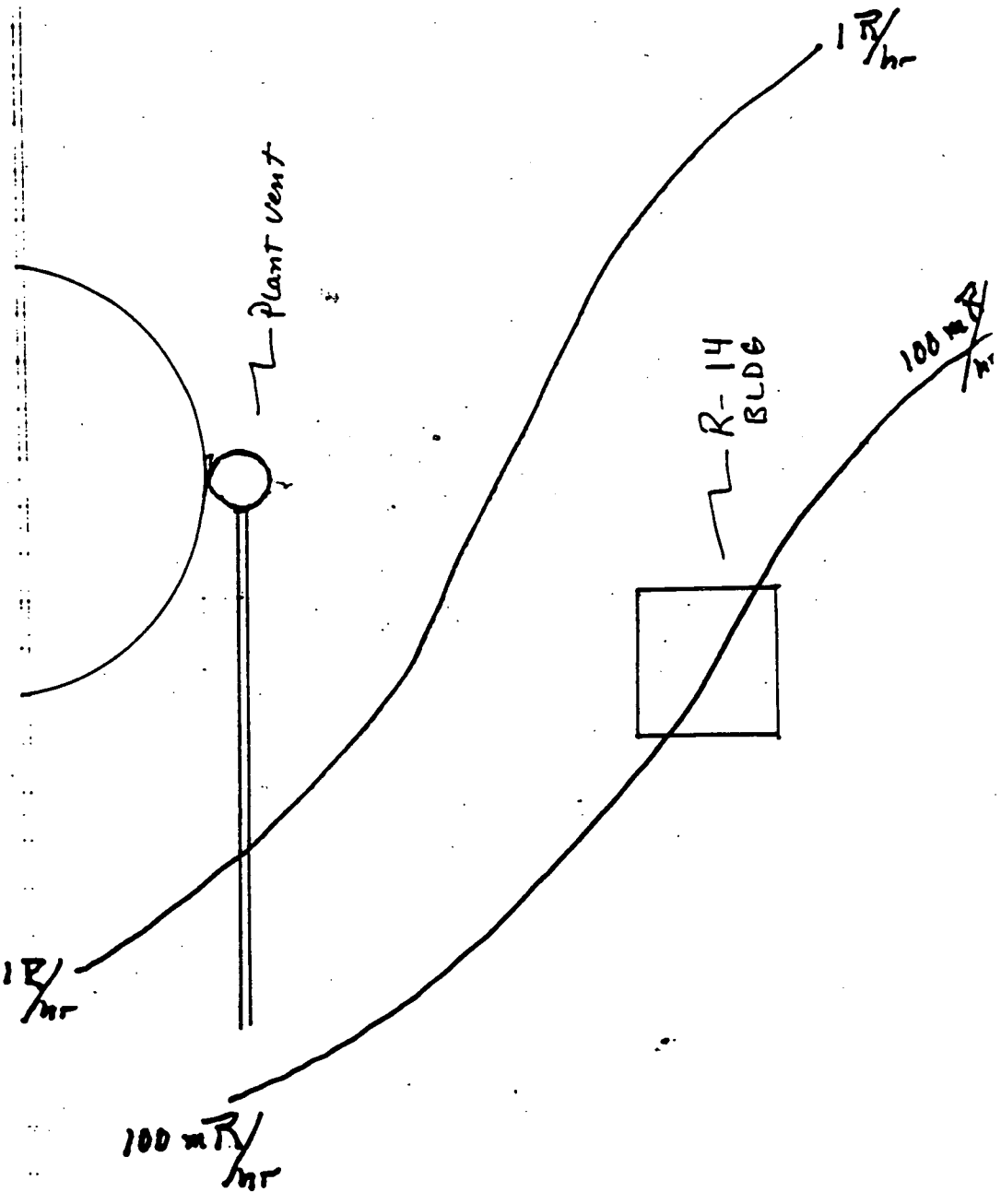
L-RA: Locked - Rad Area
RA: Rad Area
HCA: High Contaminated Area
CA: Contamination Area
CPEA: Contam. Process Equip. Area
ARA: Airborne Rad Area
RA: Rad Area
RMA: Rad Material Area
SOP: Step-Off Pad
E#: Equip. Location
F#: Floor Location
H#: Hot Spot Location

COMMENTS: MDA = 70 dpm, Drum Survey Nov. '91 1116-1300

Page: ____ of ____

FMS:87-5782

1115 to Drill Termination



CAROLINA POWER AND LIGHT COMPANY

ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

3.4C OFFSITE RADIOLOGICAL INFORMATION

SOURCE TERMS		08:30 AM	08:45 AM	09:00 AM	09:15 AM	09:30 AM	09:45 AM	10:00 AM	10:15 AM	10:30 AM	10:45 AM	11:00 AM	11:15 AM	11:30 AM	11:45 AM
SECONDARY RELEASE ACTIVITY	uCi/ml	0.00E+00	0.00E+00	0.00E+00	2.03E-03	3.74E-03	4.96E-03	6.94E-03	7.71E-03	4.44E-03	3.02E-03	2.24E-03	4.24E-04	3.16E+00	5.27E+00
S/G WATER ACTIVITY	uCi/ml	0.00E+00	0.00E+00	0.00E+00	1.05E-03	1.93E-03	2.56E-03	3.58E-03	3.98E-03	2.30E-03	1.57E-03	1.17E-03	2.25E-04	1.92E+00	3.19E+00
S/G BLOWDOWN MONITOR	CPM	0.00E+00	0.00E+00	0.00E+00	1.10E+03	2.02E+03	2.68E+03	3.75E+03	4.16E+03	2.40E+03	1.63E+03	1.21E+03	9.08E+02	6.76E+06	1.13E+07
MAIN STEAM/PORV ACTIVITY	uCi/ml	0.00E+00	0.00E+00	0.00E+00	2.03E-03	3.74E-03	4.96E-03	6.94E-03	7.71E-03	4.44E-03	3.02E-03	2.24E-03	4.24E-04	3.16E+00	5.27E+00
MAIN STEAM MONITOR (MSL ONLY)	mR/hr	0.00E+00	0.00E+00	0.00E+00	2.62E-02	5.00E-02	7.95E-02	9.98E-02	9.92E-02	4.57E-02	2.29E-02	9.99E-03	1.33E-03	2.35E+01	3.74E+01
COND. AIR EJECTOR	CPM	0.00E+00	0.00E+00	0.00E+00	4.34E+03	8.01E+03	1.06E+04	1.49E+04	1.65E+04	1.09E+04	7.23E+03	4.79E+03	3.17E+03	2.10E+03	1.39E+03

MONITORS			ALARM	08:30 AM	08:45 AM	09:00 AM	09:15 AM	09:30 AM	09:45 AM	10:00 AM	10:15 AM	10:30 AM	10:45 AM	11:00 AM	11:15 AM	11:30 AM	11:45 AM
R2	CV LOW RANGE	mR/hr	100	11	11	11	11	11	11	11	11	11	11	11	11	11	21
R4	CHARGING PUMP AREA	mR/hr	50	6	6	6	6	6	6	6	6	6	6	6	6	714	858
R7	IN-CORE INST. AREA	mR/hr	200	8.0	8.0	8.0	8.0	8.0	8.0	7.0	6.0	5.1	4.1	3.1	2.1	1.1	8.9
R9	LETDOWN LINE AREA	mR/hr	3000	70	62	62	62	62	62	62	62	61	61	61	61	7135	8577
R11	CV AIR PART.	CPM	40K	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000
R12	CV AIR GAS	CPM	~2-3K	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
R14A	PLANT VENT PART.	CPM	2000000	700	700	700	844	1109	1460	1951	2495	1889	1487	1221	1045	928	851
R14B	PLANT VENT IODINE	CPM	1400000	20	20	20	30	47	71	104	142	101	74	56	44	36	30
R14C	PLANT VENT GAS LOW	CPM	1500	40	40	40	184	449	800	1291	1836	1229	827	561	385	268	191
R14D	PLANT VENT GAS MID	CPM	136000	10	8	8	8	8	8	8	8	8	8	8	8	8	8
R14E	PLANT VENT GAS HIGH	CPM	150000	10	30	30	30	30	30	30	30	30	30	30	30	30	30
R15	COND. AIR EJECTOR	CPM	1500	15	15	15	4359	8023	10631	14868	16504	10932	7243	4801	3184	2113	1404
R19A	SG "A" BLOWDOWN	CPM	3600	2000	2000	2000	3096	4021	3568	3166	2810	2494	2213	1964	1743	1547	1373
R19B	SG "B" BLOWDOWN	CPM	3700	1000	1000	1000	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000
R19C	SG "C" BLOWDOWN	CPM	3300	1000	1000	1000	1001	1001	1001	1001	1001	1000	1000	1000	1000	1000	1000
R23P	RADWASTE BLDG PART.	CPM	9800	60	60	60	60	60	60	60	60	60	60	60	60	60	60
R23I	RADWASTE BLDG IOD.	CPM	1350	10	10	10	10	10	10	10	10	10	10	10	10	10	10
R23NG	RADWASTE BLDG GAS	CPM	1000	20	20	20	20	20	20	20	20	20	20	20	20	20	20
R31A	MAIN STEAM "A"	mR/hr	12	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	23.8	37.7
R31B	MAIN STEAM "B"	mR/hr	12	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
R31C	MAIN STEAM "C"	mR/hr	12	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
R32A	CV HIGH RANGE	R/hr	10-1000	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R32B	CV HIGH RANGE	R/hr	10-1000	1	1	1	1	1	1	1	1	1	1	1	1	1	1
R33	MONITOR BLDG AREA	mR/hr	100	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35

ROBINSON PROJECT EXERCISE MARCH 1994

		12:00 PM	12:15 PM	12:30 PM	12:45 PM	01:00 PM	01:15 PM	01:30 PM
SOURCE TERMS								
SECONDARY RELEASE ACTIVITY	uCi/ml	8.16E+00	1.03E+01	1.17E+01	1.15E+01	1.12E+01	1.06E+01	1.19E+01
S/G WATER ACTIVITY	uCi/ml	4.93E+00	6.19E+00	7.02E+00	6.86E+00	6.66E+00	6.28E+00	7.04E+00
S/G BLOWDOWN MONITOR	CPM	1.75E+07	2.20E+07	2.50E+07	2.45E+07	2.39E+07	2.26E+07	2.54E+07
MAIN STEAM/PORV ACTIVITY	uCi/ml	8.16E+00	1.03E+01	1.17E+01	1.15E+01	1.12E+01	1.06E+01	1.19E+01
MAIN STEAM MONITOR (MSL ONLY)	mR/hr	4.32E+01	4.43E+01	5.05E+01	5.48E+01	4.82E+01	2.94E+01	2.61E+01
COND. AIR EJECTOR	CPM	9.20E+02	6.09E+02	4.03E+02	2.67E+02	1.77E+02	1.17E+02	7.75E+01

MONITORS			ALARM	12:00 PM	12:15 PM	12:30 PM	12:45 PM	01:00 PM	01:15 PM	01:30 PM
R2	CV LOW RANGE	mR/hr	100	28	37	44	48	48	47	45
R4	CHARGING PUMP AREA	mR/hr	50	923	896	871	835	799	766	741
R7	IN-CORE INST. AREA	mR/hr	200	22.7	44.5	72.2	103.9	134.9	165.1	193.7
R9	LETDOWN LINE AREA	mR/hr	3000	9227	8960	8713	8350	7995	7664	7414
R11	CV AIR PART.	CPM	40K	20000	20000	20000	20000	20000	20000	20000
R12	CV AIR GAS	CPM	~2-3K	1200	1200	1200	1200	1200	1200	1200
R14A	PLANT VENT PART.	CPM	2000000	800	766	744	729	719	713	708
R14B	PLANT VENT IODINE	CPM	1400000	27	25	23	22	21	21	21
R14C	PLANT VENT GAS LOW	CPM	1500	140	106	84	69	59	53	48
R14D	PLANT VENT GAS MID	CPM	136000	8	8	8	8	8	8	8
R14E	PLANT VENT GAS HIGH	CPM	150000	30	30	30	30	30	30	30
R15	COND. AIR EJECTOR	CPM	1500	935	624	418	282	192	132	92
R19A	SG "A" BLOWDOWN	CPM	3600	1218	1081	1000	1000	1000	1000	1000
R19B	SG "B" BLOWDOWN	CPM	3700	1000	1000	1000	1000	1000	1000	1000
R19C	SG "C" BLOWDOWN	CPM	3300	1000	1000	1000	1000	1000	1000	1000
R23P	RADWASTE BLDG PART.	CPM	9800	5	6	7	7	7	6	7
R23I	RADWASTE BLDG IOD.	CPM	1350	1	1	1	1	1	1	1
R23NG	RADWASTE BLDG GAS	CPM	1000	2	2	2	2	2	2	2
R31A	MAIN STEAM "A"	mR/hr	12	43.5	44.6	50.8	55.1	48.5	29.7	26.4
R31B	MAIN STEAM "B"	mR/hr	12	0.4	0.4	0.4	0.4	0.4	0.4	0.4
R31C	MAIN STEAM "C"	mR/hr	12	0.6	0.6	0.6	0.6	0.6	0.6	0.6
R32A	CV HIGH RANGE	R/hr	10-1000	1	1	1	1	1	1	1
R32B	CV HIGH RANGE	R/hr	10-1000	1	1	1	1	1	1	1
R33	MONITOR BLDG AREA	mR/hr	100	0.35	0.35	0.35	0.35	0.35	0.35	0.35

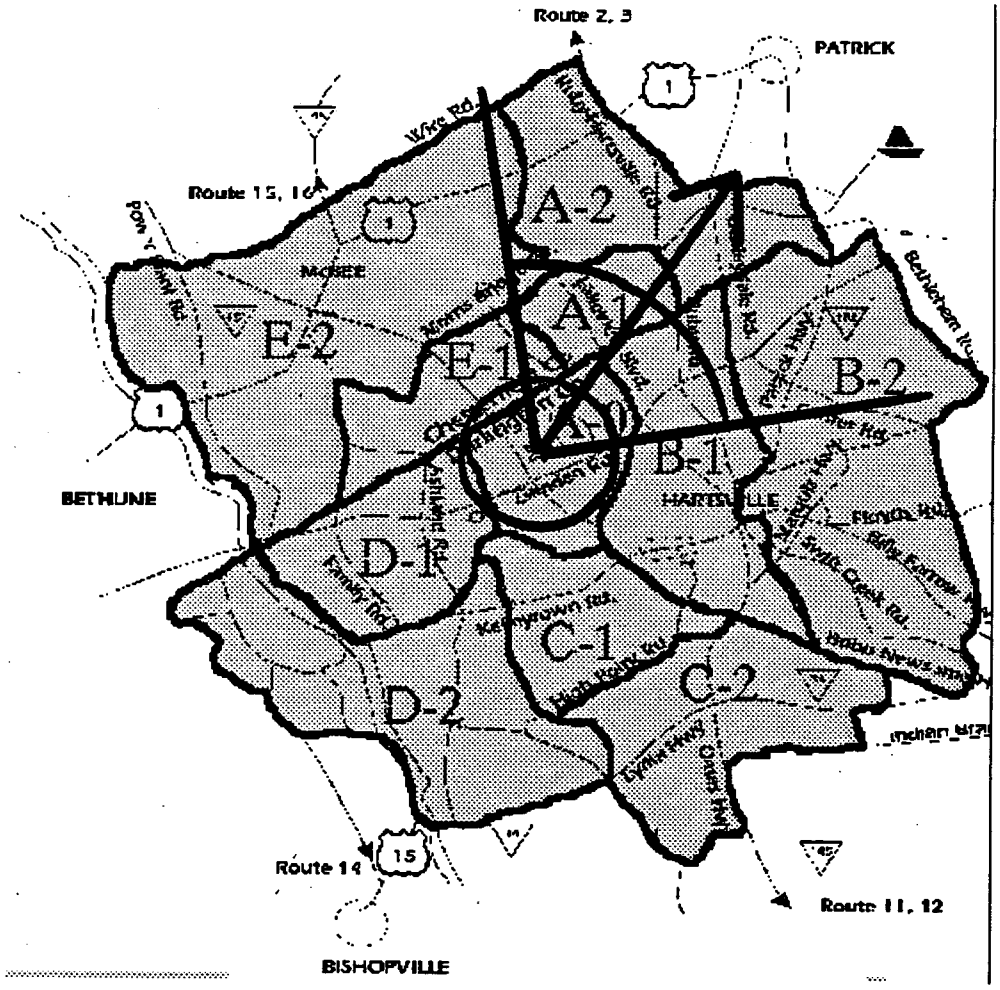
ROBINSON PROJECT EXERCISE MARCH 1994 SOURCE TERM

	08:30 AM	09:15 AM	09:30 AM	09:45 AM	10:00 AM	10:15 AM	10:30 AM	10:45 AM	11:00 AM	11:15 AM	11:30 AM	11:45 AM	12:00 PM	12:15 PM	12:30 PM
NG RELEASE RATE (CI/SEC)	0.00E+00	1.44E-04	2.65E-04	3.51E-04	4.91E-04	1.17E-02	5.36E-03	2.71E-03	7.95E-03	1.04E-03	7.36E+00	8.49E+00	9.76E+00	9.63E+00	1.55E+01
I RELEASE RATE (CI/SEC)	0.00E+00	9.60E-06	1.77E-05	2.35E-05	3.28E-05	1.38E-04	6.58E-05	3.99E-05	1.04E-04	1.90E-05	1.16E+00	1.39E+00	1.66E+00	1.71E+00	2.55E+00
PART RELEASE RATE	0.00E+00	1.44E-04	2.65E-04	3.51E-04	4.91E-04	6.56E-04	2.58E-04	1.66E-04	1.82E-04	2.95E-05	7.98E-02	1.17E-01	1.67E-01	2.00E-01	2.46E-01

ROBINSON PROJECT EXERCISE MARCH 1994 SOURCE TERM

	08:30 AM	12:45 PM	01:00 PM	01:15 PM	01:30 PM
NG RELEASE RATE (CI/SEC)	0.00E+00	1.67E+01	1.49E+01	8.57E+00	7.16E+00
I RELEASE RATE (CI/SEC)	0.00E+00	2.69E+00	2.41E+00	1.52E+00	1.37E+00
PART RELEASE RATE	0.00E+00	2.47E-01	2.36E-01	2.01E-01	2.16E-01

Robinson



WIND DIR.
216 degrees

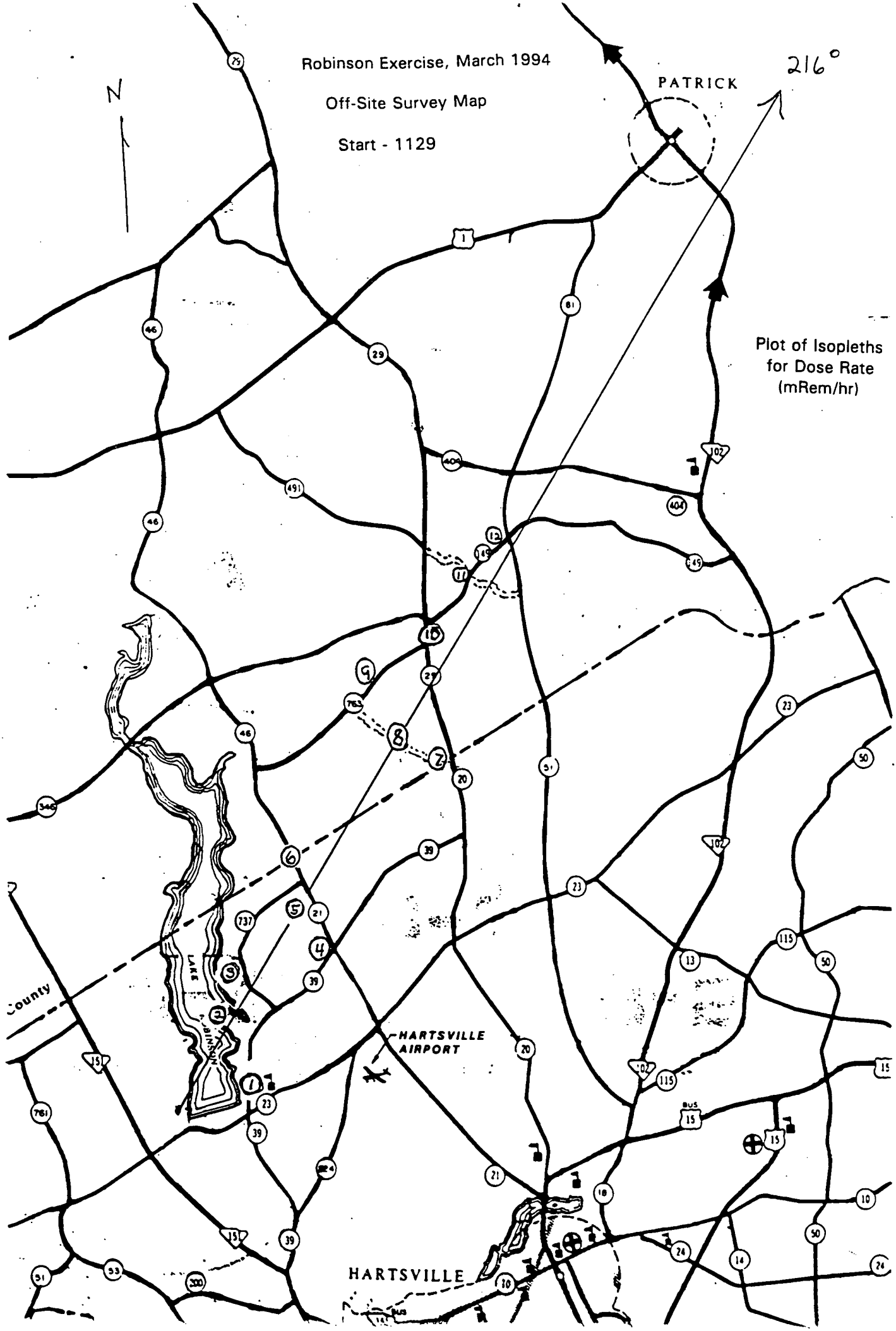
EXIT

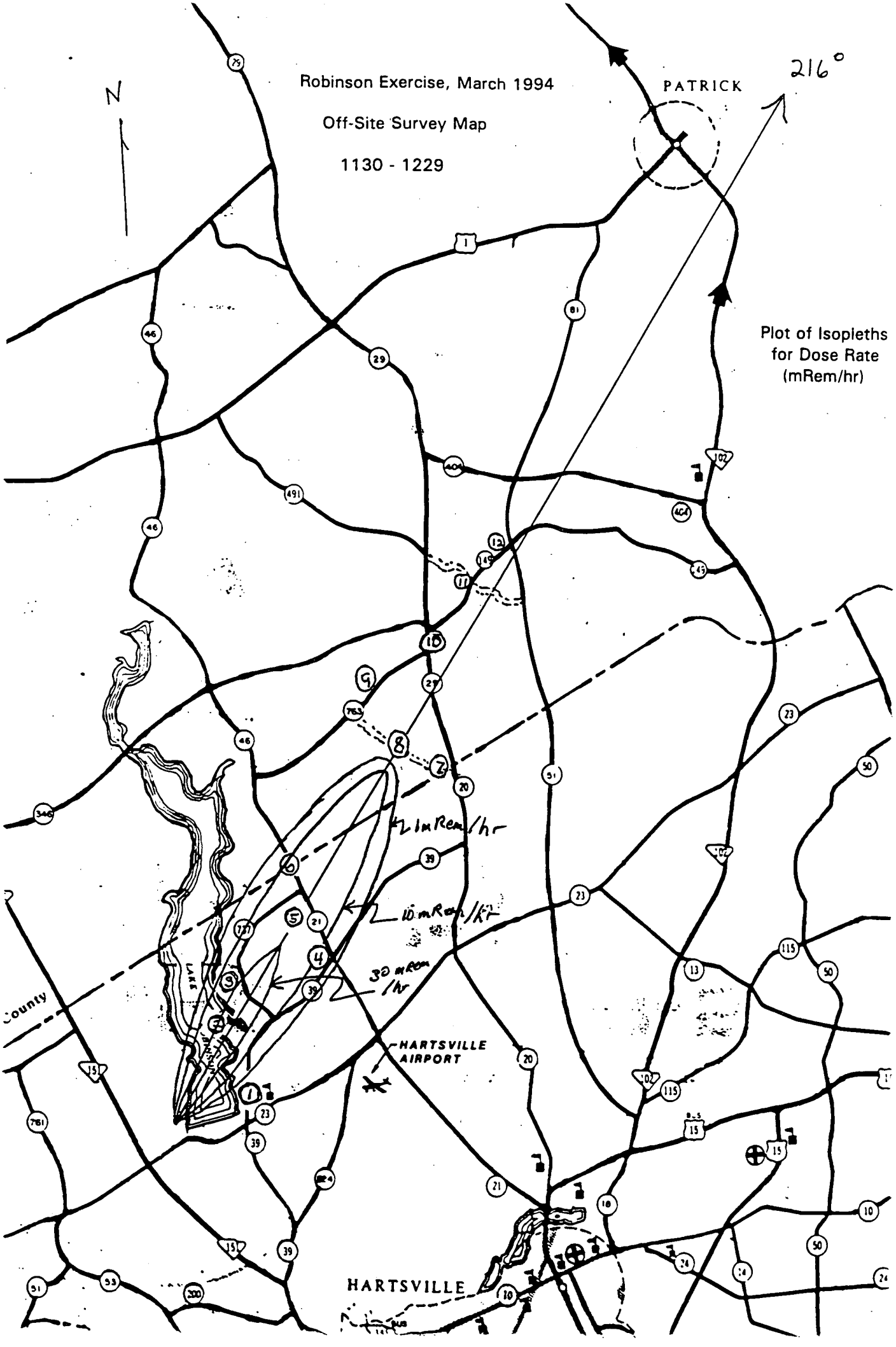
1130 EST

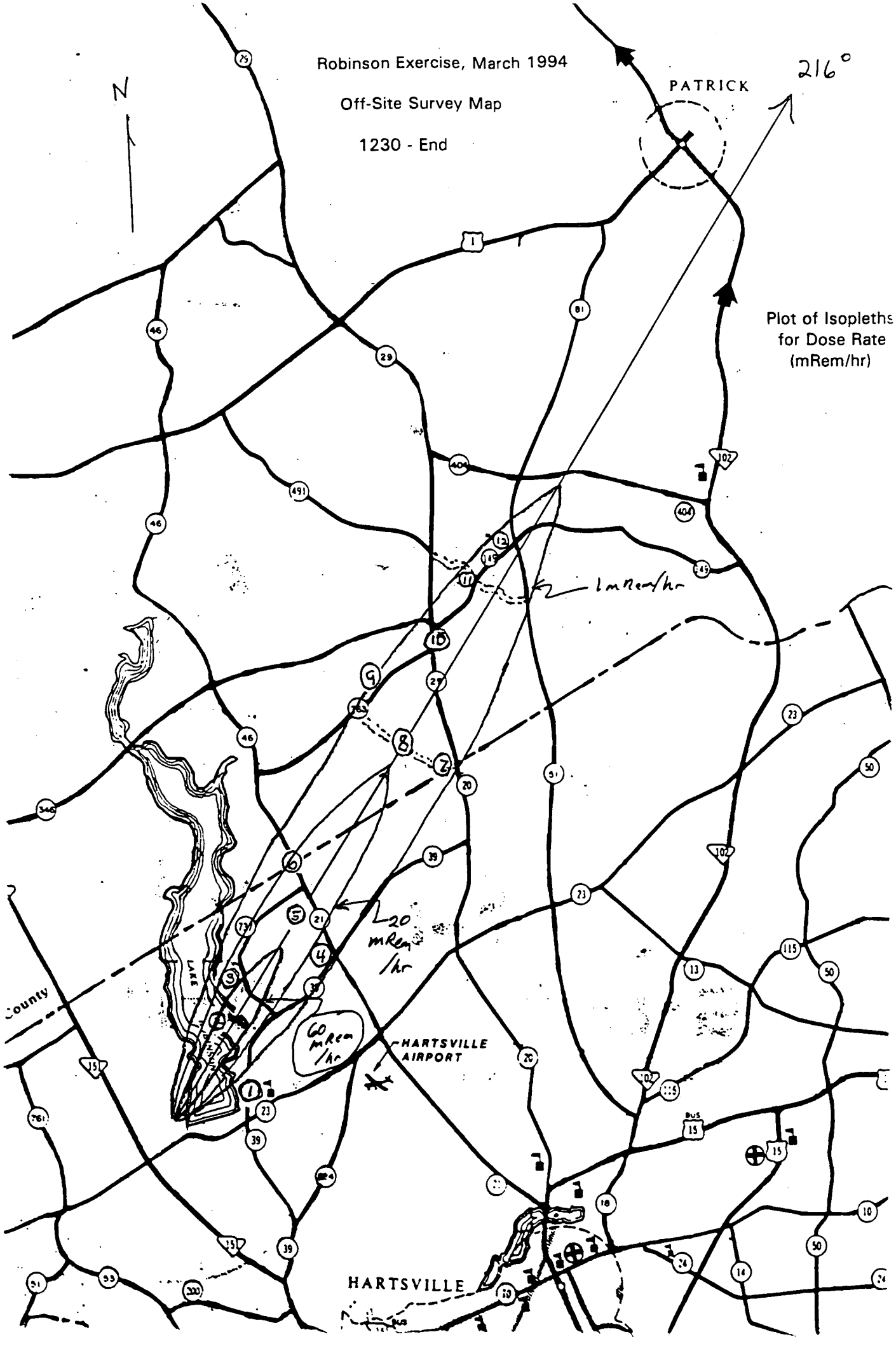
ROBINSON ANNUAL EXERCISE
03/31/94

Sampling Points

#	Description	Distance (Downwind)	Degrees (From Plume)
1.	Johnson's Landing	0.7	32
2.	Atkinson's Landing	1.21	16.5
3.	Easterling's Landing where gas line crosses	1.77	0
4.	Grantham's Crossroads	2.73	12.5
5.	Secondary Road 21 @ plume centerline	3.16	0
6.	County line on Secondary Road 21	3.38	5.5
7.	Secondary Road 20	5.36	8.0
8.	Dirt road at plume centerline	5.42	0
9.	Prospect Church on Secondary Road 763	5.87	4.0
10.	Beaver Dam Creek Bridge on Secondary Road 29 (Chesterfield Co.)	6.58	1.0
11.	On dirt road near the intersection with Secondary Road 29 (Chesterfield Co.)	7.43	0
12.	Ousleydale Baptist Church Secondary Road 149 (Chesterfield Co.)	8.02	0


Robinson Exercise, March 1994
Off-Site Survey Map
Start - 1129
N
PATRICK
216°
Plot of Isopleths for Dose Rate (mRem/hr)
HARTSVILLE AIRPORT
HARTSVILLE
LAKE
County


Robinson Exercise, March 1994
Off-Site Survey Map
1130 - 1229
N
PATRICK
216°
Plot of Isopleths for Dose Rate (mRem/hr)
1 mRem/hr
10 mRem/hr
30 mRem/hr
HARTSVILLE AIRPORT
HARTSVILLE
LAKE
County


Robinson Exercise, March 1994
Off-Site Survey Map
1230 - End
N
PATRICK
216°
Plot of Isopleths
for Dose Rate
(mRem/hr)
1 mRem/hr
20 mRem/hr
60 mRem/hr
HARTSVILLE AIRPORT
HARTSVILLE
LAKE
County

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

02/01/94 11:43 AM SHEET 1

TIME: 08:30 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE	IODINE AIRBORNE	PART AIRBORNE	IODINE SURFACE	IODINE VEGETAT'N	PARTIC VEG	TLD DOSE
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	HP-210 cpm/cfm SAMPLE	HP-210 cpm/cfm SAMPLE	HP-210 mR/hr contact	uCi/cc	uCi/cc	uCi/m^2	pCi/g	pCi/g	mRem
1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 08:45 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:43 AM SHEET 2

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.0	0.0	0	0.0	0.0	0.0
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.0	0
3	0.0	0.0	0
4	0.0	0.0	0
5	0.0	0.0	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
2	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
3	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
4	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
5	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
6	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 09:00 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:43 AM SHEET 3

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.0	0.0	0	0.0	0.0	0.0
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.0	0
3	0.0	0.0	0
4	0.0	0.0	0
5	0.0	0.0	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
2	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
3	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
4	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
5	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
6	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 09:15 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:44 AM SHEET 4

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.0	0.1	0	0.0	0.1	0.1
2	0	0.0	0.0	0.0	0	0.0	0.0	0.0
3	0	0.0	0.0	0.0	0	0.0	0.0	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.0	0
3	0.0	0.0	0
4	0.0	0.0	0
5	0.0	0.0	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	6.65E-14	9.95E-11	0.00	0.00E+00	0.00E+00	0.0
2	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
3	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
4	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
5	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
6	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 09:30 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:44 AM SHEET 5

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.1	0.1	0	0.0	0.1	0.1
2	0	0.0	0.2	0.2	0	0.0	0.2	0.3
3	0	0.0	0.5	0.6	0	0.0	0.6	0.8
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0
5	0	0.0	0.0	0.0	0	0.0	0.0	0.0
6	0	0.0	0.0	0.0	0	0.0	0.0	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.0	0
3	0.0	0.1	0
4	0.0	0.0	0
5	0.0	0.0	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.23E-13	1.83E-10	0.00	1.99E-06	2.99E-01	0.0
2	2.99E-13	4.47E-10	0.00	0.00E+00	0.00E+00	0.0
3	7.87E-13	1.18E-09	0.00	0.00E+00	0.00E+00	0.0
4	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
5	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
6	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 09:45 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF SITE LABORATORY DATA				
									IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE	IODINE AIRBORNE	PART AIRBORNE	IODINE SURFACE	IODINE VEGETAT'N	PARTIC VEG	TLD DOSE
	Dose Rate	Dose Rate	LUD-19	HP-210	Dose Rate	Dose Rate	LUD-19	HP-210	HP-210	HP-210	HP-210						
SAMPLE POINT	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	CW mR/hr	OW mR/hr	D/R uR/hr	C/R cpm	cpm/cfm SAMPLE	cpm/cfm SAMPLE	mR/hr contact	uCi/cc	uCi/cc	uCi/m^2	pCi/g	pCi/g	mRem
1	0	0.0	0.1	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.62E-13	2.43E-10	0.00	5.67E-06	8.49E-01	0.0
2	0	0.0	0.4	0.5	0	0.0	0.5	0.6	0.0	0.1	0	5.51E-13	8.25E-10	0.00	8.97E-06	1.34E+00	0.0
3	0	0.0	1.1	1.3	0	0.0	1.3	1.6	0.0	0.2	0	1.45E-12	2.17E-09	0.00	2.36E-05	3.53E+00	0.0
4	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	4.81E-14	7.20E-11	0.00	0.00E+00	0.00E+00	0.0
5	0	0.0	0.2	0.3	0	0.0	0.3	0.3	0.0	0.0	0	3.24E-13	4.86E-10	0.00	0.00E+00	0.00E+00	0.0
6	0	0.0	0.1	0.1	0	0.0	0.1	0.2	0.0	0.0	0	1.72E-13	2.58E-10	0.00	0.00E+00	0.00E+00	0.0
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 10:00 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:44 AM SHEET 7

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.2	0.3	0	0.0	0.2	0.3
2	0	0.0	0.6	0.8	0	0.0	0.7	0.9
3	0	0.0	1.7	2.0	0	0.0	2.0	2.3
4	0	0.0	0.1	0.1	0	0.0	0.1	0.1
5	0	0.0	0.5	0.5	0	0.0	0.5	0.7
6	0	0.0	0.2	0.3	0	0.0	0.3	0.3
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.0	0.0	0	0.0	0.0	0.0
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.1	0
3	0.0	0.3	0
4	0.0	0.0	0
5	0.0	0.1	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	2.27E-13	3.40E-10	0.00	1.05E-05	1.58E+00	0.0
2	7.30E-13	1.09E-09	0.00	2.55E-05	3.82E+00	0.0
3	1.92E-12	2.88E-09	0.00	6.71E-05	1.01E+01	0.0
4	8.86E-14	1.33E-10	0.00	1.44E-06	2.16E-01	0.0
5	5.98E-13	8.95E-10	0.00	9.73E-06	1.46E+00	0.0
6	3.17E-13	4.75E-10	0.00	5.16E-06	7.73E-01	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 10:15 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	2.9	3.5	0	0.0	3.7	4.5
2	0	0.0	0.9	1.1	0	0.0	1.1	1.3
3	0	0.0	2.5	3.0	0	0.0	2.9	3.5
4	0	0.0	0.1	0.1	0	0.0	0.1	0.1
5	0	0.0	0.7	0.8	0	0.0	0.8	1.0
6	0	0.0	0.4	0.4	0	0.0	0.4	0.5
7	0	0.0	0.0	0.0	0	0.0	0.0	0.0
8	0	0.0	0.1	0.1	0	0.0	0.1	0.1
9	0	0.0	0.0	0.0	0	0.0	0.0	0.0
10	0	0.0	0.0	0.0	0	0.0	0.0	0.0
11	0	0.0	0.0	0.0	0	0.0	0.0	0.0
12	0	0.0	0.0	0.0	0	0.0	0.0	0.0

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.2	0
3	0.0	0.4	0
4	0.0	0.0	0
5	0.0	0.1	0
6	0.0	0.1	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	9.57E-13	4.54E-10	0.00	1.74E-05	2.60E+00	0.0
2	1.02E-12	1.53E-09	0.00	4.74E-05	7.10E+00	0.0
3	2.69E-12	4.03E-09	0.00	1.25E-04	1.87E+01	0.0
4	1.18E-13	1.76E-10	0.00	4.10E-06	6.14E-01	0.0
5	7.93E-13	1.19E-09	0.00	2.77E-05	4.14E+00	0.0
6	4.21E-13	6.30E-10	0.00	1.47E-05	2.20E+00	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	1.35E-13	2.03E-10	0.00	0.00E+00	0.00E+00	0.0
9	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
11	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
12	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 10:30 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	1.4	1.7	0	0.0	1.8	2.2
2	0	0.0	13.1	15.7	0	0.0	16.8	20.1
3	0	0.1	34.4	41.2	0	0.1	44.2	53.0
4	0	0.0	0.2	0.2	0	0.0	0.2	0.2
5	0	0.0	1.0	1.2	0	0.0	1.2	1.4
6	0	0.0	0.5	0.7	0	0.0	0.6	0.8
7	0	0.0	0.0	0.0	0	0.0	0.1	0.1
8	0	0.0	0.2	0.2	0	0.0	0.2	0.3
9	0	0.0	0.0	0.1	0	0.0	0.1	0.1
10	0	0.0	0.1	0.1	0	0.0	0.1	0.1
11	0	0.0	0.1	0.1	0	0.0	0.1	0.1
12	0	0.0	0.0	0.1	0	0.0	0.1	0.1

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.2	0
3	0.0	0.5	0
4	0.0	0.0	0
5	0.0	0.2	0
6	0.0	0.1	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	4.56E-13	1.79E-10	0.00	4.61E-05	3.96E+00	0.0
2	4.30E-12	2.04E-09	0.00	7.81E-05	1.17E+01	0.0
3	1.13E-11	5.38E-09	0.00	2.06E-04	3.08E+01	0.0
4	1.64E-13	2.46E-10	0.00	7.63E-06	1.14E+00	0.0
5	1.11E-12	1.66E-09	0.00	5.15E-05	7.70E+00	0.0
6	5.88E-13	8.81E-10	0.00	2.73E-05	4.09E+00	0.0
7	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
8	2.49E-13	3.73E-10	0.00	4.06E-06	6.08E-01	0.0
9	7.18E-14	1.07E-10	0.00	0.00E+00	0.00E+00	0.0
10	9.36E-14	1.40E-10	0.00	0.00E+00	0.00E+00	0.0
11	8.06E-14	1.21E-10	0.00	0.00E+00	0.00E+00	0.0
12	7.07E-14	1.06E-10	0.00	0.00E+00	0.00E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 10:45 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:45 AM SHEET 10

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.8	1.0	0	0.0	1.0	1.2
2	0	0.0	6.4	7.7	0	0.0	8.1	9.7
3	0	0.0	16.9	20.3	0	0.0	21.4	25.7
4	0	0.0	2.1	2.5	0	0.0	2.7	3.2
5	0	0.0	14.2	17.0	0	0.0	18.2	21.8
6	0	0.0	7.5	9.0	0	0.0	9.7	11.6
7	0	0.0	0.9	1.1	0	0.0	1.2	1.4
8	0	0.0	0.3	0.3	0	0.0	0.3	0.4
9	0	0.0	0.1	0.1	0	0.0	0.1	0.1
10	0	0.0	0.1	0.2	0	0.0	0.2	0.2
11	0	0.0	0.1	0.1	0	0.0	0.1	0.2
12	0	0.0	0.1	0.1	0	0.0	0.1	0.1

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.1	0
3	0.0	0.2	0
4	0.0	0.0	0
5	0.0	0.2	0
6	0.0	0.1	0
7	0.0	0.0	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	2.76E-13	1.15E-10	0.00	5.97E-05	4.50E+00	0.0
2	2.05E-12	8.05E-10	0.00	2.07E-04	1.78E+01	0.0
3	5.40E-12	2.12E-09	0.00	5.45E-04	4.69E+01	0.0
4	6.92E-13	3.29E-10	0.00	1.26E-05	1.88E+00	0.0
5	4.67E-12	2.22E-09	0.00	8.47E-05	1.27E+01	0.0
6	2.48E-12	1.18E-09	0.00	4.49E-05	6.73E+00	0.0
7	2.15E-13	2.41E-11	0.00	0.00E+00	0.00E+00	0.0
8	3.31E-13	4.95E-10	0.00	1.15E-05	1.73E+00	0.0
9	1.32E-13	1.98E-10	0.00	2.15E-06	3.22E-01	0.0
10	1.73E-13	2.58E-10	0.00	2.81E-06	4.20E-01	0.0
11	1.49E-13	2.23E-10	0.00	2.42E-06	3.62E-01	0.0
12	1.30E-13	1.95E-10	0.00	2.12E-06	3.18E-01	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 11:00 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	2.1	2.5	0	0.0	2.6	3.1
2	0	0.0	3.7	4.4	0	0.0	4.5	5.4
3	0	0.0	9.7	11.6	0	0.0	11.9	14.3
4	0	0.0	1.0	1.2	0	0.0	1.3	1.6
5	0	0.0	7.0	8.4	0	0.0	8.8	10.6
6	0	0.0	3.7	4.4	0	0.0	4.7	5.6
7	0	0.0	0.4	0.5	0	0.0	0.6	0.7
8	0	0.0	0.4	0.5	0	0.0	0.5	0.6
9	0	0.0	0.2	0.2	0	0.0	0.2	0.2
10	0	0.0	0.2	0.2	0	0.0	0.2	0.3
11	0	0.0	0.2	0.2	0	0.0	0.2	0.2
12	0	0.0	0.1	0.2	0	0.0	0.2	0.2

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.1	0
3	0.0	0.1	0
4	0.0	0.0	0
5	0.0	0.1	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.1	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	7.21E-13	1.26E-10	0.00	6.80E-05	4.84E+00	0.0
2	1.24E-12	5.17E-10	0.00	2.69E-04	2.02E+01	0.0
3	3.27E-12	1.36E-09	0.00	7.07E-04	5.33E+01	0.0
4	3.30E-13	1.29E-10	0.00	3.33E-05	2.87E+00	0.0
5	2.23E-12	8.74E-10	0.00	2.25E-04	1.93E+01	0.0
6	1.18E-12	4.63E-10	0.00	1.19E-04	1.03E+01	0.0
7	1.29E-13	1.34E-11	0.00	6.44E-06	7.24E-02	0.0
8	4.63E-13	6.93E-10	0.00	2.15E-05	3.21E+00	0.0
9	1.75E-13	2.63E-10	0.00	6.12E-06	9.17E-01	0.0
10	2.29E-13	3.42E-10	0.00	7.98E-06	1.20E+00	0.0
11	1.97E-13	2.95E-10	0.00	6.88E-06	1.03E+00	0.0
12	1.73E-13	2.59E-10	0.00	6.03E-06	9.03E-01	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 11:15 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	0	0.0	0.4	0.5	0	0.0	0.5	0.6
2	0	0.0	9.3	11.1	0	0.0	11.8	14.2
3	0	0.0	24.4	29.3	0	0.0	31.1	37.3
4	0	0.0	0.6	0.7	0	0.0	0.7	0.9
5	0	0.0	4.0	4.8	0	0.0	4.9	5.9
6	0	0.0	2.1	2.5	0	0.0	2.6	3.1
7	0	0.0	0.2	0.3	0	0.0	0.3	0.3
8	0	0.0	5.9	7.1	0	0.0	7.6	9.1
9	0	0.0	0.2	0.3	0	0.0	0.3	0.3
10	0	0.0	0.3	0.4	0	0.0	0.3	0.4
11	0	0.0	0.3	0.3	0	0.0	0.3	0.4
12	0	0.0	0.2	0.3	0	0.0	0.3	0.3

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	0.0	0.0	0
2	0.0	0.1	0
3	0.0	0.1	0
4	0.0	0.0	0
5	0.0	0.1	0
6	0.0	0.0	0
7	0.0	0.0	0
8	0.0	0.1	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.32E-13	2.04E-11	0.00	8.96E-05	5.22E+00	0.0
2	3.24E-12	5.67E-10	0.00	3.06E-04	2.18E+01	0.0
3	8.53E-12	1.49E-09	0.00	8.05E-04	5.74E+01	0.0
4	2.00E-13	8.32E-11	0.00	4.32E-05	3.25E+00	0.0
5	1.35E-12	5.61E-10	0.00	2.92E-04	2.20E+01	0.0
6	7.15E-13	2.98E-10	0.00	1.55E-04	1.16E+01	0.0
7	8.15E-14	7.60E-12	0.00	1.03E-05	1.13E-01	0.0
8	1.95E-12	9.25E-10	0.00	3.54E-05	5.29E+00	0.0
9	2.45E-13	3.67E-10	0.00	1.14E-05	1.70E+00	0.0
10	3.20E-13	4.79E-10	0.00	1.48E-05	2.22E+00	0.0
11	2.76E-13	4.13E-10	0.00	1.28E-05	1.91E+00	0.0
12	2.42E-13	3.62E-10	0.00	1.12E-05	1.68E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 11:30 AM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

	1 METER ABOVE SURFACE				6" ABOVE SURFACE				IODINE AIRBORNE	PART. AIRBORNE	VEGETAT'N SAMPLE
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	HP-210 cpm/cfm SAMPLE	HP-210 cpm/cfm SAMPLE	HP-210 mR/hr contact
1	2	2.6	1739.1	2086.9	2	3.3	2258.9	2710.7	0.8	5.5	0
2	0	0.0	2.0	2.4	0	0.0	2.3	2.8	0.0	0.0	0
3	0	0.0	5.2	6.2	0	0.0	6.0	7.3	0.0	0.0	0
4	0	0.0	1.5	1.8	0	0.0	1.9	2.3	0.0	0.0	0
5	0	0.0	10.1	12.1	0	0.0	12.8	15.4	0.0	0.1	0
6	0	0.0	5.3	6.4	0	0.0	6.8	8.2	0.0	0.0	0
7	0	0.0	0.6	0.8	0	0.0	0.8	1.0	0.0	0.0	0
8	0	0.0	2.9	3.5	0	0.0	3.7	4.4	0.0	0.0	0
9	0	0.0	3.1	3.8	0	0.0	4.0	4.8	0.0	0.0	0
10	0	0.0	4.1	4.9	0	0.0	5.3	6.3	0.0	0.1	0
11	0	0.0	3.5	4.2	0	0.0	4.5	5.4	0.0	0.1	0
12	0	0.0	3.1	3.7	0	0.0	4.0	4.8	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	8.04E-09	5.53E-08	0.00	9.36E-05	5.28E+00	0.0
2	5.93E-13	9.19E-11	0.00	4.03E-04	2.35E+01	0.0
3	1.56E-12	2.42E-10	0.00	1.06E-03	6.18E+01	0.0
4	5.21E-13	9.13E-11	0.00	4.92E-05	3.50E+00	0.0
5	3.52E-12	6.16E-10	0.00	3.32E-04	2.36E+01	0.0
6	1.87E-12	3.27E-10	0.00	1.76E-04	1.25E+01	0.0
7	4.76E-14	3.97E-12	0.00	1.28E-05	1.35E-01	0.0
8	9.28E-13	3.64E-10	0.00	9.38E-05	8.07E+00	0.0
9	1.03E-12	4.91E-10	0.00	1.88E-05	2.81E+00	0.0
10	1.35E-12	6.40E-10	0.00	2.44E-05	3.66E+00	0.0
11	1.16E-12	5.51E-10	0.00	2.11E-05	3.15E+00	0.0
12	1.02E-12	4.83E-10	0.00	1.85E-05	2.77E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 11:45 AM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:46 AM SHEET 14

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	2	3.0	2013.3	2415.9	3	3.8	2612.7	3135.3
2	8	11.5	7819.1	9382.9	10	14.9	10156.4	12187.6
3	21	30.3	20591.6	24709.9	27	39.3	26746.9	32096.2
4	0	0.0	0.3	0.4	0	0.0	0.4	0.4
5	0	0.0	2.1	2.6	0	0.0	2.5	3.0
6	0	0.0	1.1	1.4	0	0.0	1.3	1.6
7	0	0.0	0.9	1.0	0	0.0	0.9	1.1
8	0	0.0	1.7	2.0	0	0.0	2.1	2.5
9	0	0.0	1.5	1.8	0	0.0	1.9	2.3
10	0	0.0	2.0	2.4	0	0.0	2.5	3.1
11	0	0.0	1.7	2.1	0	0.0	2.2	2.6
12	0	0.0	1.5	1.8	0	0.0	1.9	2.3

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.0	8.1	0
2	3.6	24.8	0
3	9.5	65.4	0
4	0.0	0.0	0
5	0.0	0.0	0
6	0.0	0.0	0
7	0.2	0.7	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	9.62E-09	8.10E-08	0.00	2.41E-01	1.71E+02	0.1
2	3.61E-08	2.48E-07	0.00	4.21E-04	2.38E+01	0.0
3	9.52E-08	6.54E-07	0.00	1.11E-03	6.26E+01	0.0
4	9.53E-14	1.48E-11	0.00	6.48E-05	3.78E+00	0.0
5	6.43E-13	9.98E-11	0.00	4.38E-04	2.55E+01	0.0
6	3.41E-13	5.29E-11	0.00	2.32E-04	1.35E+01	0.0
7	2.43E-09	7.11E-09	0.00	1.42E-05	1.47E-01	0.0
8	5.62E-13	2.34E-10	0.00	1.22E-04	9.16E+00	0.0
9	4.92E-13	1.93E-10	0.00	4.97E-05	4.28E+00	0.0
10	6.42E-13	2.52E-10	0.00	6.49E-05	5.58E+00	0.0
11	5.53E-13	2.17E-10	0.00	5.59E-05	4.81E+00	0.0
12	4.85E-13	1.91E-10	0.00	4.90E-05	4.22E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 12:00 PM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1 METER ABOVE SURFACE

SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	2	3.4	2327.0	2792.4
2	9	13.3	9051.9	10862.2
3	24	35.0	23838.1	28605.7
4	1	1.8	1258.0	1509.6
5	8	12.5	8487.7	10185.3
6	5	6.6	4502.1	5402.5
7	1	0.9	583.2	699.8
8	0	0.0	4.2	5.0
9	0	0.0	0.9	1.1
10	0	0.0	1.1	1.4
11	0	0.0	1.0	1.2
12	0	0.0	0.9	1.0

6" ABOVE SURFACE

SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	3	4.4	3016.8	3620.1
2	12	17.3	11747.0	14096.4
3	31	45.5	30935.8	37123.0
4	2	2.4	1634.1	1960.9
5	11	16.2	11024.9	13229.9
6	6	8.6	5847.9	7017.4
7	1	1.1	757.4	908.8
8	0	0.0	5.3	6.4
9	0	0.0	1.1	1.3
10	0	0.0	1.4	1.7
11	0	0.0	1.2	1.5
12	0	0.0	1.1	1.3

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.2	11.6	0
2	4.3	36.4	0
3	11.4	95.9	0
4	0.6	4.0	0
5	3.9	27.0	0
6	2.1	14.3	0
7	0.6	1.7	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.15E-08	1.16E-07	0.00	5.30E-01	4.14E+02	0.3
2	4.33E-08	3.64E-07	0.00	1.08E+00	7.69E+02	0.8
3	1.14E-07	9.59E-07	0.00	2.86E+00	2.03E+03	2.1
4	5.82E-09	4.00E-08	0.00	6.77E-05	3.82E+00	0.0
5	3.92E-08	2.70E-07	0.00	4.57E-04	2.58E+01	0.0
6	2.08E-08	1.43E-07	0.00	2.42E-04	1.37E+01	0.0
7	5.97E-09	1.75E-08	0.00	7.28E-02	2.15E+01	0.0
8	1.47E-12	2.57E-10	0.00	1.39E-04	9.86E+00	0.0
9	2.98E-13	1.24E-10	0.00	6.45E-05	4.86E+00	0.0
10	3.89E-13	1.62E-10	0.00	8.41E-05	6.34E+00	0.0
11	3.35E-13	1.39E-10	0.00	7.25E-05	5.46E+00	0.0
12	2.94E-13	1.22E-10	0.00	6.36E-05	4.79E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 12:15 PM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:46 AM SHEET 16

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	2	3.4	2311.3	2773.5	3	4.4	2991.8	3590.1
2	10	15.4	10462.4	12554.9	14	19.9	13563.6	16276.4
3	28	40.5	27552.8	33063.4	36	52.5	35719.9	42863.9
4	1	2.1	1456.4	1747.6	2	2.8	1890.0	2268.0
5	10	14.4	9826.0	11791.1	13	18.7	12751.6	15301.9
6	5	7.7	5211.9	6254.3	7	9.9	6763.7	8116.5
7	1	1.0	675.3	810.4	1	1.3	876.1	1051.3
8	0	0.0	0.9	1.1	0	0.0	1.0	1.2
9	0	0.0	2.2	2.7	0	0.0	2.8	3.4
10	0	0.0	2.9	3.5	0	0.0	3.7	4.4
11	0	0.0	2.5	3.0	0	0.0	3.2	3.8
12	0	0.0	2.2	2.6	0	0.0	2.8	3.4

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.2	13.8	0
2	5.2	52.1	0
3	13.6	137.1	0
4	0.7	5.9	0
5	4.7	39.6	0
6	2.5	21.0	0
7	1.0	2.9	0
8	0.0	0.0	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.19E-08	1.38E-07	0.00	8.76E-01	7.62E+02	0.4
2	5.18E-08	5.21E-07	0.00	2.38E+00	1.86E+03	1.1
3	1.36E-07	1.37E-06	0.01	6.28E+00	4.90E+03	2.9
4	6.96E-09	5.86E-08	0.00	1.75E-01	1.24E+02	0.0
5	4.70E-08	3.96E-07	0.00	1.18E+00	8.35E+02	0.3
6	2.49E-08	2.10E-07	0.00	6.25E-01	4.43E+02	0.2
7	1.00E-08	2.94E-08	0.00	2.52E-01	7.39E+01	0.0
8	2.68E-13	4.16E-11	0.00	1.83E-04	1.06E+01	0.0
9	7.78E-13	1.36E-10	0.00	7.35E-05	5.23E+00	0.0
10	1.01E-12	1.78E-10	0.00	9.58E-05	6.82E+00	0.0
11	8.74E-13	1.53E-10	0.00	8.25E-05	5.88E+00	0.0
12	7.67E-13	1.34E-10	0.00	7.24E-05	5.16E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 12:30 PM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

02/01/94 11:46 AM SHEET 17

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	4	5.4	3706.6	4447.9	5	7.1	4800.1	5760.1
2	10	15.3	10391.7	12470.1	13	19.8	13451.3	16141.5
3	27	40.2	27366.6	32840.0	35	52.1	35424.0	42508.8
4	2	2.5	1683.3	2020.0	2	3.2	2182.3	2618.7
5	11	16.7	11357.1	13628.6	15	21.6	14723.6	17668.3
6	6	8.9	6024.1	7228.9	8	11.5	7809.7	9371.7
7	1	1.1	780.2	936.3	1	1.5	1011.3	1213.6
8	4	5.2	3540.7	4248.9	5	6.8	4599.2	5519.0
9	0	0.0	0.5	0.6	0	0.0	0.6	0.7
10	0	0.0	0.6	0.7	0	0.0	0.7	0.9
11	0	0.0	0.5	0.6	0	0.0	0.6	0.7
12	0	0.0	0.5	0.6	0	0.0	0.5	0.7

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.8	17.0	0
2	5.3	62.2	0
3	14.0	163.9	0
4	0.8	8.4	0
5	5.6	56.5	0
6	3.0	30.0	0
7	1.3	3.7	0
8	1.6	11.3	0
9	0.0	0.0	0
10	0.0	0.0	0
11	0.0	0.0	0
12	0.0	0.0	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.77E-08	1.70E-07	0.00	1.23E+00	1.18E+03	0.5
2	5.33E-08	6.22E-07	0.00	3.94E+00	3.42E+03	1.4
3	1.40E-07	1.64E-06	0.01	1.04E+01	9.02E+03	3.8
4	8.34E-09	8.38E-08	0.00	3.83E-01	3.00E+02	0.1
5	5.63E-08	5.65E-07	0.00	2.59E+00	2.02E+03	0.6
6	2.98E-08	3.00E-07	0.00	1.37E+00	1.07E+03	0.3
7	1.27E-08	3.73E-08	0.00	5.52E-01	1.62E+02	0.0
8	1.64E-08	1.13E-07	0.00	1.91E-04	1.08E+01	0.0
9	1.42E-13	2.21E-11	0.00	9.68E-05	5.64E+00	0.0
10	1.86E-13	2.88E-11	0.00	1.26E-04	7.35E+00	0.0
11	1.60E-13	2.48E-11	0.00	1.09E-04	6.33E+00	0.0
12	1.40E-13	2.18E-11	0.00	9.54E-05	5.56E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 12:45 PM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	4	5.9	4021.5	4825.8	5	7.6	5203.9	6244.7
2	17	24.5	16665.2	19998.3	22	31.7	21581.7	25898.1
3	44	64.5	43888.0	52665.6	57	83.5	56835.5	68202.7
4	2	2.5	1671.9	2006.3	2	3.2	2164.2	2597.0
5	11	16.6	11280.4	13536.5	15	21.5	14601.6	17521.9
6	6	8.8	5983.4	7180.1	8	11.4	7745.0	9294.0
7	1	1.1	774.3	929.2	1	1.5	1002.3	1202.7
8	4	6.0	4099.0	4918.8	5	7.8	5319.5	6383.3
9	2	2.8	1878.2	2253.9	2	3.6	2439.7	2927.6
10	2	3.6	2448.7	2938.5	3	4.7	3180.7	3816.8
11	2	3.1	2109.4	2531.3	3	4.0	2739.9	3287.9
12	2	2.7	1850.7	2220.9	2	3.5	2404.0	2884.7

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.9	17.1	0
2	7.9	76.6	0
3	20.9	201.6	0
4	0.9	10.0	0
5	5.8	67.6	0
6	3.1	35.8	0
7	1.4	4.0	0
8	2.0	16.5	0
9	0.9	6.0	0
10	1.1	7.8	0
11	1.0	6.7	0
12	0.9	5.9	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.86E-08	1.71E-07	0.00	1.76E+00	1.69E+03	0.7
2	7.94E-08	7.66E-07	0.01	5.54E+00	5.29E+03	2.0
3	2.09E-07	2.02E-06	0.01	1.46E+01	1.39E+04	5.1
4	8.57E-09	1.00E-07	0.00	6.34E-01	5.51E+02	0.2
5	5.78E-08	6.76E-07	0.00	4.27E+00	3.72E+03	1.2
6	3.07E-08	3.58E-07	0.00	2.27E+00	1.97E+03	0.6
7	1.36E-08	4.04E-08	0.00	9.32E-01	2.74E+02	0.1
8	1.96E-08	1.65E-07	0.00	4.91E-01	3.48E+02	0.2
9	8.68E-09	5.97E-08	0.00	1.01E-04	5.71E+00	0.0
10	1.13E-08	7.78E-08	0.00	1.32E-04	7.44E+00	0.0
11	9.75E-09	6.70E-08	0.00	1.14E-04	6.41E+00	0.0
12	8.56E-09	5.88E-08	0.00	9.96E-05	5.62E+00	0.0

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 01:00 PM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1 METER ABOVE SURFACE

6" ABOVE SURFACE

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	4	5.3	3612.0	4334.4	5	6.9	4666.1	5599.4	1.7	16.3	0
2	18	26.6	18081.2	21697.4	23	34.4	23397.1	28076.5	8.4	77.0	0
3	48	70.0	47616.8	57140.2	62	90.6	61616.4	73939.6	22.0	202.8	0
4	3	3.9	2681.3	3217.6	3	5.1	3472.3	4166.8	1.3	12.3	0
5	18	26.6	18090.4	21708.5	23	34.4	23427.3	28112.8	8.6	83.1	0
6	10	14.1	9595.6	11514.7	12	18.3	12426.4	14911.7	4.6	44.1	0
7	1	1.8	1240.6	1488.7	2	2.4	1606.9	1928.3	1.6	4.7	0
8	5	7.0	4737.7	5685.3	6	9.0	6142.1	7370.5	2.3	23.6	0
9	2	3.2	2174.3	2609.2	3	4.1	2821.8	3386.1	1.0	8.8	0
10	3	4.2	2834.8	3401.8	4	5.4	3678.9	4414.6	1.4	11.4	0
11	2	3.6	2442.0	2930.3	3	4.7	3169.0	3802.8	1.2	9.8	0
12	2	3.1	2142.5	2571.0	3	4.1	2780.5	3336.5	1.0	8.6	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1.67E-08	1.63E-07	0.00	2.32E+00	2.20E+03	0.8
8.37E-08	7.70E-07	0.01	7.92E+00	7.59E+03	2.5
2.20E-07	2.03E-06	0.02	2.09E+01	2.00E+04	6.6
1.28E-08	1.23E-07	0.00	8.91E-01	8.51E+02	0.2
8.62E-08	8.31E-07	0.01	6.01E+00	5.74E+03	1.6
4.57E-08	4.41E-07	0.00	3.19E+00	3.05E+03	0.8
1.56E-08	4.65E-08	0.00	1.34E+00	3.95E+02	0.1
2.35E-08	2.36E-07	0.00	1.08E+00	8.43E+02	0.3
1.04E-08	8.75E-08	0.00	2.61E-01	1.85E+02	0.1
1.35E-08	1.14E-07	0.00	3.40E-01	2.41E+02	0.1
1.17E-08	9.83E-08	0.00	2.93E-01	2.08E+02	0.1
1.02E-08	8.62E-08	0.00	2.57E-01	1.82E+02	0.1

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 01:15 PM

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	2	3.1	2132.2	2558.6	3	4.0	2737.8	3285.4
2	16	23.9	16239.9	19487.9	21	30.8	20979.3	25175.2
3	43	62.9	42767.8	51321.4	55	81.2	55249.2	66299.0
4	3	4.3	2909.1	3490.9	4	5.5	3764.4	4517.3
5	20	28.9	19627.4	23552.9	25	37.3	25398.0	30477.6
6	10	15.3	10410.8	12493.0	13	19.8	13471.7	16166.0
7	1	2.0	1345.7	1614.9	2	2.6	1741.8	2090.2
8	5	6.9	4705.7	5646.9	6	9.0	6091.2	7309.4
9	3	3.7	2513.2	3015.8	3	4.8	3258.1	3909.7
10	3	4.8	3276.5	3931.9	4	6.2	4247.8	5097.3
11	3	4.1	2822.5	3387.0	4	5.4	3659.1	4390.9
12	2	3.6	2476.4	2971.7	3	4.7	3210.4	3852.5

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.1	13.9	0
2	7.5	73.3	0
3	19.7	193.2	0
4	1.3	12.4	0
5	9.1	83.6	0
6	4.8	44.3	0
7	1.8	5.4	0
8	2.4	28.2	0
9	1.2	12.5	0
10	1.6	16.3	0
11	1.4	14.0	0
12	1.2	12.3	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	1.05E-08	1.39E-07	0.00	2.82E+00	2.69E+03	0.9
2	7.49E-08	7.33E-07	0.01	1.04E+01	9.90E+03	2.8
3	1.97E-07	1.93E-06	0.03	2.75E+01	2.61E+04	7.4
4	1.35E-08	1.24E-07	0.00	1.27E+00	1.22E+03	0.3
5	9.09E-08	8.36E-07	0.01	8.60E+00	8.24E+03	1.9
6	4.82E-08	4.43E-07	0.00	4.56E+00	4.37E+03	1.0
7	1.80E-08	5.39E-08	0.00	1.81E+00	5.35E+02	0.1
8	2.41E-08	2.82E-07	0.00	1.78E+00	1.55E+03	0.4
9	1.24E-08	1.25E-07	0.00	5.72E-01	4.47E+02	0.1
10	1.62E-08	1.63E-07	0.00	7.46E-01	5.83E+02	0.1
11	1.40E-08	1.40E-07	0.00	6.43E-01	5.02E+02	0.1
12	1.23E-08	1.23E-07	0.00	5.64E-01	4.41E+02	0.1

ROBINSON EXERCISE MARCH 1994 OFFSITE RELEASE DATA

TIME: 01:30 PM

1. Zeros are "as read"
2. Multiply the airborne values by the ft^3 Sampled.
3. Veg. value based on a 1 kilogram sample
4. ERRATIC means cpm to high to be reliable

OFF SITE FIELD DATA

AMBIENT RADIATION READINGS

	1 METER ABOVE SURFACE				6" ABOVE SURFACE			
SAMPLE POINT	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm
1	2	2.7	1816.5	2179.8	2	3.4	2322.4	2786.9
2	10	14.1	9586.5	11503.8	12	18.1	12309.4	14771.3
3	25	37.1	25246.2	30295.4	32	47.7	32417.0	38900.4
4	3	3.8	2612.9	3135.4	3	5.0	3375.4	4050.5
5	18	25.9	17628.7	21154.4	23	33.5	22773.4	27328.1
6	9	13.7	9350.6	11220.8	12	17.8	12079.5	14495.5
7	1	1.8	1208.8	1450.5	2	2.3	1561.9	1874.3
8	8	11.1	7546.6	9055.9	10	14.4	9772.9	11727.5
9	2	3.7	2496.2	2995.4	3	4.7	3231.1	3877.4
10	3	4.8	3254.4	3905.3	4	6.2	4212.6	5055.1
11	3	4.1	2803.4	3364.1	4	5.3	3628.8	4354.6
12	2	3.6	2459.7	2951.6	3	4.7	3183.8	3820.6

CONTAMINATION READINGS

READINGS MADE OUTSIDE PLUME

SAMPLE POINT	IODINE AIRBORNE HP-210 cpm/cfm SAMPLE	PART. AIRBORNE HP-210 cpm/cfm SAMPLE	VEGETAT'N SAMPLE HP-210 mR/hr contact
1	1.0	15.0	0
2	4.7	62.5	0
3	12.5	164.6	0
4	1.2	11.8	0
5	8.1	79.6	0
6	4.3	42.2	0
7	1.9	5.7	0
8	3.6	34.7	0
9	1.3	15.0	0
10	1.7	19.5	0
11	1.4	16.8	0
12	1.3	14.7	0

OFF SITE LABORATORY DATA

1. Multiply veg. values by No. of grams in sample.

CONTAMINATION SAMPLE RESULTS

SAMPLE POINT	IODINE AIRBORNE uCi/cc	PART AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
1	9.51E-09	1.50E-07	0.00	3.14E+00	3.11E+03	1.4
2	4.74E-08	6.25E-07	0.01	1.27E+01	1.21E+04	7.1
3	1.25E-07	1.65E-06	0.03	3.34E+01	3.19E+04	18.8
4	1.21E-08	1.18E-07	0.00	1.68E+00	1.59E+03	1.1
5	8.13E-08	7.96E-07	0.01	1.13E+01	1.07E+04	7.1
6	4.31E-08	4.22E-07	0.01	6.00E+00	5.70E+03	3.8
7	1.89E-08	5.69E-08	0.00	2.35E+00	6.96E+02	0.5
8	3.60E-08	3.47E-07	0.00	2.51E+00	2.40E+03	1.6
9	1.28E-08	1.50E-07	0.00	9.46E-01	8.22E+02	0.8
10	1.67E-08	1.95E-07	0.00	1.23E+00	1.07E+03	1.0
11	1.44E-08	1.68E-07	0.00	1.06E+00	9.24E+02	0.9
12	1.26E-08	1.47E-07	0.00	9.32E-01	8.10E+02	0.8

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 01

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.1	0	0.0	0.1	0.1	0.0	0.0	0	6.65E-14	9.95E-11	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	1.23E-13	1.83E-10	0.00	1.99E-06	2.99E-01	0.0
09:45 AM	0	0.0	0.1	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.62E-13	2.43E-10	0.00	5.67E-06	8.49E-01	0.0
10:00 AM	0	0.0	0.2	0.3	0	0.0	0.2	0.3	0.0	0.0	0	2.27E-13	3.40E-10	0.00	1.05E-05	1.58E+00	0.0
10:15 AM	0	0.0	2.9	3.5	0	0.0	3.7	4.5	0.0	0.0	0	9.57E-13	4.54E-10	0.00	1.74E-05	2.60E+00	0.0
10:30 AM	0	0.0	1.4	1.7	0	0.0	1.8	2.2	0.0	0.0	0	4.56E-13	1.79E-10	0.00	4.61E-05	3.96E+00	0.0
10:45 AM	0	0.0	0.8	1.0	0	0.0	1.0	1.2	0.0	0.0	0	2.76E-13	1.15E-10	0.00	5.97E-05	4.50E+00	0.0
11:00 AM	0	0.0	2.1	2.5	0	0.0	2.6	3.1	0.0	0.0	0	7.21E-13	1.26E-10	0.00	6.80E-05	4.84E+00	0.0
11:15 AM	0	0.0	0.4	0.5	0	0.0	0.5	0.6	0.0	0.0	0	1.32E-13	2.04E-11	0.00	8.96E-05	5.22E+00	0.0
11:30 AM	2	2.6	1739.1	2086.9	2	3.3	2258.9	2710.7	0.8	5.5	0	8.04E-09	5.53E-08	0.00	9.36E-05	5.28E+00	0.0
11:45 AM	2	3.0	2013.3	2415.9	3	3.8	2612.7	3135.3	1.0	8.1	0	9.62E-09	8.10E-08	0.00	2.41E-01	1.71E+02	0.1
12:00 PM	2	3.4	2327.0	2792.4	3	4.4	3016.8	3620.1	1.2	11.6	0	1.15E-08	1.16E-07	0.00	5.30E-01	4.14E+02	0.3
12:15 PM	2	3.4	2311.3	2773.5	3	4.4	2991.8	3590.1	1.2	13.8	0	1.19E-08	1.38E-07	0.00	8.76E-01	7.62E+02	0.4
12:30 PM	4	5.4	3706.6	4447.9	5	7.1	4800.1	5760.1	1.8	17.0	0	1.77E-08	1.70E-07	0.00	1.23E+00	1.18E+03	0.5
12:45 PM	4	5.9	4021.5	4825.8	5	7.6	5203.9	6244.7	1.9	17.1	0	1.86E-08	1.71E-07	0.00	1.76E+00	1.69E+03	0.7
01:00 PM	4	5.3	3612.0	4334.4	5	6.9	4666.1	5599.4	1.7	16.3	0	1.67E-08	1.63E-07	0.00	2.32E+00	2.20E+03	0.8
01:15 PM	2	3.1	2132.2	2558.6	3	4.0	2737.8	3285.4	1.1	13.9	0	1.05E-08	1.39E-07	0.00	2.82E+00	2.69E+03	0.9
01:30 PM	2	2.7	1816.5	2179.8	2	3.4	2322.4	2786.9	1.0	15.0	0	9.51E-09	1.50E-07	0.00	3.14E+00	3.11E+03	1.4

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 02

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.2	0.2	0	0.0	0.2	0.3	0.0	0.0	0	2.99E-13	4.47E-10	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.4	0.5	0	0.0	0.5	0.6	0.0	0.1	0	5.51E-13	8.25E-10	0.00	8.97E-06	1.34E+00	0.0
10:00 AM	0	0.0	0.6	0.8	0	0.0	0.7	0.9	0.0	0.1	0	7.30E-13	1.09E-09	0.00	2.55E-05	3.82E+00	0.0
10:15 AM	0	0.0	0.9	1.1	0	0.0	1.1	1.3	0.0	0.2	0	1.02E-12	1.53E-09	0.00	4.74E-05	7.10E+00	0.0
10:30 AM	0	0.0	13.1	15.7	0	0.0	16.8	20.1	0.0	0.2	0	4.30E-12	2.04E-09	0.00	7.81E-05	1.17E+01	0.0
10:45 AM	0	0.0	6.4	7.7	0	0.0	8.1	9.7	0.0	0.1	0	2.05E-12	8.05E-10	0.00	2.07E-04	1.78E+01	0.0
11:00 AM	0	0.0	3.7	4.4	0	0.0	4.5	5.4	0.0	0.1	0	1.24E-12	5.17E-10	0.00	2.69E-04	2.02E+01	0.0
11:15 AM	0	0.0	9.3	11.1	0	0.0	11.8	14.2	0.0	0.1	0	3.24E-12	5.67E-10	0.00	3.06E-04	2.18E+01	0.0
11:30 AM	0	0.0	2.0	2.4	0	0.0	2.3	2.8	0.0	0.0	0	5.93E-13	9.19E-11	0.00	4.03E-04	2.35E+01	0.0
11:45 AM	8	11.5	7819.1	9382.9	10	14.9	10156.4	12187.6	3.6	24.8	0	3.61E-08	2.48E-07	0.00	4.21E-04	2.38E+01	0.0
12:00 PM	9	13.3	9051.9	10862.2	12	17.3	11747.0	14096.4	4.3	36.4	0	4.33E-08	3.64E-07	0.00	1.08E+00	7.69E+02	0.8
12:15 PM	10	15.4	10462.4	12554.9	14	19.9	13563.6	16276.4	5.2	52.1	0	5.18E-08	5.21E-07	0.00	2.38E+00	1.86E+03	1.1
12:30 PM	10	15.3	10391.7	12470.1	13	19.8	13451.3	16141.5	5.3	62.2	0	5.33E-08	6.22E-07	0.00	3.94E+00	3.42E+03	1.4
12:45 PM	17	24.5	16665.2	19998.3	22	31.7	21581.7	25898.1	7.9	76.6	0	7.94E-08	7.66E-07	0.01	5.54E+00	5.29E+03	2.0
01:00 PM	18	26.6	18081.2	21697.4	23	34.4	23397.1	28076.5	8.4	77.0	0	8.37E-08	7.70E-07	0.01	7.92E+00	7.59E+03	2.5
01:15 PM	16	23.9	16239.9	19487.9	21	30.8	20979.3	25175.2	7.5	73.3	0	7.49E-08	7.33E-07	0.01	1.04E+01	9.90E+03	2.8
01:30 PM	10	14.1	9586.5	11503.8	12	18.1	12309.4	14771.3	4.7	62.5	0	4.74E-08	6.25E-07	0.01	1.27E+01	1.21E+04	7.1

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 03

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.5	0.6	0	0.0	0.6	0.8	0.0	0.1	0	7.87E-13	1.18E-09	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	1.1	1.3	0	0.0	1.3	1.6	0.0	0.2	0	1.45E-12	2.17E-09	0.00	2.36E-05	3.53E+00	0.0
10:00 AM	0	0.0	1.7	2.0	0	0.0	2.0	2.3	0.0	0.3	0	1.92E-12	2.88E-09	0.00	6.71E-05	1.01E+01	0.0
10:15 AM	0	0.0	2.5	3.0	0	0.0	2.9	3.5	0.0	0.4	0	2.69E-12	4.03E-09	0.00	1.25E-04	1.87E+01	0.0
10:30 AM	0	0.1	34.4	41.2	0	0.1	44.2	53.0	0.0	0.5	0	1.13E-11	5.38E-09	0.00	2.06E-04	3.08E+01	0.0
10:45 AM	0	0.0	16.9	20.3	0	0.0	21.4	25.7	0.0	0.2	0	5.40E-12	2.12E-09	0.00	5.45E-04	4.69E+01	0.0
11:00 AM	0	0.0	9.7	11.6	0	0.0	11.9	14.3	0.0	0.1	0	3.27E-12	1.36E-09	0.00	7.07E-04	5.33E+01	0.0
11:15 AM	0	0.0	24.4	29.3	0	0.0	31.1	37.3	0.0	0.1	0	8.53E-12	1.49E-09	0.00	8.05E-04	5.74E+01	0.0
11:30 AM	0	0.0	5.2	6.2	0	0.0	6.0	7.3	0.0	0.0	0	1.56E-12	2.42E-10	0.00	1.06E-03	6.18E+01	0.0
11:45 AM	21	30.3	20591.6	24709.9	27	39.3	26746.9	32096.2	9.5	65.4	0	9.52E-08	6.54E-07	0.00	1.11E-03	6.26E+01	0.0
12:00 PM	24	35.0	23838.1	28605.7	31	45.5	30935.8	37123.0	11.4	95.9	0	1.14E-07	9.59E-07	0.00	2.86E+00	2.03E+03	2.1
12:15 PM	28	40.5	27552.8	33063.4	36	52.5	35719.9	42863.9	13.6	137.1	0	1.36E-07	1.37E-06	0.01	6.28E+00	4.90E+03	2.9
12:30 PM	27	40.2	27366.6	32840.0	35	52.1	35424.0	42508.8	14.0	163.9	0	1.40E-07	1.64E-06	0.01	1.04E+01	9.02E+03	3.8
12:45 PM	44	64.5	43888.0	52665.6	57	83.5	56835.5	68202.7	20.9	201.6	0	2.09E-07	2.02E-06	0.01	1.46E+01	1.39E+04	5.1
01:00 PM	48	70.0	47616.8	57140.2	62	90.6	61616.4	73939.6	22.0	202.8	0	2.20E-07	2.03E-06	0.02	2.09E+01	2.00E+04	6.6
01:15 PM	43	62.9	42767.8	51321.4	55	81.2	55249.2	66299.0	19.7	193.2	0	1.97E-07	1.93E-06	0.03	2.75E+01	2.61E+04	7.4
01:30 PM	25	37.1	25246.2	30295.4	32	47.7	32417.0	38900.4	12.5	164.6	0	1.25E-07	1.65E-06	0.03	3.34E+01	3.19E+04	18.8

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 04

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	4.81E-14	7.20E-11	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	8.86E-14	1.33E-10	0.00	1.44E-06	2.16E-01	0.0
10:15 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	1.18E-13	1.76E-10	0.00	4.10E-06	6.14E-01	0.0
10:30 AM	0	0.0	0.2	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.64E-13	2.46E-10	0.00	7.63E-06	1.14E+00	0.0
10:45 AM	0	0.0	2.1	2.5	0	0.0	2.7	3.2	0.0	0.0	0	6.92E-13	3.29E-10	0.00	1.26E-05	1.88E+00	0.0
11:00 AM	0	0.0	1.0	1.2	0	0.0	1.3	1.6	0.0	0.0	0	3.30E-13	1.29E-10	0.00	3.33E-05	2.87E+00	0.0
11:15 AM	0	0.0	0.6	0.7	0	0.0	0.7	0.9	0.0	0.0	0	2.00E-13	8.32E-11	0.00	4.32E-05	3.25E+00	0.0
11:30 AM	0	0.0	1.5	1.8	0	0.0	1.9	2.3	0.0	0.0	0	5.21E-13	9.13E-11	0.00	4.92E-05	3.50E+00	0.0
11:45 AM	0	0.0	0.3	0.4	0	0.0	0.4	0.4	0.0	0.0	0	9.53E-14	1.48E-11	0.00	6.48E-05	3.78E+00	0.0
12:00 PM	1	1.8	1258.0	1509.6	2	2.4	1634.1	1960.9	0.6	4.0	0	5.82E-09	4.00E-08	0.00	6.77E-05	3.82E+00	0.0
12:15 PM	1	2.1	1456.4	1747.6	2	2.8	1890.0	2268.0	0.7	5.9	0	6.96E-09	5.86E-08	0.00	1.75E-01	1.24E+02	0.0
12:30 PM	2	2.5	1683.3	2020.0	2	3.2	2182.3	2618.7	0.8	8.4	0	8.34E-09	8.38E-08	0.00	3.83E-01	3.00E+02	0.1
12:45 PM	2	2.5	1671.9	2006.3	2	3.2	2164.2	2597.0	0.9	10.0	0	8.57E-09	1.00E-07	0.00	6.34E-01	5.51E+02	0.2
01:00 PM	3	3.9	2681.3	3217.6	3	5.1	3472.3	4166.8	1.3	12.3	0	1.28E-08	1.23E-07	0.00	8.91E-01	8.51E+02	0.2
01:15 PM	3	4.3	2909.1	3490.9	4	5.5	3764.4	4517.3	1.3	12.4	0	1.35E-08	1.24E-07	0.00	1.27E+00	1.22E+03	0.3
01:30 PM	3	3.8	2612.9	3135.4	3	5.0	3375.4	4050.5	1.2	11.8	0	1.21E-08	1.18E-07	0.00	1.68E+00	1.59E+03	1.1

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 05

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.2	0.3	0	0.0	0.3	0.3	0.0	0.0	0	3.24E-13	4.86E-10	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.5	0.5	0	0.0	0.5	0.7	0.0	0.1	0	5.98E-13	8.95E-10	0.00	9.73E-06	1.46E+00	0.0
10:15 AM	0	0.0	0.7	0.8	0	0.0	0.8	1.0	0.0	0.1	0	7.93E-13	1.19E-09	0.00	2.77E-05	4.14E+00	0.0
10:30 AM	0	0.0	1.0	1.2	0	0.0	1.2	1.4	0.0	0.2	0	1.11E-12	1.66E-09	0.00	5.15E-05	7.70E+00	0.0
10:45 AM	0	0.0	14.2	17.0	0	0.0	18.2	21.8	0.0	0.2	0	4.67E-12	2.22E-09	0.00	8.47E-05	1.27E+01	0.0
11:00 AM	0	0.0	7.0	8.4	0	0.0	8.8	10.6	0.0	0.1	0	2.23E-12	8.74E-10	0.00	2.25E-04	1.93E+01	0.0
11:15 AM	0	0.0	4.0	4.8	0	0.0	4.9	5.9	0.0	0.1	0	1.35E-12	5.61E-10	0.00	2.92E-04	2.20E+01	0.0
11:30 AM	0	0.0	10.1	12.1	0	0.0	12.8	15.4	0.0	0.1	0	3.52E-12	6.16E-10	0.00	3.32E-04	2.36E+01	0.0
11:45 AM	0	0.0	2.1	2.6	0	0.0	2.5	3.0	0.0	0.0	0	6.43E-13	9.98E-11	0.00	4.38E-04	2.55E+01	0.0
12:00 PM	8	12.5	8487.7	10185.3	11	16.2	11024.9	13229.9	3.9	27.0	0	3.92E-08	2.70E-07	0.00	4.57E-04	2.58E+01	0.0
12:15 PM	10	14.4	9826.0	11791.1	13	18.7	12751.6	15301.9	4.7	39.6	0	4.70E-08	3.96E-07	0.00	1.18E+00	8.35E+02	0.3
12:30 PM	11	16.7	11357.1	13628.6	15	21.6	14723.6	17668.3	5.6	56.5	0	5.63E-08	5.65E-07	0.00	2.59E+00	2.02E+03	0.6
12:45 PM	11	16.6	11280.4	13536.5	15	21.5	14601.6	17521.9	5.8	67.6	0	5.78E-08	6.76E-07	0.00	4.27E+00	3.72E+03	1.2
01:00 PM	18	26.6	18090.4	21708.5	23	34.4	23427.3	28112.8	8.6	83.1	0	8.62E-08	8.31E-07	0.01	6.01E+00	5.74E+03	1.6
01:15 PM	20	28.9	19627.4	23552.9	25	37.3	25398.0	30477.6	9.1	83.6	0	9.09E-08	8.36E-07	0.01	8.60E+00	8.24E+03	1.9
01:30 PM	18	25.9	17628.7	21154.4	23	33.5	22773.4	27328.1	8.1	79.6	0	8.13E-08	7.96E-07	0.01	1.13E+01	1.07E+04	7.1

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 06

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.2	0.0	0.0	0	1.72E-13	2.58E-10	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.2	0.3	0	0.0	0.3	0.3	0.0	0.0	0	3.17E-13	4.75E-10	0.00	5.16E-06	7.73E-01	0.0
10:15 AM	0	0.0	0.4	0.4	0	0.0	0.4	0.5	0.0	0.1	0	4.21E-13	6.30E-10	0.00	1.47E-05	2.20E+00	0.0
10:30 AM	0	0.0	0.5	0.7	0	0.0	0.6	0.8	0.0	0.1	0	5.88E-13	8.81E-10	0.00	2.73E-05	4.09E+00	0.0
10:45 AM	0	0.0	7.5	9.0	0	0.0	9.7	11.6	0.0	0.1	0	2.48E-12	1.18E-09	0.00	4.49E-05	6.73E+00	0.0
11:00 AM	0	0.0	3.7	4.4	0	0.0	4.7	5.6	0.0	0.0	0	1.18E-12	4.63E-10	0.00	1.19E-04	1.03E+01	0.0
11:15 AM	0	0.0	2.1	2.5	0	0.0	2.6	3.1	0.0	0.0	0	7.15E-13	2.98E-10	0.00	1.55E-04	1.16E+01	0.0
11:30 AM	0	0.0	5.3	6.4	0	0.0	6.8	8.2	0.0	0.0	0	1.87E-12	3.27E-10	0.00	1.76E-04	1.25E+01	0.0
11:45 AM	0	0.0	1.1	1.4	0	0.0	1.3	1.6	0.0	0.0	0	3.41E-13	5.29E-11	0.00	2.32E-04	1.35E+01	0.0
12:00 PM	5	6.6	4502.1	5402.5	6	8.6	5847.9	7017.4	2.1	14.3	0	2.08E-08	1.43E-07	0.00	2.42E-04	1.37E+01	0.0
12:15 PM	5	7.7	5211.9	6254.3	7	9.9	6763.7	8116.5	2.5	21.0	0	2.49E-08	2.10E-07	0.00	6.25E-01	4.43E+02	0.2
12:30 PM	6	8.9	6024.1	7228.9	8	11.5	7809.7	9371.7	3.0	30.0	0	2.98E-08	3.00E-07	0.00	1.37E+00	1.07E+03	0.3
12:45 PM	6	8.8	5983.4	7180.1	8	11.4	7745.0	9294.0	3.1	35.8	0	3.07E-08	3.58E-07	0.00	2.27E+00	1.97E+03	0.6
01:00 PM	10	14.1	9595.6	11514.7	12	18.3	12426.4	14911.7	4.6	44.1	0	4.57E-08	4.41E-07	0.00	3.19E+00	3.05E+03	0.8
01:15 PM	10	15.3	10410.8	12493.0	13	19.8	13471.7	16166.0	4.8	44.3	0	4.82E-08	4.43E-07	0.00	4.56E+00	4.37E+03	1.0
01:30 PM	9	13.7	9350.6	11220.8	12	17.8	12079.5	14495.5	4.3	42.2	0	4.31E-08	4.22E-07	0.01	6.00E+00	5.70E+03	3.8

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 07

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:30 AM	0	0.0	0.0	0.0	0	0.0	0.1	0.1	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:45 AM	0	0.0	0.9	1.1	0	0.0	1.2	1.4	0.0	0.0	0	2.15E-13	2.41E-11	0.00	0.00E+00	0.00E+00	0.0
11:00 AM	0	0.0	0.4	0.5	0	0.0	0.6	0.7	0.0	0.0	0	1.29E-13	1.34E-11	0.00	6.44E-06	7.24E-02	0.0
11:15 AM	0	0.0	0.2	0.3	0	0.0	0.3	0.3	0.0	0.0	0	8.15E-14	7.60E-12	0.00	1.03E-05	1.13E-01	0.0
11:30 AM	0	0.0	0.6	0.8	0	0.0	0.8	1.0	0.0	0.0	0	4.76E-14	3.97E-12	0.00	1.28E-05	1.35E-01	0.0
11:45 AM	0	0.0	0.9	1.0	0	0.0	0.9	1.1	0.2	0.7	0	2.43E-09	7.11E-09	0.00	1.42E-05	1.47E-01	0.0
12:00 PM	1	0.9	583.2	699.8	1	1.1	757.4	908.8	0.6	1.7	0	5.97E-09	1.75E-08	0.00	7.28E-02	2.15E+01	0.0
12:15 PM	1	1.0	675.3	810.4	1	1.3	876.1	1051.3	1.0	2.9	0	1.00E-08	2.94E-08	0.00	2.52E-01	7.39E+01	0.0
12:30 PM	1	1.1	780.2	936.3	1	1.5	1011.3	1213.6	1.3	3.7	0	1.27E-08	3.73E-08	0.00	5.52E-01	1.62E+02	0.0
12:45 PM	1	1.1	774.3	929.2	1	1.5	1002.3	1202.7	1.4	4.0	0	1.36E-08	4.04E-08	0.00	9.32E-01	2.74E+02	0.1
01:00 PM	1	1.8	1240.6	1488.7	2	2.4	1606.9	1928.3	1.6	4.7	0	1.56E-08	4.65E-08	0.00	1.34E+00	3.95E+02	0.1
01:15 PM	1	2.0	1345.7	1614.9	2	2.6	1741.8	2090.2	1.8	5.4	0	1.80E-08	5.39E-08	0.00	1.81E+00	5.35E+02	0.1
01:30 PM	1	1.8	1208.8	1450.5	2	2.3	1561.9	1874.3	1.9	5.7	0	1.89E-08	5.69E-08	0.00	2.35E+00	6.96E+02	0.5

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 08

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:15 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	1.35E-13	2.03E-10	0.00	0.00E+00	0.00E+00	0.0
10:30 AM	0	0.0	0.2	0.2	0	0.0	0.2	0.3	0.0	0.0	0	2.49E-13	3.73E-10	0.00	4.06E-06	6.08E-01	0.0
10:45 AM	0	0.0	0.3	0.3	0	0.0	0.3	0.4	0.0	0.0	0	3.31E-13	4.95E-10	0.00	1.15E-05	1.73E+00	0.0
11:00 AM	0	0.0	0.4	0.5	0	0.0	0.5	0.6	0.0	0.1	0	4.63E-13	6.93E-10	0.00	2.15E-05	3.21E+00	0.0
11:15 AM	0	0.0	5.9	7.1	0	0.0	7.6	9.1	0.0	0.1	0	1.95E-12	9.25E-10	0.00	3.54E-05	5.29E+00	0.0
11:30 AM	0	0.0	2.9	3.5	0	0.0	3.7	4.4	0.0	0.0	0	9.28E-13	3.64E-10	0.00	9.38E-05	8.07E+00	0.0
11:45 AM	0	0.0	1.7	2.0	0	0.0	2.1	2.5	0.0	0.0	0	5.62E-13	2.34E-10	0.00	1.22E-04	9.16E+00	0.0
12:00 PM	0	0.0	4.2	5.0	0	0.0	5.3	6.4	0.0	0.0	0	1.47E-12	2.57E-10	0.00	1.39E-04	9.86E+00	0.0
12:15 PM	0	0.0	0.9	1.1	0	0.0	1.0	1.2	0.0	0.0	0	2.68E-13	4.16E-11	0.00	1.83E-04	1.06E+01	0.0
12:30 PM	4	5.2	3540.7	4248.9	5	6.8	4599.2	5519.0	1.6	11.3	0	1.64E-08	1.13E-07	0.00	1.91E-04	1.08E+01	0.0
12:45 PM	4	6.0	4099.0	4918.8	5	7.8	5319.5	6383.3	2.0	16.5	0	1.96E-08	1.65E-07	0.00	4.91E-01	3.48E+02	0.2
01:00 PM	5	7.0	4737.7	5685.3	6	9.0	6142.1	7370.5	2.3	23.6	0	2.35E-08	2.36E-07	0.00	1.08E+00	8.43E+02	0.3
01:15 PM	5	6.9	4705.7	5646.9	6	9.0	6091.2	7309.4	2.4	28.2	0	2.41E-08	2.82E-07	0.00	1.78E+00	1.55E+03	0.4
01:30 PM	8	11.1	7546.6	9055.9	10	14.4	9772.9	11727.5	3.6	34.7	0	3.60E-08	3.47E-07	0.00	2.51E+00	2.40E+03	1.6

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 09

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:30 AM	0	0.0	0.0	0.1	0	0.0	0.1	0.1	0.0	0.0	0	7.18E-14	1.07E-10	0.00	0.00E+00	0.00E+00	0.0
10:45 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	1.32E-13	1.98E-10	0.00	2.15E-06	3.22E-01	0.0
11:00 AM	0	0.0	0.2	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.75E-13	2.63E-10	0.00	6.12E-06	9.17E-01	0.0
11:15 AM	0	0.0	0.2	0.3	0	0.0	0.3	0.3	0.0	0.0	0	2.45E-13	3.67E-10	0.00	1.14E-05	1.70E+00	0.0
11:30 AM	0	0.0	3.1	3.8	0	0.0	4.0	4.8	0.0	0.0	0	1.03E-12	4.91E-10	0.00	1.88E-05	2.81E+00	0.0
11:45 AM	0	0.0	1.5	1.8	0	0.0	1.9	2.3	0.0	0.0	0	4.92E-13	1.93E-10	0.00	4.97E-05	4.28E+00	0.0
12:00 PM	0	0.0	0.9	1.1	0	0.0	1.1	1.3	0.0	0.0	0	2.98E-13	1.24E-10	0.00	6.45E-05	4.86E+00	0.0
12:15 PM	0	0.0	2.2	2.7	0	0.0	2.8	3.4	0.0	0.0	0	7.78E-13	1.36E-10	0.00	7.35E-05	5.23E+00	0.0
12:30 PM	0	0.0	0.5	0.6	0	0.0	0.6	0.7	0.0	0.0	0	1.42E-13	2.21E-11	0.00	9.68E-05	5.64E+00	0.0
12:45 PM	2	2.8	1878.2	2253.9	2	3.6	2439.7	2927.6	0.9	6.0	0	8.68E-09	5.97E-08	0.00	1.01E-04	5.71E+00	0.0
01:00 PM	2	3.2	2174.3	2609.2	3	4.1	2821.8	3386.1	1.0	8.8	0	1.04E-08	8.75E-08	0.00	2.61E-01	1.85E+02	0.1
01:15 PM	3	3.7	2513.2	3015.8	3	4.8	3258.1	3909.7	1.2	12.5	0	1.24E-08	1.25E-07	0.00	5.72E-01	4.47E+02	0.1
01:30 PM	2	3.7	2496.2	2995.4	3	4.7	3231.1	3877.4	1.3	15.0	0	1.28E-08	1.50E-07	0.00	9.46E-01	8.22E+02	0.8

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 10

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				AMBIENT RADIATION READINGS 6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:30 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	9.36E-14	1.40E-10	0.00	0.00E+00	0.00E+00	0.0
10:45 AM	0	0.0	0.1	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.73E-13	2.58E-10	0.00	2.81E-06	4.20E-01	0.0
11:00 AM	0	0.0	0.2	0.2	0	0.0	0.2	0.3	0.0	0.0	0	2.29E-13	3.42E-10	0.00	7.98E-06	1.20E+00	0.0
11:15 AM	0	0.0	0.3	0.4	0	0.0	0.3	0.4	0.0	0.0	0	3.20E-13	4.79E-10	0.00	1.48E-05	2.22E+00	0.0
11:30 AM	0	0.0	4.1	4.9	0	0.0	5.3	6.3	0.0	0.1	0	1.35E-12	6.40E-10	0.00	2.44E-05	3.66E+00	0.0
11:45 AM	0	0.0	2.0	2.4	0	0.0	2.5	3.1	0.0	0.0	0	6.42E-13	2.52E-10	0.00	6.49E-05	5.58E+00	0.0
12:00 PM	0	0.0	1.1	1.4	0	0.0	1.4	1.7	0.0	0.0	0	3.89E-13	1.62E-10	0.00	8.41E-05	6.34E+00	0.0
12:15 PM	0	0.0	2.9	3.5	0	0.0	3.7	4.4	0.0	0.0	0	1.01E-12	1.78E-10	0.00	9.58E-05	6.82E+00	0.0
12:30 PM	0	0.0	0.6	0.7	0	0.0	0.7	0.9	0.0	0.0	0	1.86E-13	2.88E-11	0.00	1.26E-04	7.35E+00	0.0
12:45 PM	2	3.6	2448.7	2938.5	3	4.7	3180.7	3816.8	1.1	7.8	0	1.13E-08	7.78E-08	0.00	1.32E-04	7.44E+00	0.0
01:00 PM	3	4.2	2834.8	3401.8	4	5.4	3678.9	4414.6	1.4	11.4	0	1.35E-08	1.14E-07	0.00	3.40E-01	2.41E+02	0.1
01:15 PM	3	4.8	3276.5	3931.9	4	6.2	4247.8	5097.3	1.6	16.3	0	1.62E-08	1.63E-07	0.00	7.46E-01	5.83E+02	0.1
01:30 PM	3	4.8	3254.4	3905.3	4	6.2	4212.6	5055.1	1.7	19.5	0	1.67E-08	1.95E-07	0.00	1.23E+00	1.07E+03	1.0

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 11

AMBIENT RADIATION READINGS
1 METER ABOVE SURFACE

6" ABOVE SURFACE

CONTAMINATION READINGS
READINGS MADE OUTSIDE PLUME

OFF-SITE LABORATORY DATA
CONTAMINATION SAMPLE RESULTS

DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:30 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	8.06E-14	1.21E-10	0.00	0.00E+00	0.00E+00	0.0
10:45 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.2	0.0	0.0	0	1.49E-13	2.23E-10	0.00	2.42E-06	3.62E-01	0.0
11:00 AM	0	0.0	0.2	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.97E-13	2.95E-10	0.00	6.88E-06	1.03E+00	0.0
11:15 AM	0	0.0	0.3	0.3	0	0.0	0.3	0.4	0.0	0.0	0	2.76E-13	4.13E-10	0.00	1.28E-05	1.91E+00	0.0
11:30 AM	0	0.0	3.5	4.2	0	0.0	4.5	5.4	0.0	0.1	0	1.16E-12	5.51E-10	0.00	2.11E-05	3.15E+00	0.0
11:45 AM	0	0.0	1.7	2.1	0	0.0	2.2	2.6	0.0	0.0	0	5.53E-13	2.17E-10	0.00	5.59E-05	4.81E+00	0.0
12:00 PM	0	0.0	1.0	1.2	0	0.0	1.2	1.5	0.0	0.0	0	3.35E-13	1.39E-10	0.00	7.25E-05	5.46E+00	0.0
12:15 PM	0	0.0	2.5	3.0	0	0.0	3.2	3.8	0.0	0.0	0	8.74E-13	1.53E-10	0.00	8.25E-05	5.88E+00	0.0
12:30 PM	0	0.0	0.5	0.6	0	0.0	0.6	0.7	0.0	0.0	0	1.60E-13	2.48E-11	0.00	1.09E-04	6.33E+00	0.0
12:45 PM	2	3.1	2109.4	2531.3	3	4.0	2739.9	3287.9	1.0	6.7	0	9.75E-09	6.70E-08	0.00	1.14E-04	6.41E+00	0.0
01:00 PM	2	3.6	2442.0	2930.3	3	4.7	3169.0	3802.8	1.2	9.8	0	1.17E-08	9.83E-08	0.00	2.93E-01	2.08E+02	0.1
01:15 PM	3	4.1	2822.5	3387.0	4	5.4	3659.1	4390.9	1.4	14.0	0	1.40E-08	1.40E-07	0.00	6.43E-01	5.02E+02	0.1
01:30 PM	3	4.1	2803.4	3364.1	4	5.3	3628.8	4354.6	1.4	16.8	0	1.44E-08	1.68E-07	0.00	1.06E+00	9.24E+02	0.9

ROBINSON PROJECT MMARCH 1994 EXERCISE OFFSITE RELEASE BY SAMPLE POINT

SAMPLE POINT: 12

	AMBIENT RADIATION READINGS 1 METER ABOVE SURFACE				6" ABOVE SURFACE				CONTAMINATION READINGS READINGS MADE OUTSIDE PLUME			OFF-SITE LABORATORY DATA CONTAMINATION SAMPLE RESULTS					
DRILL TIME	Dose Rate CW mR/hr	Dose Rate OW mR/hr	LUD-19 D/R uR/hr	HP-210 C/R cpm	Dose Rate CW	Dose Rate OW	LUD-19 D/R	HP-210 C/R cpm	IODINE AIRBORNE cpm/cfm	PART. AIRBORNE cpm/cfm	VEGETAT'N SAMPLE mR/hr	IODINE AIRBORNE uCi/cc	PART. AIRBORNE uCi/cc	IODINE SURFACE uCi/m^2	IODINE VEGETAT'N pCi/g	PARTIC VEG pCi/g	TLD DOSE mRem
08:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
08:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:30 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
09:45 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:00 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:15 AM	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	0.0
10:30 AM	0	0.0	0.0	0.1	0	0.0	0.1	0.1	0.0	0.0	0	7.07E-14	1.06E-10	0.00	0.00E+00	0.00E+00	0.0
10:45 AM	0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	0	1.30E-13	1.95E-10	0.00	2.12E-06	3.18E-01	0.0
11:00 AM	0	0.0	0.1	0.2	0	0.0	0.2	0.2	0.0	0.0	0	1.73E-13	2.59E-10	0.00	6.03E-06	9.03E-01	0.0
11:15 AM	0	0.0	0.2	0.3	0	0.0	0.3	0.3	0.0	0.0	0	2.42E-13	3.62E-10	0.00	1.12E-05	1.68E+00	0.0
11:30 AM	0	0.0	3.1	3.7	0	0.0	4.0	4.8	0.0	0.0	0	1.02E-12	4.83E-10	0.00	1.85E-05	2.77E+00	0.0
11:45 AM	0	0.0	1.5	1.8	0	0.0	1.9	2.3	0.0	0.0	0	4.85E-13	1.91E-10	0.00	4.90E-05	4.22E+00	0.0
12:00 PM	0	0.0	0.9	1.0	0	0.0	1.1	1.3	0.0	0.0	0	2.94E-13	1.22E-10	0.00	6.36E-05	4.79E+00	0.0
12:15 PM	0	0.0	2.2	2.6	0	0.0	2.8	3.4	0.0	0.0	0	7.67E-13	1.34E-10	0.00	7.24E-05	5.16E+00	0.0
12:30 PM	0	0.0	0.5	0.6	0	0.0	0.5	0.7	0.0	0.0	0	1.40E-13	2.18E-11	0.00	9.54E-05	5.56E+00	0.0
12:45 PM	2	2.7	1850.7	2220.9	2	3.5	2404.0	2884.7	0.9	5.9	0	8.56E-09	5.88E-08	0.00	9.96E-05	5.62E+00	0.0
01:00 PM	2	3.1	2142.5	2571.0	3	4.1	2780.5	3336.5	1.0	8.6	0	1.02E-08	8.62E-08	0.00	2.57E-01	1.82E+02	0.1
01:15 PM	2	3.6	2476.4	2971.7	3	4.7	3210.4	3852.5	1.2	12.3	0	1.23E-08	1.23E-07	0.00	5.64E-01	4.41E+02	0.1
01:30 PM	2	3.6	2459.7	2951.6	3	4.7	3183.8	3820.6	1.3	14.7	0	1.26E-08	1.47E-07	0.00	9.32E-01	8.10E+02	0.8

CAROLINA POWER AND LIGHT COMPANY

ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

3.5 DAMAGE CONTROL MISSIONS

DAMAGE CONTROL MISSION INDEX

MISSION	DESCRIPTION	APPROX TIME
#1	"A" CHARGING PUMP FIRE	0846 HRS
#2	LOSS OF DEDICATED SHUTDOWN (DS) BUS	0853 HRS
#3	INVESTIGATE "A" CHARGING PUMP	0908 HRS
#4	INVESTIGATE HVS 1	0926 HRS
#5	SPURIOUS TURBINE TRIP	1007 HRS
#6	ATWS INVESTIGATION	1007 HRS
#7	STEAM DUMP VALVES FAILURE	1008 HRS
#8	STUCK S/G "A" PORV	1012 HRS
#9	INVESTIGATE LPMS ALARM	1116 HRS
#10	INVESTIGATE TURNING GEAR	1210 HRS
#11	PASS	

DAMAGE CONTROL MISSION # 1:

TITLE: "A" Charging Pump Fire

Narrative Description - Due to an internal electrical fault, the "A" Charging Pump motor catches fire (internal short, breakdown of insulation).

Indications - Control Room receives 2 trains of fire alarms. Charging flow drops and alarm is received. Visible flames in Charging Pump Room on motor of "A" Charging Pump and large quantities of smoke. After initial Charging Pump loss, a 480V bus ground alarm is received in the Control Room to indicate possible problems with other pumps. Fire to last for 15 minutes after fire fighting begins, initial attempts with portable equipment to be unsuccessful. Visual indication of heat damage/sparks on "B" Charging Pump and Charging Pump Control Panel.

Mockup Description - Flames on "A" Charging Pump. Conditions in the area will be described by controller.

Controller Requirements - Requires 1 controller at the Charging Pump Room. Controller must be familiar with area and fire brigade procedures/methods. Controller will prevent actual equipment spraydown but will force players to "earn" responses. May need 1 HP Controller for RC/Personnel Protection concerns.

Proposed Fix - Extinguish fire. Remove pump from service, rack out breaker, to recover DS Bus.

Parts Needed - Smoke ejector for room.

Time to Repair - 1/2 hour.

Data Change of Fix - N/A

REFERENCE MESSAGES #3, A, 4, 5, 7, 8, 9, C

DAMAGE CONTROL MISSION # 2:

TITLE: Loss of Dedicated Shutdown (DS) Bus

Narrative Description - The electrical short associated with the "A" Charging Pump motor fire results in an undervoltage (UV) condition on the DS Bus. The DS Bus breaker (52/32A) responds correctly to the UV, the "A" Charging pump breaker fails to trip, due to a faulty UV relay.

Indications - Control Room receives alarms associated with DS Bus undervoltage and subsequent trip of bus feeds. The "A" Charging Pump breaker fails to trip (remains closed).

Mockup Description - Large drawings of breaker cubicles and breaker schematics for I&C to use their test instruments on.

Controller Requirements - Requires 1 controller to cover both the DS bus tie breaker and the "A" Charging Pump breaker. Controller must be familiar with circuit breaker operations and associated electrical signals.

Proposed Fix - Manual opening and/or racking out of "A" Charging Pump breaker will clear the DS bus fault. DS tie breaker will then be able to be reclosed. Alternately, after the pump breaker is opened/racked out the DS Diesel may be started and breaker 52/32B closed.

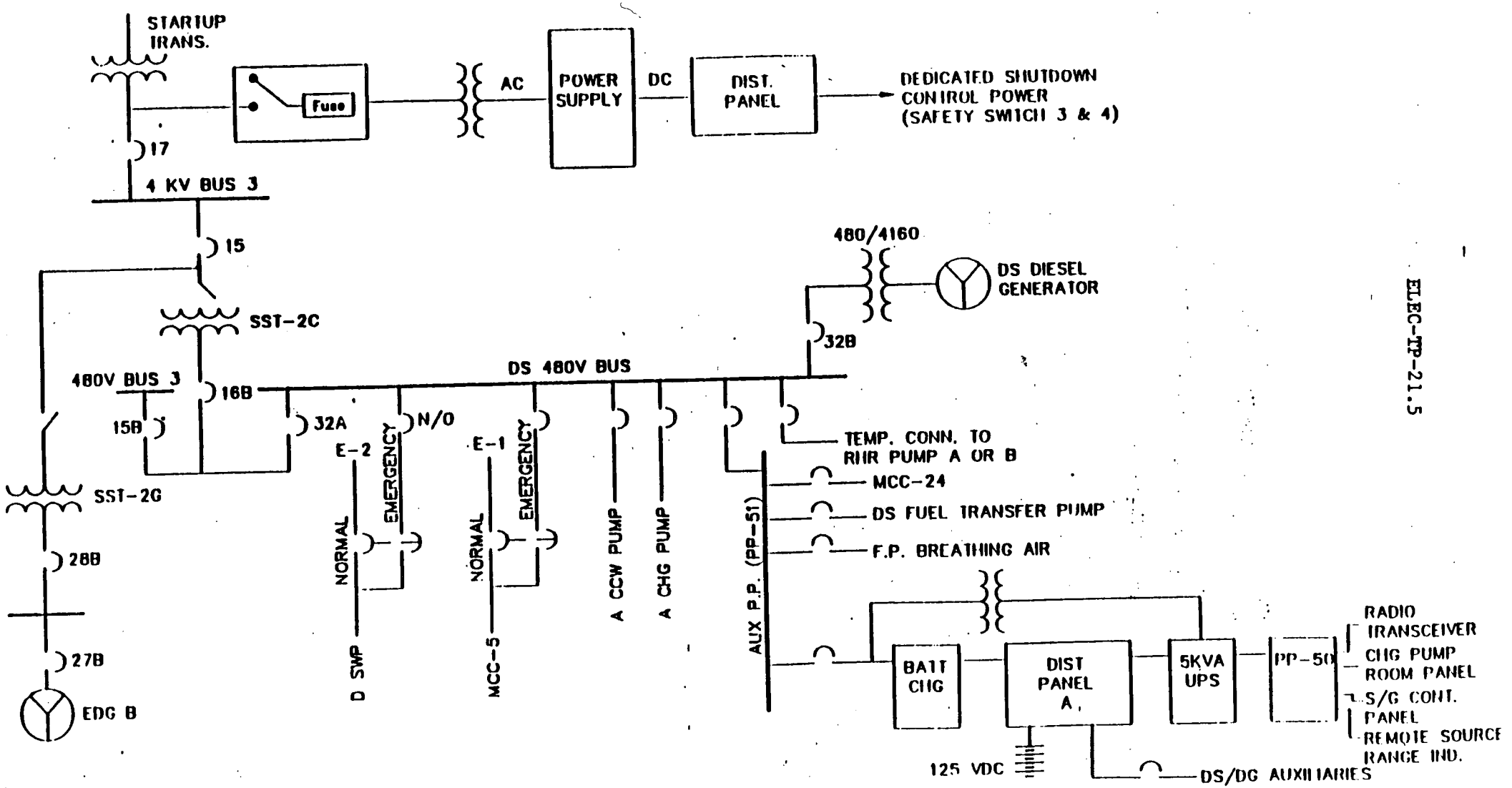
Parts Needed - Undervoltage relay for "A" Charging Pump breaker, if desired to repair.

Time to Repair - Approximately 1 hour troubleshooting, 1/2 - 1 hour to rack breaker out. Final repair may be outside of exercise scope.

Data Change of Fix - Restores "A" Charging Pump (power supply from DS bus) and availability of DS Bus (on SPDS Sheets). Contact Lead Scenario Controller in Exercise Control Room.

REFERENCE MESSAGES #6, B

DEDICATED SHUTDOWN ELECTRICAL SYSTEM



DAMAGE CONTROL MISSION # 3:

TITLE: Investigation of "A" Charging Pump

Narrative Description - Fire Alarm in Charging Room from "A" Charging Pump. Smoke and flames from "A" Charging Pump Motor. Failure of breaker to trip on undervoltage condition.

Indications - Meggar and Bridge test the "A" Charging Pump Motor.

Mockup Description - Mockup should be near DS Bus in 4KV Room. Large drawings of associated electrical schematics and breaker cubicle. Motor should meggar open from at least one winding to ground, bridge will show open winding.

Controller Requirements - 1 Controller (shared with Mission #2).

Proposed Fix - Repair motor at offsite shop.

Parts Needed - None supplied onsite.

Time to Repair - 48 Hours (Beyond exercise scope).

Data Change of Fix - None.

REFERENCE MESSAGE #10 AND MISSIONS #1 & #2

DAMAGE CONTROL MISSION # 4:

TITLE: Failure of HVS 1

Narrative Description - Due to a series of breaks of the belts on HVS-1 a HVS trouble alarm is generated on the RTGB. The Relationship of HVS-1 and HVE-2 maintain the Auxiliary (Aux) building at a negative pressure. Although the Aux Building will maintain a negative pressure, the flow balance will be disrupted.

Indication - Broken belts are on the floor and the drive motor is running and is hot to touch. APP-010-A5 (HVS Trouble) on the RTGB.

Mockup Description - N/A

Controller Requirements - One controller is required in the 2nd floor hallway in the HVS-1 Fan Room.

Proposed Fix - Obtain clearance, secure belts and simulate installation of the belts.

Parts Needed - Belts for HVS-1

Time to Repair - Approx 1 hour

Data Change of Fix - N/A

Reference Message - Simulator instructions

DAMAGE CONTROL MISSION # 5:

TITLE: Spurious Turbine Trip

Narrative Description - During the power decrease made necessary by the steam generator tube leak, the turbine trips while at approximately 25% power. Trip is a turbine auto trip due to loss of EHC fluid at a reheat valve. The loss of fluid in the emergency trip header reduces EHC pressure which closes turbine stop valves. Cause of pressure loss is a broken fitting on EHC line to reheat valve.

Indications - Control Room receives turbine trip first out alarm and EHC reservoir low level alarms. 40-50 gallons of oil may be seen @ the spill site.

Mockup Description - Simulated spill of EHC fluid between Turbine and MSR.

Controller Requirements - Requires 1 controller familiar with chemical/oil spills. Requires 1 controller familiar with EHC lines/high pressure oil piping.

Proposed Fix - Secure EHC pumps. Investigate leak and repair EHC line/replace fitting. Clean up spill, refill EHC reservoir. This mission may not be repaired due to other priorities, but environmental issues must be addressed.

Parts Needed - New EHC piping/fitting.

Time to Repair - >4 Hours, may be outside of exercise scope.

Data Change of Fix - N/A

REFERENCE MESSAGES #15, 17, K, L

DAMAGE CONTROL MISSION # 6:

TITLE: ATWS

Narrative Description - Following the spurious turbine trip, the associated automatic reactor trip does not occur. A manual trip from the RTGB is required to reduce power. This will be second alert condition in the scenario. Fault caused by P-7 logic failure.

Indications - Reactor trip breakers remain "red", reactor power is not reduced, "first out" for turbine trip is flashing.

Mockup Description - None

Controller Requirements - Requires 1 I&C controller.

Proposed Fix - Troubleshoot problem, identify failure.

Parts Needed -

Time to Repair - Play as actual, ≈ 2 Hours

Data Change of Fix - None

REFERENCE MESSAGE #15

DAMAGE CONTROL MISSION # 7:

TITLE: Steam Dump Valves Failure

Narrative Description - Following the spurious turbine trip, the steam dump valves fail to open to control Tavg. Failure is due to failure of PSHH-1338 (Condenser Vacuum Interlock).

Indications - Control Room indications for steam dump valves indicate closed, Tavg increases, steam generator PORVs open.

Mockup Description - Drawing of steam dump control circuit for I&C to use their test instruments on. Drawings of PSHH-1338 and PSHH-1339 circuits also.

Controller Requirements - Requires 1 controller familiar with circuit functions.

Proposed Fix - Jumper PSHH-1338 contacts to restore steam dumps or replace Pressure Switch (PS) from stock.

Parts Needed - New PS or jumper. Jumper may require Temporary Modification or Engineering Evaluation.

Time to Repair - 1-2 Hours.

Data Change of Fix - No SPDS data change allowed if using "paper" scenario, must be OOS for at least 1 hour.

REFERENCE MESSAGE #16

DAMAGE CONTROL MISSION # 8:

TITLE: Stuck S/G "A" PORV

Narrative Description - Following turbine trip without steam dumps available, the valve opened properly but will not reclose later. High rad levels and much steam and noise exist in the area.

Indications - Lights on RTGB indicate valve has not fully closed. If repair party can get close enough, the valve appears to have a bent stem.

Mockup Description - Drawings of valve, instruction manual.

Controller Requirements - Observe and record mechanics attempts to repair. Do not allow valve to close.

Proposed Fix - Loosen packing, lubricate stem and cycle valve.

Parts Needed - Lubricant and brush, wrenches, pry bars, etc.

Time to Repair - OOS for duration of drill.

Data Change of Fix - None

REFERENCE MESSAGES #19, 25

DAMAGE CONTROL MISSION # 9:

TITLE: Investigate LPMS Alarm

Narrative Description - LPMS Annunciator Alarm received in Control Room. When the STA arrives at the LPMS panel he will find indications that loose parts have occurred at both the bottom and top of the Reactor Vessel. Upon checking the various displays he will find that loose parts impacts are still occurring in the Reactor Vessel.

Indications - Annunciator Alarm in Control Room and local alarm on LPMS Panel.

Mockup Description - Typed displayed messages as follows:

When the STA or alternate responds to the LPMS cabinet in the Rod Control Room they will find displayed on the LPMS screen that Channels 752 - Reactor Vessel lower and 750 - Reactor Vessel Upper Channels have had events.

When the channels displays are requested they will note that impacts occurred on bottom of Reactor Vessel and 1 minute later impacts occurred at top of Reactor Vessel. The number and force of the impacts is less at the top than at the bottom, indicating parts may have broken up and some may be trapped in the core.

The displays will indicate that no additional impacts are occurring in either the RV bottom or top.

DAMAGE CONTROL MISSION # 9: (Continued)

If the STA checks the other channels, he will note that impacts were seen the previous day on S/G "B" primary at 2300 hours. This is information unrelated to the real event ("red herring) but will be explained as normal spurious indication that may be induced by changes in RCS lineup. These types of LPMS indications often occur. Since only one impact occurred above the alarm limit, it did not alarm the system.

If the STA displays the other active channels, he will find that impacts have occurred on Channel 754 S/G "A" primary side. The impacts occurred after those in the Reactor Vessel Upper and show that the debris may have traveled into S/G "A". The impacts are below the alarm setpoint, so no alarm was received.

The debris could work its way back into the Reactor Vessel lower area but by the time it traveled through the S/G and back it could be small enough not to register as impacts. It could however lodge in the core and cause additional fuel failures, due to debris wear.

Controller Requirements - 1 Controller familiar with the LPMS.

Proposed Fix - Report findings to Control Room. Get printout of displays for future use or by others. Arrange for a tape of events to be forwarded to Westinghouse for analysis.

Parts Needed - None. If decision to make recording, will need new tape for the recorder.

Time to Repair - Approximately 10 to 20 minutes to check displays and acquire data.

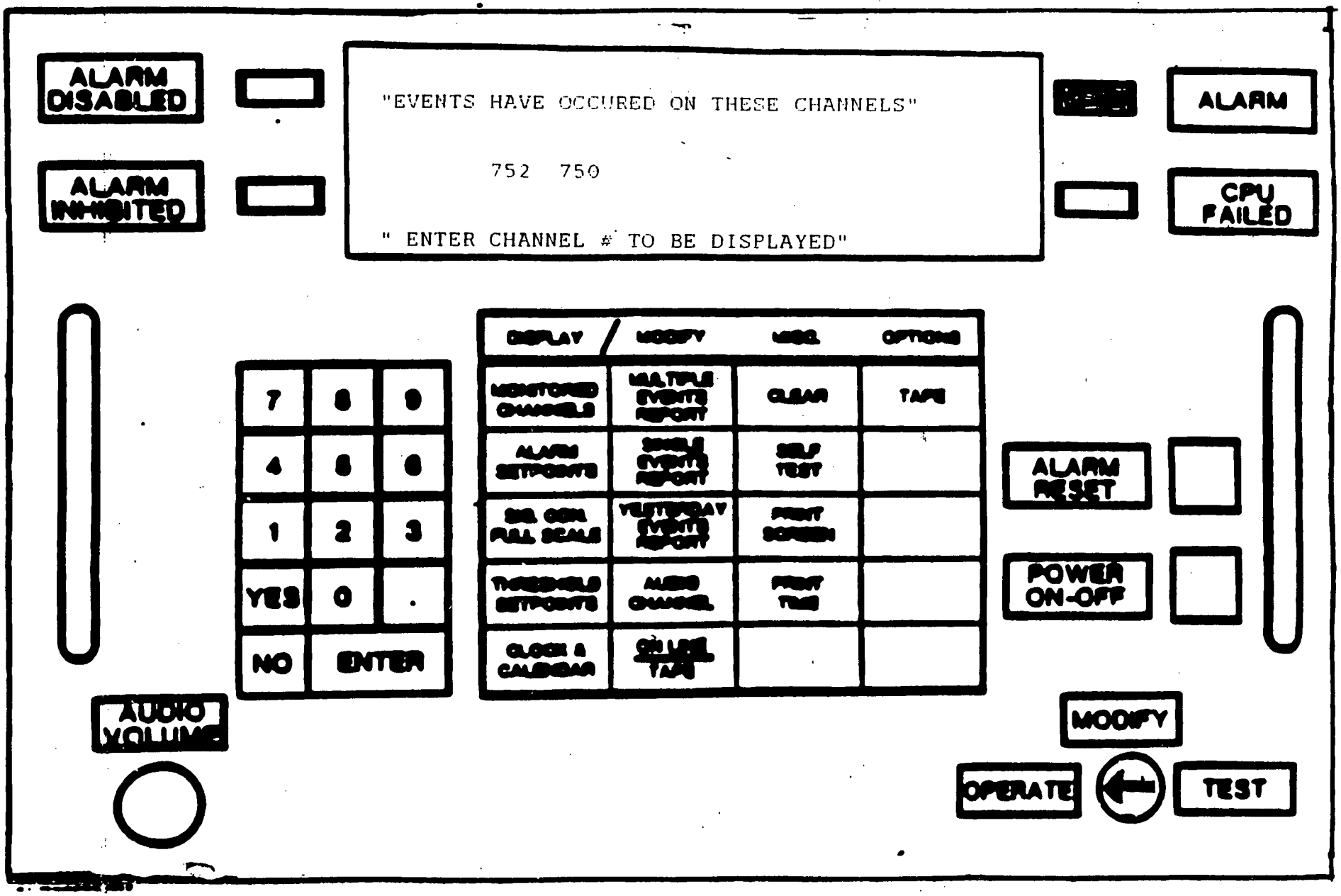
Data Change of Fix - None.

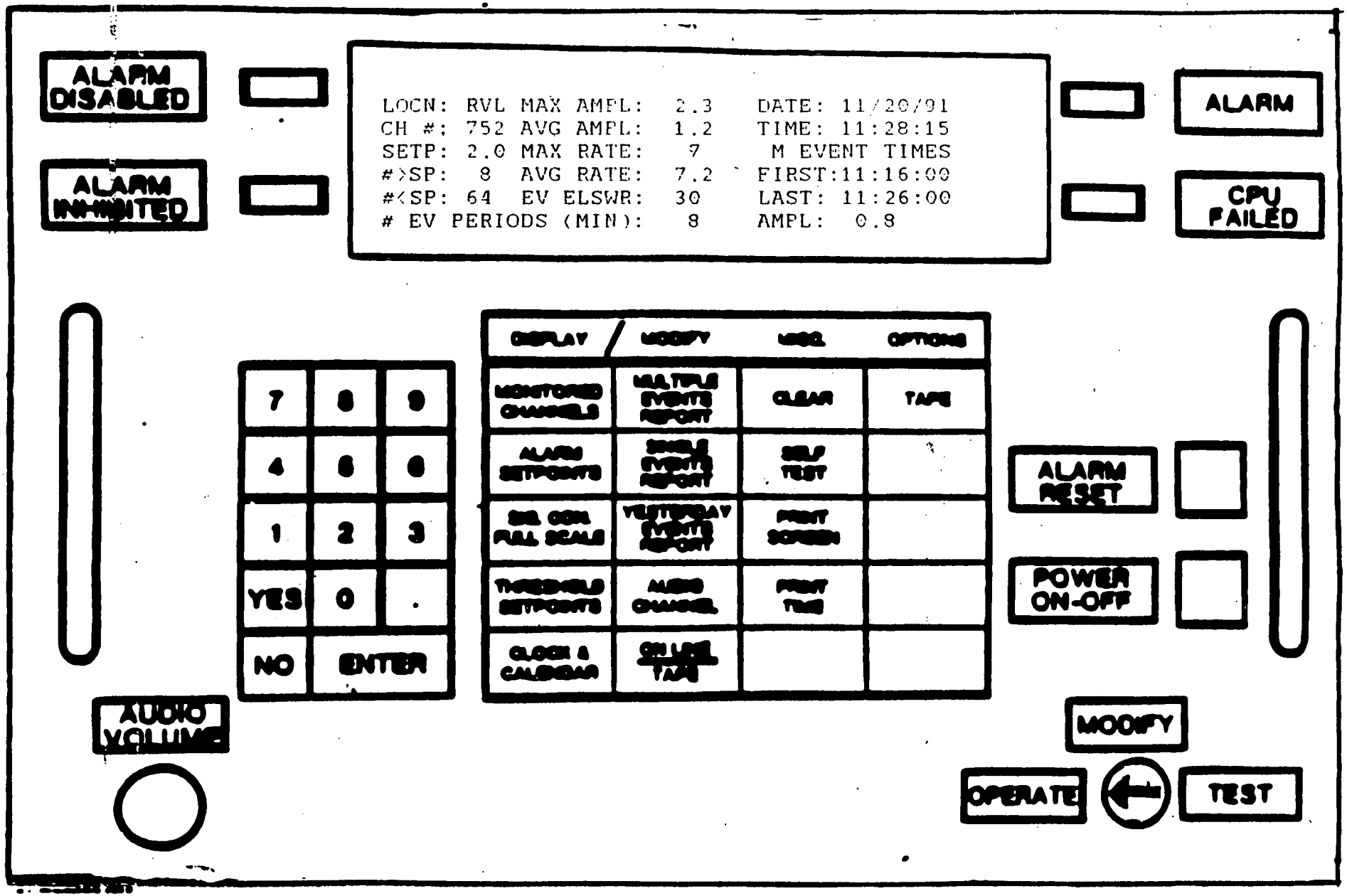
REFERENCE MESSAGE # 26

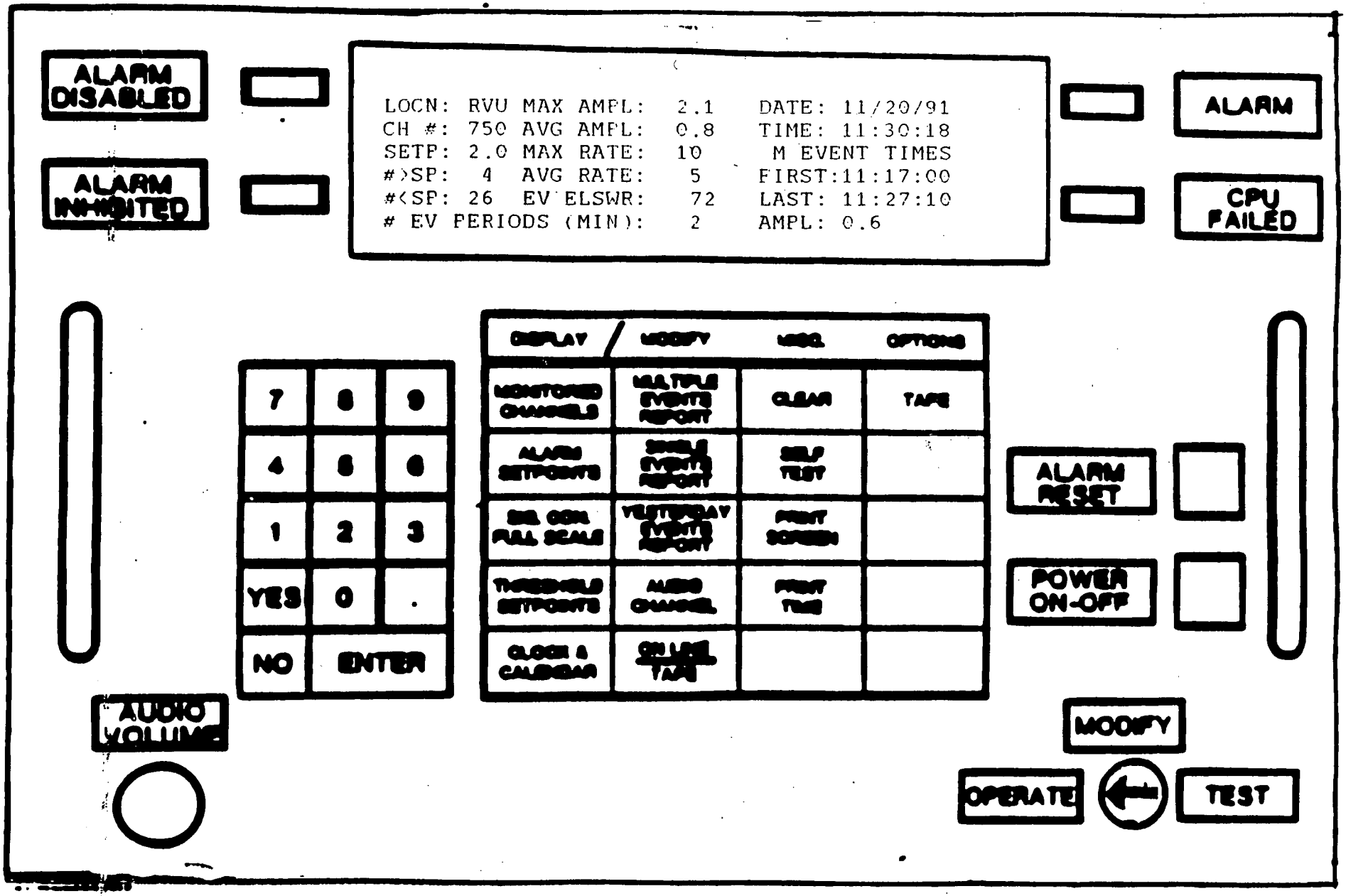
CONTROL ROOM AUXILIARY ANNUNCIATOR PANEL

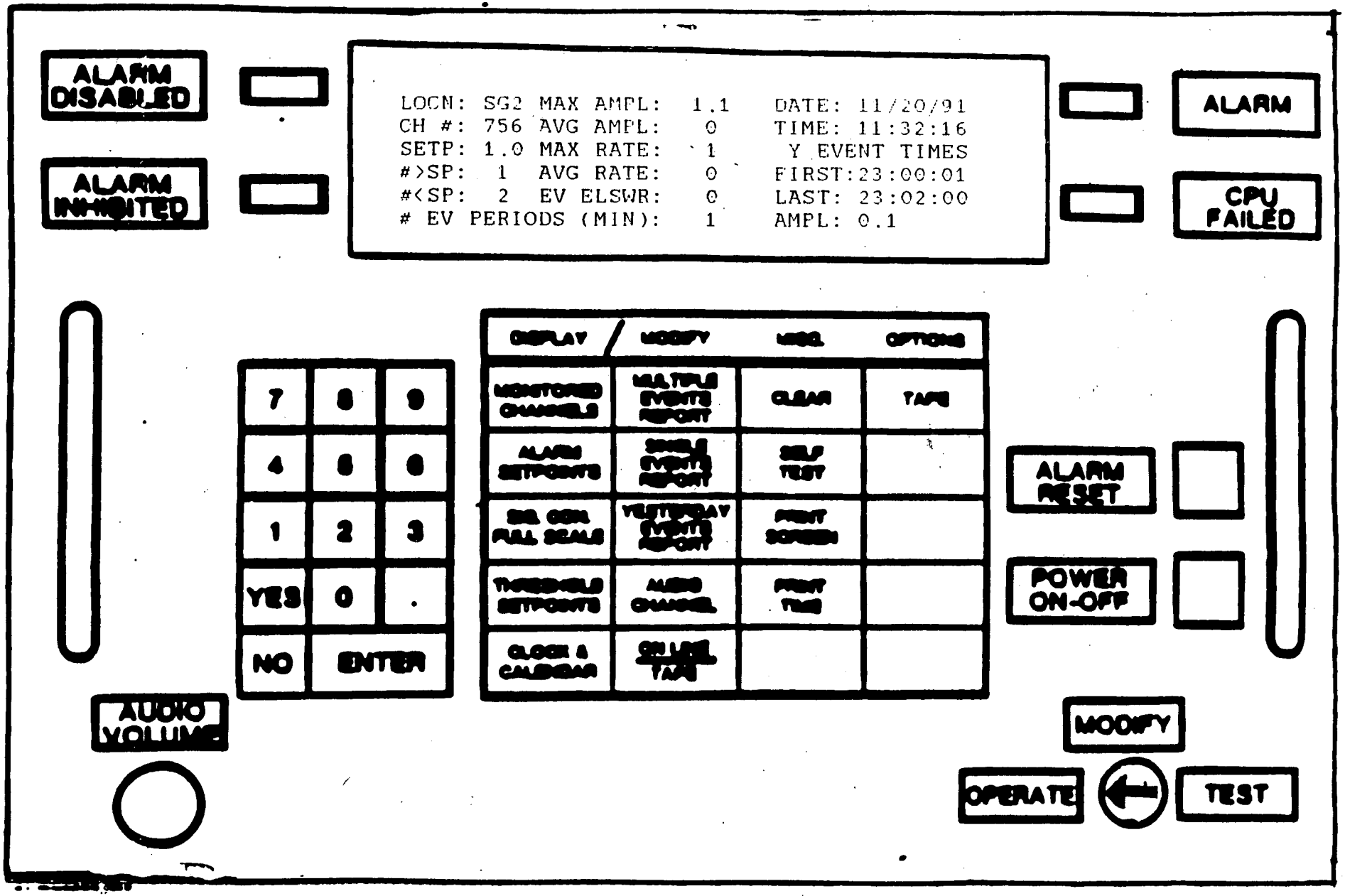
ICCM SYSTEM MALFUNCT CHANNEL A 1	ICCM SYSTEM MALFUNCT CHANNEL B 2	LPMS ALARM 3	SG BLOWDOWN/WET LAYUP TROUBLE 4	CONDENSATE POLISHER TROUBLE 5	PA SYS CIR BKR TRIPPED 6	7	INST A/C "C" TROUBLE 8	INST A/C "C" TRIP 9	10	11	12
SPENT FUEL PIT HI TEMP 13	SPENT FUEL PIT HI LVL 14	SPENT FUEL PIT LO LVL 15	FULL RANGE NEUTRON FLUX MONITOR TROUBLE CHANNEL A 16	FULL RANGE NEUTRON FLUX MONITOR TROUBLE CHANNEL B 17	BATTERY "C" UNDER-VOLTAGE 18	BATTERY "C" GROUND DETECTION 19	20	21	22	23	N_2 HEADER PRESSURE HIGH/LOW 24
ROD DRIVE CONT'L RM TEMP HI 25	BATTERY ROOM TEMPERATURE HI/LO 26	27	N. SERVICE WTR. STRAINER PIT LEVEL HI-HI 28	S. SERVICE WTR STRAINER PIT LEVEL HI-HI 29	RCS LOOP 2 STANDPIPE LEVEL LOW 30	31	ICCM TEMP HIGH 32	33	34	35	36
ERFIS ALARM 37	38	39	N. SERVICE WTR. STRAINER PIT LEVEL HI 40	S. SERVICE WTR. STRAINER PIT LEVEL HI 41	RCS LOOP 3 STANDPIPE LEVEL LOW 42	43	44	45	46	47	48
49	50	51	52	53	TURBINE BLDG SW ISOLATED 54	A RHR PIT HI-HI WATER LEVEL 55	B RHR PIT HI-HI WATER LEVEL 56	57	58	59	60
61	62	63	64	65	66	A RHR PIT HI WATER LEVEL 67	B RHR PIT HI WATER LEVEL 68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144

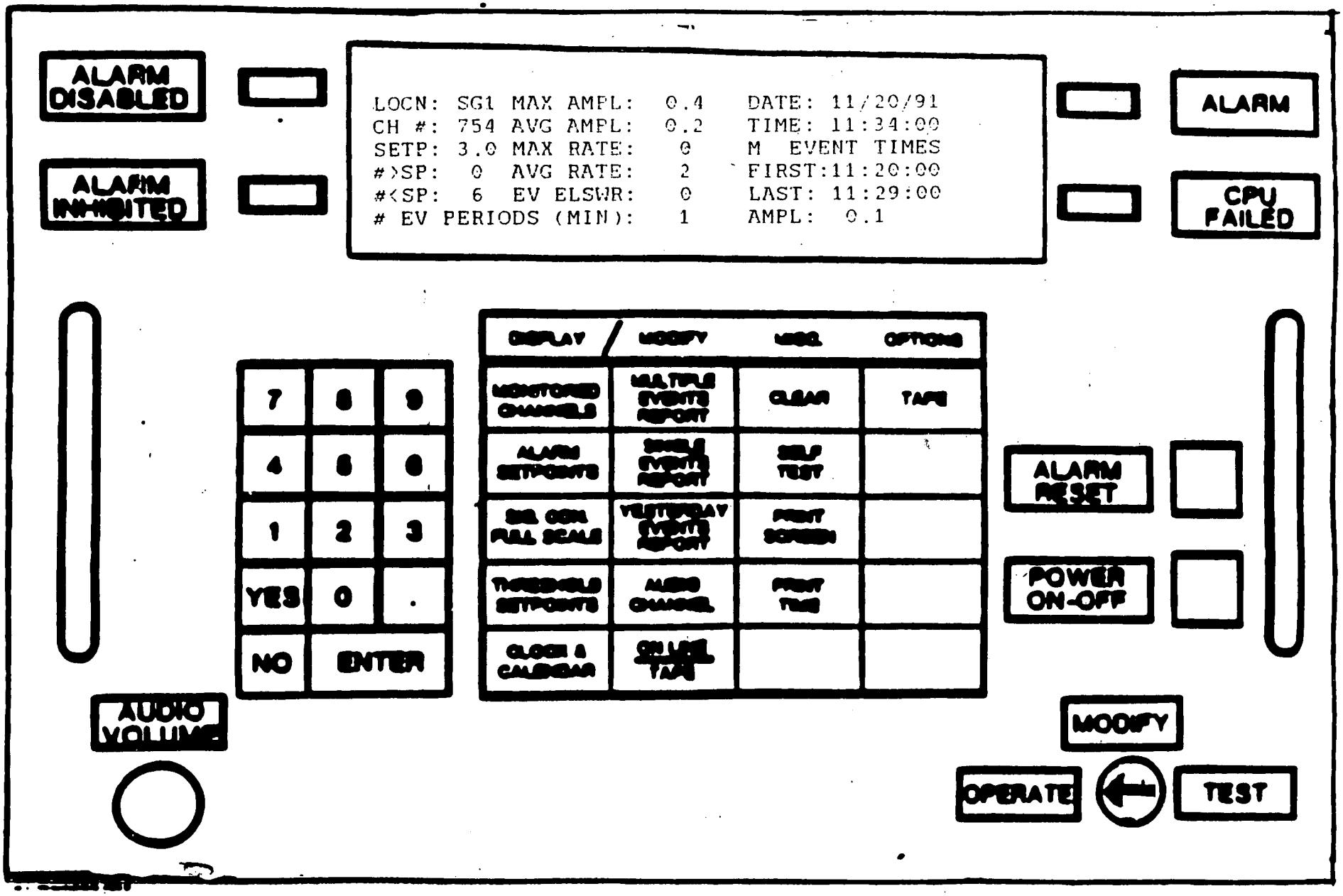
```
LOCN: RVL MAX AMPL:   2.3    DATE: 11/20/91
CH #: 752 AVG AMPL:   1.2    TIME: 11:28:15
SETP: 2.0 MAX RATE:    7      M EVENT TIMES
#>SP:   8  AVG RATE:   7.2   FIRST:11:16:00
#<SP:  64  EV ELSWR:  30     LAST: 11:26:00
# EV PERIODS (MIN):    8     AMPL:   0.8

LOCN: RVU MAX AMPL:   2.1    DATE: 11/20/91
CH #: 750 AVG AMPL:   0.8    TIME: 11:30:18
SETP: 2.0 MAX RATE:   10      M EVENT TIMES
#>SP:   4  AVG RATE:    5    FIRST:11:17:00
#<SP:  26  EV ELSWR:   72     LAST: 11:27:10
# EV PERIODS (MIN):    2     AMPL: 0.6

LOCN: SG2 MAX AMPL:   1.1    DATE: 11/20/91
CH #: 756 AVG AMPL:    0     TIME: 11:32:16
SETP: 1.0 MAX RATE:    1      Y EVENT TIMES
#>SP:   1  AVG RATE:    0    FIRST:23:00:01
#<SP:   2  EV ELSWR:    0     LAST: 23:02:00
# EV PERIODS (MIN):    1     AMPL: 0.1

LOCN: SG1 MAX AMPL:   0.4    DATE: 11/20/91
CH #: 754 AVG AMPL:   0.2    TIME: 11:34:00
SETP: 3.0 MAX RATE:    0     M  EVENT TIMES
#>SP:   0  AVG RATE:    2    FIRST:11:20:00
#<SP:   6  EV ELSWR:    0     LAST: 11:29:00
# EV PERIODS (MIN):    1     AMPL:   0.1
```


ALARM DISABLED
ALARM INHIBITED
"EVENTS HAVE OCCURED ON THESE CHANNELS"
752 750
" ENTER CHANNEL # TO BE DISPLAYED"
ALARM
CPU FAILED
7 8 9
4 5 6
1 2 3
YES 0 .
NO ENTER
DISPLAY / MODIFY
MULTIPLE EVENTS REPORT
CLEAR
TAPE
SINGLE EVENTS REPORT
SELF TEST
YESTERDAY EVENTS REPORT
PRINT SCREEN
AUDIO CHANNEL
PRINT TIME
CLOCK & CALENDAR
CHANGE TAPE
ALARM RESET
POWER ON-OFF
AUDIO VOLUME
MODIFY
OPERATE
TEST


ALARM DISABLED
ALARM INHIBITED
LOCN: RVL MAX AMPL: 2.3 DATE: 11/20/91
CH #: 752 AVG AMPL: 1.2 TIME: 11:28:15
SETP: 2.0 MAX RATE: 7 M EVENT TIMES
#>SP: 8 AVG RATE: 7.2 FIRST:11:16:00
#<SP: 64 EV ELSWR: 30 LAST: 11:26:00
EV PERIODS (MIN): 8 AMPL: 0.8
ALARM
CPU FAILED
7 8 9
4 5 6
1 2 3
YES 0 .
NO ENTER
DISPLAY / MODIFY MISC. OPTIONS
MONITORED CHANNELS
MULTIPLE EVENTS REPORT
CLEAR
TAPE
ALARM SETPOINTS
SINGLE EVENTS REPORT
SELF TEST
SIL CONT FULL SCALE
YESTERDAY'S EVENTS REPORT
PRINT SCREEN
THRESHOLD SETPOINTS
ALERT CHANNEL
PRINT TIME
CLOCK & CALIBRAN
ON LINE TAPE
ALARM RESET
POWER ON-OFF
AUDIO VOLUME
MODIFY
OPERATE
TEST


ALARM DISABLED
ALARM INHIBITED
LOCN: RVU MAX AMPL: 2.1 DATE: 11/20/91
CH #: 750 AVG AMPL: 0.8 TIME: 11:30:18
SETP: 2.0 MAX RATE: 10 M EVENT TIMES
#>SP: 4 AVG RATE: 5 FIRST:11:17:00
#<SP: 26 EV ELSWR: 72 LAST: 11:27:10
EV PERIODS (MIN): 2 AMPL: 0.6
ALARM
CPU FAILED
7 8 9
4 5 6
1 2 3
YES 0 .
NO ENTER
DISPLAY / MODIFY MISC. OPTIONS
MONITORED CHANNELS
MULTIPLE EVENTS REPORT
CLEAR
TAPE
ALARM SETPOINTS
SINGLE EVENTS REPORT
SELF TEST
SEL COM FULL SCALE
YESTERDAY'S EVENTS REPORT
PRINT SCREEN
THRESHOLD SETPOINTS
ALERT CHANNEL
PRINT TIME
CLOCK & CALENDAR
ON LINE TAPE
ALARM RESET
POWER ON-OFF
AUDIO VOLUME
MODIFY
OPERATE
TEST


ALARM DISABLED
ALARM INHIBITED
LOCN: SG2 MAX AMPL: 1.1
CH #: 756 AVG AMPL: 0
SETP: 1.0 MAX RATE: 1
#>SP: 1 AVG RATE: 0
#<SP: 2 EV ELSWR: 0
EV PERIODS (MIN): 1
DATE: 11/20/91
TIME: 11:32:16
Y EVENT TIMES
FIRST:23:00:01
LAST: 23:02:00
AMPL: 0.1
ALARM
CPU FAILED
7 8 9
4 5 6
1 2 3
YES 0 .
NO ENTER
DISPLAY
MODIFY
MISC.
OPTIONS
MONITORED CHANNELS
MULTIPLE EVENTS REPORT
CLEAR
TAPE
ALARM SETPOINTS
SINGLE EVENTS REPORT
SELF TEST
SIG. GEN. FULL SCALE
YESTERDAY EVENTS REPORT
PRINT SCREEN
THRESHOLD SETPOINTS
AUDIO CHANNEL
PRINT TIME
CLOCK & CALENDAR
ON LINE TAPE
ALARM RESET
POWER ON-OFF
AUDIO VOLUME
MODIFY
OPERATE
TEST


ALARM DISABLED
ALARM INHIBITED
LOCN: SG1 MAX AMPL: 0.4 DATE: 11/20/91
CH #: 754 AVG AMPL: 0.2 TIME: 11:34:00
SETP: 3.0 MAX RATE: 0 M EVENT TIMES
#>SP: 0 AVG RATE: 2 FIRST:11:20:00
#<SP: 6 EV ELSWR: 0 LAST: 11:29:00
EV PERIODS (MIN): 1 AMPL: 0.1
ALARM
CPU FAILED
DISPLAY
MODIFY
MISC.
OPTIONS
MONITORED CHANNELS
MULTIPLE EVENTS REPORT
CLEAR
TAPE
ALARM SETPOINTS
SINGLE EVENTS REPORT
SELF TEST
SIG. CONT. FULL SCALE
YESTERDAY EVENTS REPORT
PRINT SCREEN
THRESHOLD SETPOINTS
ALARM CHANNEL
PRINT TIME
CLOCK & CALENDAR
ON LINE TAPE
7 8 9
4 5 6
1 2 3
YES 0 .
NO ENTER
ALARM RESET
POWER ON-OFF
AUDIO VOLUME
MODIFY
OPERATE
TEST

DAMAGE CONTROL MISSION # 10:

TITLE: INVESTIGATE TURNING GEAR PROBLEM

Narrative Description - During the power decrease mae necessary by the steam generator tube leak, the turbine will trip. From approx. 1007 until approx 1115 the turbine will coast down. After approx one hour (approx 1210) the chain will break causing the turning gear to stop. This problem will need to be addressed to prevent damage to the turbine shaft.

Indications - the following RTGB indications will be seen APP-008-D2, Turning Gear Motor Trip, and APP-009-F2 Turbine at Zero Speed .

Mockup Description - No mock up will be available

Controller Requirements - Requires 1 controller at the Turning Gear on the turbine deck. Controller must be familiar with area and mechanical procedures/methods. Controller will prevent actual equipment manipulation but will force players to "earn" responses. May need 1 HP Controller for RC/Personnel Protection concerns.

Proposed Fix - Repair chain and restart turning gear. Provide appropriate procedures and diagrams if needed.

Parts Needed - procedures, chain or repair links,and tools

Time to Repair - 1 1/2 hour.

Data Change of Fix - N/A

REFERENCE MESSAGES

DAMAGE CONTROL MISSION # 11

TITLE: Sample RCS from the PASS

NARRATIVE DESCRIPTION:During a plant transient, OPS will require RCS sample results. This will provide an isotopic to determine fuel damage.

INDICATION: Chemistry will receive request for isotopic results from the Reactor Coolant System. These request may come at various times during the exercise.

MOCK UP DESCRIPTION: There will be no mock up available due to the availability of the PASS panel. Pulling of a demineralized water sample will determined by the status of the plant at the time of the annual exercise.

CONTROLLER REQUIREMENTS: One Health Physics controller and if possible a chemistry controller

PROPOSED FIX: Sample results are in the controller packets and may be given 30 to 45 minutes after completion of the sample has been pulled.

PARTS NEEDED:PASS procedures

TIME TO REPAIR: N/A

DATA CHANGE OF FIX: N/A

REFERENCE MESSAGE:

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EMERGENCY PREPAREDNESS EXERCISE

4.0 CONTROLLERS' INSTRUCTIONS

INSTRUCTIONS FOR CONTROLLERS

1. Personnel are assigned as controllers or evaluators at the key function areas to monitor and control the exercise. In addition, they will accompany Radiological Monitoring Teams, Plant Health Physics Personnel, and Emergency Repair, and Fire Emergency Teams.

2. The in-plant controllers will be coordinated by the Lead Scenario Controller. He/she will be responsible for the overall control of the scenario. If unable to reach the Lead Scenario Controller, contact any Lead Controller.

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

   Two kinds of messages will be used:

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

   Contingency
   Messages used with the approval of the Lead Scenario Controller in order to maintain the scenario plan continuity or schedule. Control messages will be presented to the designated exercise participant at the time specified in the event schedule. The controller should follow up with an explanation of the message and answer questions to ensure that the participant understands the message.

   Controllers will not provide information to the participants regarding scenario development or resolution of problem areas encountered. The participants are expected to obtain information through their own organization and exercise their own judgement in determining response actions and resolving problems.

4. Note that the scenario events are hypothetical. Any portion of the scenario depicting Plant system operational transients are simulated events. No control room actions or reactions involving operation of Plant systems or affecting generation capability will be initiated. All scenario messages will be prefixed and suffixed with the words "THIS IS AN DRILL/EXERCISE MESSAGE." Controllers stationed at areas vital to maintaining generating capability should be especially aware and take extra precautions in issuing messages or giving instructions regarding the scenario events.

5. Required controllers have the time-related Plant and radiological parameters of the exercise scenario. This information shall be issued to the appropriate exercise participants.

6. Some exercise participants may insist that certain parts of the scenario are unrealistic. The controllers and evaluators have the authority, with the approval from the Lead controllers, to clarify any questions regarding scenario validity. In some cases, it may be necessary to exercise specific instructions to preserve the continuity and objective of the exercise. Instructions however, should be made in such a manner so as NOT TO PROMPT players to make a specific response.

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

8. Controllers will commence their assignments at assembly locations for players that they are to observe or as directed by the Lead Controllers.

9. Players are not allowed to introduce problems or events into the exercise or its scenario. Free play however, should be encouraged wherever possible, so long as the players actions do not affect the overall scenario or the reaching of objectives of the exercise. when free play occurs, the Lead Controller or Exercise Director should be informed and have final authority to decide if such actions are consistent with overall exercise objectives.

CONTROLLER/EVALUATOR TELEPHONES

will change later

CONTROLLER NETWORK FOR: 3/30/94	
CONTROL ROOM	RADIO
TECHNICAL SUPPORT CENTER	RADIO
EMERGENCY OPERATIONS CENTER	RADIO
OPERATIONAL SUPPORT CENTER	RADIO

OTHER CONTROLLER TELEPHONES:	
CONTROL ROOM	**1519**
TECHNICAL SUPPORT CENTER	**5045**
EMERGENCY OPERATIONS FACILITY	**5051**
CORPORATE METEOROLOGY (Caronet)	
CORPORATE COMMUNICATIONS (Caronet)	
NRC CONTROLLER (Caronet)	

EXERCISE CONTROL ROOM NUMBERS FOR: 3'	
SHIFT SUPERVISOR	will change later
SENIOR CONTROL OPERATOR	627[illegible]
REACTOR OPERATOR	6277
SHIFT TECHNICAL ADVISOR	6443
SPDS COMMUNICATIONS	1852
FAX MACHINE	1815
AO AREA	SIMULATED

STATE/COUNTY Selective Signalling.....USE PER PROCEDURE
STATE/COUNTY Decision Line.....USE PER PROCEDURE
STATE/COUNTY TELECOPIERS.....USE PER PROCEDURE
ERDS.....DO NOT USE
NRC FTS 2000.....DO NOT USE
NRC OPERATIONS CENTER.....
NRC HPN LINE.....
NRC TELECOPIER.....
CORPORATE COMMUNICATIONS.....USE PER PROCEDURE
OTHER.....Give Message to Nearest Controller

REMEMBER: "This is a Drill Message"

EXERCISE CONTROL ROOM NUMBERS FOR: 3/30/94	
OSC LEADER	5034
Mechanical Planner	5013
Electrical Planner	5014
Damage Control Team Leader	5015
Mechanical Supervisor	5018
Electrical Supervisor	5019
E&RC Supervisor	5020
ALARA Supervisor	5023
OSC Administrative Assistant	5026
E&RC Team Leader	5027
RWP Status Board	5028
Chemistry Desk	5033

REMEMBER: "This is a Drill Message"

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EMERGENCY PREPAREDNESS EXERCISE

5.0 EVALUATORS' INSTRUCTIONS

A. INSTRUCTIONS FOR EVALUATORS

1. Know the overall Controller/Evaluator Organization.

2. Identify the players by name and function.

3. Identify yourself at all times to all players. Wear identification as provided (controller/evaluator badges or arm bands).

4. Identify the phone (or radio for field teams) you will use to maintain communications with Lead Controllers.

5. Position yourself to maximize your effectiveness in issuing messages and observing the players.

6. Be sure you understand the players' scenario script and the master scenario.

7. If acting as a Controller/Evaluator, keep the play on schedule by checking your timeline.

8. If acting as a Controller/Evaluator, issue the message on time. Make sure the players understand it.

9. If acting as a Controller/Evaluator, remember to call the Lead Controller to report on status of players' actions if off schedule or if in doubt about what to do. Call for advice if players depart significantly from the scenario script.

10. Allow the players reasonable flexibility to perform their functions and demonstrate their skill, knowledge, and initiative.

11. Identify any non CP&L evaluators. Make sure they are aware of all your actions and those of the players.

12. Make notes on good and bad points of players' actions, the strengths and weaknesses, and areas for improvements.

13. Attend the post-exercise critique session to provide your comments and recommendations to the Lead Controller.

14. Identify the players' leaders. Work with them as appropriate.

15. If a real emergency occurs and this affects the players, call off your portion of the exercise and notify the Lead Scenario Controller immediately.

16. Be at your post at least 30 minutes prior to any player action commencement.

17. Any non-CP&L evaluators will work through the Exercise Director or the Lead Scenario Controller. This is essential for the success of the exercise.

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

GENERAL "DON'Ts" FOR EVALUATORS

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

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

3. Don't coach the players.

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

5. Don't forget to call the Lead Controller to seek advice or help as necessary.

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

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

*** NOTE ***

All participants will comply with radiation exposure control practices for actual conditions existing at the plant at the time of the exercise.

Critique Worksheets/Evaluation Checklists

In an effort to help evaluators, a set of "Evaluation Checklists" have been provided for reference in Section 5.0. Each evaluator may, if he/she chooses, utilize the checklists for their particular area of observation to assist in being sure that critical items for evaluation are not accidentally missed during the exercise. The Evaluation Checklists may be completed and returned to the Lead Exercise Evaluator upon completion of the critique process; however, this is optional.

Evaluators have been provided in Section 6.0 of this exercise plan, a "Controller's Log Sheet" which is to be used to record events which have been observed during the exercise. These sheets are to be used by both controllers and evaluators for the purpose of documenting times and events which have occurred so that upon conducting the critique, specific facts can be presented. It is important that the time of the event observed be recorded so that if those actions affect several emergency facilities, a coordinated review of the chronological sequence of events may be reconstructed during the critique.

Additionally, a "Exercise Critique Form" has been provided in Section 6.0 to summarize the observations which the evaluators have made during the exercise. In responding to the "Exercise Critique Form," only those strengths which are clearly outstanding need to be noted. In addition to noting the outstanding action, it is important to include (if possible) the name of the individual(s) observed so that recognition of their achievement may be included in the final critique report. Response to the "Drill Critique Form" is to include those observations which are deficiencies from the emergency plan, the implementing procedure, or the objectives for the exercise as stated in Section 2.0 of this exercise plan. It is very important that deficiencies be related directly to a specific item from the three mentioned documents. If possible, provide the exact procedure reference, plan reference, or exercise objective number with the noted deficiency and your recommendation for corrective action. Finally, your observations are an important part of the exercise critique since each controller/evaluator has been selected for their assignment based upon their background or experience in the particular function assigned. Observations allow the whole organization an opportunity for improvement and provide a viewpoint for future consideration, but must be listed differently than deficiencies so that proper consideration can be given. In responding to all three areas (strengths, deficiencies, and observations), additional sheets of paper may be attached to the "Exercise Critique Form" for completion of the evaluators' response.

It is required that by conclusion of the evaluators critique, the "Exercise Critique Form" and the "Controller's Log Sheets" can be returned to the Lead Evaluator or to the Lead Exercise Evaluator. Further comments or observations which an evaluator may wish to elaborate upon and document should be made in the form of a written report to the Chief Evaluator within 5 working days from the conclusion of the exercise. This written information should be further detail or observations which are not of a critical nature to the evaluation process, since two of the exercise objectives are to demonstrate the ability to conduct a post-exercise critique to determine areas requiring corrective actions.

EVALUATION CHECKLISTS

-Control Room Controller-

	Yes	No	Not Observed
1. Did the operators respond quickly to the initiating events and properly assess the situation?	____	____	____
2. Did the Control Room personnel take appropriate actions to mitigate the emergency condition in an expeditious manner?	____	____	____
3. Were appropriate abnormal conditions and emergency operations procedures used and periodically reviewed during the emergency situation?	____	____	____
4. Did the Shift Supervisor receive timely notification of the emergency condition?	____	____	____
5. Were there sufficient measurable/observable indications to recognize the Emergency Action Levels?	____	____	____
6. Were classifications of the emergency conditions timely and accurate?	____	____	____
7. Did Control Room personnel know when to refer to the emergency plan implementing procedures and which procedures to use?	____	____	____
8. Was the emergency classification upgraded or downgraded when appropriate?	____	____	____
9. Did the Shift Supervisor promptly assume control and authority?	____	____	____
10. Did the Shift Supervisor initiate the correct response actions to implement onsite and offsite assessment and protective response measures?	____	____	____
11. Were such measures implemented in a prompt and well thought out manner?	____	____	____
12. If an emergency condition required corrective action in-plant, was a team assembled and briefed in a timely manner?	____	____	____
13. Did the Shift Supervisor practice efficient use of available personnel?	____	____	____
14. Was assistance requested from the appropriate emergency response organizations?	____	____	____

	Yes	No	Not Observed
15. Were personnel aware of their emergency response roles and functions?	____	____	____
16. Did the Shift Supervisor review the simulated plant conditions and declare emergency classification(s) with the Site Emergency Coordinator upon his arrival at the TSC?	____	____	____
17. Were appropriate decision-making responsibilities transferred to the TSC upon its activation?	____	____	____
18. Were manpower and staffing requirements for protracted operations assessed?	____	____	____
19. Were notification procedures available and used for mobilizing onsite emergency response personnel and augmenting the emergency response staff?	____	____	____
20. Were emergency response phone listings available, complete, and up-to-date?	____	____	____
21. Were initial and follow-up notification forms readily available and properly completed?	____	____	____
22. Did the Control Room communicators appear to understand and use the communications equipment and systems effectively?	____	____	____
23. Did Control Room personnel transmit data in a timely and knowledgeable manner?	____	____	____
24. Did the Control Room communicators use the statement, "THIS IS A DRILL/EXERCISE MESSAGE," or a similar statement?	____	____	____
25. Were communications links checked?	____	____	____
26. Were all communication networks operational?	____	____	____
27. Were communications adequate to ensure that the flow of information was timely, effective, and efficient?	____	____	____
28. Were dedicated communication links with the TSC, EOF, and OSC available and used?	____	____	____

	Yes	No	Not Observed
29. Were general status announcements or periodic updates provided to Control Room personnel throughout the emergency?	____	____	____
30. Was the plant page-party system used to apprise emergency workers of changes in the status of the emergency situation?	____	____	____
31. Was there a proper flow of data between the TSC and the Control Room?	____	____	____
32. Were Control Room logs maintained?	____	____	____
33. Did operators obtain the appropriate information necessary to Support dose projection calculations?	____	____	____
34. Did operators obtain release rate and offsite dose assessment information from the appropriate radiological monitoring systems when required?	____	____	____
35. Was a calculator or computer immediately available for performing dose projection calculations?	____	____	____
36. Were dose projection calculations performed efficiently and accurately?	____	____	____
37. Were emergency supplies and equipment, such as respirators and protective clothing available to Control Room personnel?	____	____	____
38. Was the ambient noise level in the Control Room acceptable?	____	____	____
39. Was access to the Control Room restricted to specific individuals?	____	____	____
40. Did personnel called in meet the criteria of Fitness for Duty (FFD) by completing the "FFD Determination Form"?	____	____	____
41. Was a post exercise players' critique held to evaluate Control Room performance?	____	____	____

-Technical Support Center (TSC) Controller-

		Yes	No	Not Observed
1.	Did the security organization initiate a search of the TSC in a timely manner?	____	____	____
2.	Was the TSC incorporated into the protected area?	____	____	____
3.	Were ERO personnel admitted into the TSC via the protected area in a timely manner?	____	____	____
4.	Was the TSC setup initiated upon the declaration of an Alert?	____	____	____
5.	Did emergency response personnel assigned to the TSC report in a timely manner?	____	____	____
6.	Were TSC personnel aware of their assigned work areas?	____	____	____
7.	Were TSC personnel familiar with their assigned duties and responsibilities?	____	____	____
8.	Did applicable personnel in the TSC refer to and utilize their checklists?	____	____	____
9.	Did TSC personnel have up-to-date phone listings for onsite and offsite contacts?	____	____	____
10.	Was command control authority transferred from the Control Room to the TSC according to procedures?	____	____	____
11.	Did communications contain the statement "THIS IS A DRILL/EXERCISE MESSAGE," or a similar statement?	____	____	____
12.	Did the Site Emergency Coordinator formally accept the transfer of responsibilities from the Control Room?	____	____	____
13.	Was the TSC formally declared "activated" by the Site Emergency Coordinator?	____	____	____
14.	Were TSC personnel informed of the change of command?	____	____	____

		Yes	No	Not Observed
15.	Did the Site Emergency Coordinator demonstrate the ability to maintain command control over all emergency response activities conducted from the TSC?	____	____	____
16.	Were plant status briefings periodically conducted by the Site Emergency Coordinator?	____	____	____
17.	If necessary, did the Site Emergency Coordinator make offsite protective action recommendations in a proper and timely manner?	____	____	____
18.	Were manpower and staffing requirements for protracted operations assessed?	____	____	____
19.	Did TSC personnel demonstrate, if necessary, the ability to identify the need for outside assistance when station capabilities were exceeded?	____	____	____
20.	Did TSC personnel demonstrate the ability to classify the emergency condition in a timely manner?	____	____	____
21.	Did technical personnel demonstrate their ability to react to escalating emergency classification?	____	____	____
22.	Did the TSC Accident Assessment Team demonstrate the ability to gather, assess, and disseminate information to help mitigate the emergency conditions?	____	____	____
23.	Did the TSC staff adequately Support the Control Room staff's efforts to identify the cause of an incident, mitigate the consequences of that incident, and place the unit in a safe and stable conditions?	____	____	____
24.	Did TSC personnel demonstrate the ability to respond to mitigating circumstances and properly de-escalate the emergency situation?	____	____	____

		Yes	No	Not Observed
25.	Were the notification procedures available and used for mobilizing onsite emergency response personnel and augmenting the emergency response staff?	____	____	____
26.	Were communication links established with other emergence response facilities in a timely manner?	____	____	____
27.	Did TSC personnel properly communicate with:			
	a. Control Room?	____	____	____
	b. OSC?	____	____	____
	c. EOF?	____	____	____
28.	Did the Logistic Support Director notify the Emergency Security Team Leader of anticipated emergency vehicle access to the site necessary to Support emergency response activities?	____	____	____
29.	Were necessary modifications to the security program coordinated with the Emergency Security Team Leader?	____	____	____
30.	Were the periodic follow-up notifications conducted per procedure?	____	____	____
31.	Were the initiating conditions or events posted on Plant Status Boards in a timely fashion?	____	____	____
32.	Were the subsequent plant status reports posted in a timely manner?	____	____	____
33.	Did the TSC have suitable communications with the field monitoring teams?	____	____	____
34.	Were the initial radiological conditions ascertained in a timely manner?	____	____	____
35.	Did the Dose Assessment Coordinator receive proper data to be able to assess radiological conditions (e.g., meteorological data and release rate data)?	____	____	____
36.	Did the TSC receive prompt information regarding permanent and portable radiological monitoring results?	____	____	____

-Technical Support Center (TSC) Controller-

		Yes	No	Not Observed
37.	Was effluent sampling information available?	____	____	____
38.	Were the correct procedures and methods used for making dose projection calculations?	____	____	____
39.	Were dose projections performed in a timely manner?	____	____	____
40.	Was there a clear interface between the TSC staff and field monitoring teams?	____	____	____
41.	Were the activities of the Onsite Survey Teams with those of the Radiological Monitoring Teams adequately coordinated?	____	____	____
42.	Were habitability surveys initiated by the Radiation Monitor Director?	____	____	____
43.	Was the TSC monitored for radiological hazards?	____	____	____
44.	Did TSC personnel demonstrate the ability to properly define protective action recommendations?	____	____	____
45.	Did the TSC have sufficient protective equipment and supplies for the personnel assigned to the TSC?	____	____	____
46.	Was the status of the TSC ventilation addressed?	____	____	____
47.	Were procedures available to, and used by, TSC personnel?	____	____	____
48.	Were technical resources and other information, such as as-built drawings, maps, and emergency plan implementing procedures, readily available?	____	____	____
49.	Was the operational and functional adequacy of the TSC demonstrated during the drill/exercise?	____	____	____
50.	Was the ambient noise level in the TSC acceptable?	____	____	____
51.	Did personnel called in to the TSC from offsite meet Fitness for Duty (FFD) criteria by completing the "FFD Determination Form"?	____	____	____
52.	Was a post exercise players' critique held to evaluate TSC performance?	____	____	____

-Emergency Operations Facility (EOF) Controller-

		Yes	No	Not Observed
1.	Was the Emergency Response Manager notified following the Notification of Unusual Event and Alert declarations?	____	____	____
2.	Was the EOF activated in a timely manner?	____	____	____
3.	Were EOF personnel aware of their assigned work areas?	____	____	____
4.	Was the EOF activated as prescribed in the emergency plan implementing procedures?	____	____	____
5.	Were security controls exercised concerning personnel permitted access to the EOF?	____	____	____
6.	Was there a clear and precise transfer of responsibility from the TSC staff to the EOF staff?	____	____	____
7.	Did the Emergency Response Manager declare the EOF operational prior to accepting full responsibility for offsite activities?	____	____	____
8.	Did the Emergency Response Manager maintain command control over the emergency response activities conducted from the EOF?	____	____	____
9.	Was there a clear dissemination of authority and control in the EOF organization?	____	____	____
10.	Did the EOF staff initiate and coordinate activities in an efficient and timely manner?	____	____	____
11.	Were procedures available to, and used by, EOF personnel?	____	____	____
12.	Did EOF personnel have up-to-date phone listings for onsite and offsite emergency contacts?	____	____	____
13.	Were current plant status announcements and periodic updates made?	____	____	____
14.	Did communications contain the statement "THIS IS A DRILL/EXERCISE MESSAGE," or a similar statement?	____	____	____

		Yes	No	Not Observed
15.	Were appropriate EOF staff members aware of decisions regarding protective action recommendations for the general public and emergency workers within the 10-mile EPZ?	____	____	____
16.	Did the EOF staff perform manpower projections to support protracted operations and notify the Administrative and Logistic Manager accordingly?	____	____	____
17.	Did the EOF staff demonstrate the ability to obtain outside resources when station capabilities were exceeded?	____	____	____
18.	Were communicators correctly assigned and communication checks performed in a timely fashion?	____	____	____
19.	Were dedicated communication links available and operational?	____	____	____
20.	Were the communication links between the EOF and other locations, including mobile personnel, effective?	____	____	____
21.	Following changes in the emergency classification level, were notifications made to the proper authorities when required?	____	____	____
22.	Did the EOF staff inform and update the appropriate County, State, and Federal emergency response personnel in a timely manner?	____	____	____
23.	Did EOF personnel demonstrate the ability to gather, assess, and disseminate information regarding the status of emergency conditions and the status of emergency response activities in a timely manner?	____	____	____
24.	Did the EOF staff demonstrate the ability to Support the TSC staff's efforts to identify the cause of an incident, mitigate the consequences of that incident, and place the unit in a safe and stable condition?	____	____	____
25.	Did the EOF staff demonstrate the ability to analyze current plant conditions and identify projected trends and potential consequences?	____	____	____

	Yes	No	Not Observed
26. Were there sufficient sources of technical expertise available and utilized?	____	____	____
27. Were technical resources and other information such as as-built drawings, maps, and emergency plan implementing procedures, readily available?	____	____	____
28. Were procedures and other necessary documents used?	____	____	____
29. Did the EOF staff demonstrate the ability to utilize vendor and other outside resources to assist accident analysis and mitigation efforts where necessary?	____	____	____
30. Did the Radiological Control Manager demonstrate the ability to perform offsite dose assessment activities in a timely manner?	____	____	____
31. Did the EOF staff demonstrate the ability to perform timely assessments of offsite radiological conditions to support the formulation of protective action recommendations?	____	____	____
32. Was there an adequate flow of information between State and RNPD radiological assessment personnel regarding offsite radiological conditions?	____	____	____
33. Did the EOF staff effectively direct and coordinate the Radiological Monitoring Teams' activities?	____	____	____
34. Were the EOF radiological assessment personnel in frequent communication with the Radiological Monitoring Teams?	____	____	____
35. Did the Radiological Control Manager demonstrate the ability to coordinate the activities of the Radiological Monitoring Teams with those of the Onsite Survey Teams?	____	____	____
36. Were the emergency plan implementing procedures effectively used to provide adequate protection to station personnel and the general public?	____	____	____

	Yes	No	Not Observed
37. Was there good communication between EOF personnel, State, and Local authorities regarding the protective action recommendations?	____	____	____
38. Was the operational and functional adequacy of the EOF demonstrated?	____	____	____
39. Was the ambient noise level in the EOF acceptable?	____	____	____
40. Did the EOF have sufficient protective equipment and supplies for personnel stationed in the EOF?	____	____	____
41. Did the EOF staff demonstrate, if appropriate, the ability to de-escalate the emergency response based on current plant conditions and projected trends?	____	____	____
42. Did the EOF staff remain involved through the de-escalation of the emergency situation?	____	____	____
43. Was the EOF staff able to identify and discuss appropriate reentry and recovery activities based on current or projected conditions?	____	____	____
44. Did personnel called in to the EOF from offsite meet Fitness for Duty (FFD) criteria by completing the "FFD Determination Form"?	____	____	____
45. Was a post exercise critique held to evaluate EOF performance?	____	____	____

-Plant Monitoring Team Controller-

		Yes	No	Not Observed
1.	Did the team respond to, and prepare for, survey tasks in a timely manner?	____	____	____
2.	Did the team have the proper equipment?			
	a. Dosimetry?	____	____	____
	b. Survey instruments?	____	____	____
	c. Maps?	____	____	____
	d. Protective clothing/respiratory protection equipment?	____	____	____
	e. Radio?	____	____	____
	f. Vehicle (if needed)?	____	____	____
	g. Sampling equipment?	____	____	____
3.	Prior to deployment, was the team adequately briefed regarding potential hazards and conditions?	____	____	____
4.	Prior to deployment, was a team leader identified?	____	____	____
5.	Were the survey instruments and radios functionally checked prior to starting on the survey and were the instrument calibrations current?	____	____	____
6.	Was personnel dosimetry available and issued to the team members?	____	____	____
7.	Were teams supplied with appropriate high-range personnel dosimeters?	____	____	____
8.	Were procedures followed while taking samples?	____	____	____
9.	Were appropriate precautions taken in the handling and storing of any high-level samples?	____	____	____
10.	Were samples collected in a timely manner?	____	____	____
11.	Were samples analyzed within the required time limit?	____	____	____
12.	Were emergency monitoring procedures available to, and used by, team personnel?	____	____	____
13.	Were the capabilities in place for dealing with both heavily contaminated personnel and those individuals only slightly contaminated?	____	____	____

	Yes	No	Not Observed
14. Was respiratory protection equipment available and used while making the surveys?	_____	_____	_____
15. Were communications properly maintained?	_____	_____	_____
16. Did communications contain the statement "THIS IS A DRILL/EXERCISE MESSAGE," or similar statement?	_____	_____	_____
17. Upon return, was the team properly debriefed?	_____	_____	_____
18. Did personnel called in from offsite meet Fitness for Duty (FFD) criteria by completing the "FFD Determination Form"?	_____	_____	_____

-Environmental Monitoring Teams Controller-

	Yes	No	Not Observed
1. Did team members arrive at the staging area and prepare themselves in a timely manner?	____	____	____
2. Was the team equipped with the following supplies:			
a. Survey instruments?	____	____	____
b. Air samplers?	____	____	____
c. Radio?	____	____	____
d. Maps?	____	____	____
e. Protective clothing?	____	____	____
f. Respiratory protection equipment?	____	____	____
3. With respect to the team's vehicle:			
a. Was it fully gassed?	____	____	____
b. Were the keys readily available?	____	____	____
c. Was a release survey completed prior to deployment?	____	____	____
4. Prior to deployment, was a team leader identified?	____	____	____
5. Prior to deployment, did team personnel perform preoperational checks on the following equipment:			
a. Radio?	____	____	____
b. Survey meters?	____	____	____
c. Sampling equipment?	____	____	____
6. Were the instruments calibrated within the current calendar quarter or within the prescribed schedule?	____	____	____
7. Was the team briefed prior to dispatch?	____	____	____
8. Was the vehicle properly designed or modified to hold team members, and monitoring, protective, safety, and auxiliary equipment?	____	____	____
9. Were there enough team members to adequately conduct survey and sampling activities?	____	____	____
10. Was the vehicle and/or team equipped with an adequate radio system that permitted unimpeded transmission and reception of data and instructions?	____	____	____

	Yes	No	Not Observed
11. Did the EOF provide adequate instructions regarding what measurements were to be performed?			
12. Did the radio communications contain the statement, "THIS IS A DRILL/EXERCISE MESSAGE," or a similar statement?			
13. Were radio communications clear, concise, and accurate?			
14. Were communications properly maintained?			
15. Did the Environmental Monitoring Coordinator exhibit good ALARA practices in directing team?			
16. Was information transmitted to the EOF communicator in a timely manner?			
17. Was the team kept apprised of the status of the emergency situation?			
18. Were dose rate measurements taken to verify radiation levels while in transit to monitoring and/or sampling sites?			
19. Was the team able to find the monitoring and/or sampling locations?			
20. Did the team demonstrate a knowledge of proper survey and sampling techniques?			
21. Did team personnel know how to operate and/or handle monitoring, sampling, and auxiliary equipment?			
22. Were air samplers run for an appropriate time interval?			
23. Were samples counted outside the plume?			
24. Was the proper procedure used for field counting of airborne samples?			
25. Were good sample handling techniques used to avoid cross-contamination?			

		Yes	No	Not Observed
26.	Was raw field data converted correctly to uCi/cc for both particulate and iodine airborne samples?	_____	_____	_____
27.	Were vehicle surveys performed periodically?	_____	_____	_____
28.	Was the team aware of sample drop location(s)?	_____	_____	_____
29.	Did the team members keep track of their individual exposure?	_____	_____	_____
30.	Were pocket dosimeters checked on a regular basis?	_____	_____	_____
31.	Were data sheets properly filled out and maintained?	_____	_____	_____
32.	Were standby areas clearly identified to the team?	_____	_____	_____
33.	Were spare batteries available for portable radios?	_____	_____	_____
34.	Were backup instruments available in case of a failure of the primary instruments?	_____	_____	_____
35.	Were the team members and vehicle properly surveyed upon completion of their monitoring tasks?	_____	_____	_____
36.	Were the team members debriefed upon their return?	_____	_____	_____
37.	Upon return, was equipment returned to its original status?	_____	_____	_____
38.	Did personnel called in to the OSC from offsite meet Fitness for Duty (FFD) criteria by completing the "FFD Determination Form"?	_____	_____	_____

-Operations Support Center (OSC) Controller-

	Yes	No	Not Observed
1. Was the activation of the OSC at the **ALERT** level initiated in a timely manner?	____	____	____
2. Was the OSC facility log initiated in a timely manner?	____	____	____
3. Was the equipment set up and made ready in a timely manner?	____	____	____
a. Telephones	____	____	____
b. Radios	____	____	____
c. Status Board	____	____	____
d. Emergency Equipment Kit	____	____	____
e. Plant Keys	____	____	____
4. Were communication checks and equipment operability tests made?	____	____	____
5. Did communications contain the statement **"THIS IS A DRILL/EXERCISE MESSAGE,"** or similar statement?	____	____	____
6. Was the OSC Status Board manned in a timely manner?	____	____	____
7. Did the OSC Leader assume control and announce the activation of the OSC?	____	____	____
8. Were status briefings provided to OSC personnel?	____	____	____
9. Was a manpower assessment completed?	____	____	____
10. Did the OSC demonstrate that round-the-clock coverage was possible?	____	____	____
11. Were controls implemented at ingress areas?	____	____	____
12. Were visitors escorted to security egress?	____	____	____
13. Was there an orderly evacuation of all non-essential personnel?	____	____	____
14. Was an adequate number of support personnel available in the OSC?	____	____	____
15. Were the emergency teams formed as required by procedure?	____	____	____

	Yes	No	Not Observed
16. Was the OSC Leader informed of initiating conditions by the TSC staff?	____	____	____
17. Was equipment out-of-service identified and impact on the mission evaluated?	____	____	____
18. Were personnel qualification checked prior to mission dispatch?	____	____	____
19. Was there adequate information flow from the TSC concerning plant conditions and hazardous areas?	____	____	____
20. Were teams made ready and standing by in timely manner?	____	____	____
21. Were increased exposure requests initiated for team members prior to team deployment?	____	____	____
22. Was the OSC Leader aware of all EAL upgrades and reasons for changes?	____	____	____
23. Did the OSC Leader demonstrate the ability to coordinate and control the teams both onsite and in-plant?	____	____	____
24. Was the OSC activated and placed in a state of readiness in accordance with procedures and the OSC H.P. Activation Task Status Board?	____	____	____
25. Did the team remain in a state of readiness until dispatched?	____	____	____
26. Were procedural responsibilities of teams and OSC staff correctly implemented?	____	____	____
27. Was the OSC Leader kept aware of current plant conditions from the TSC?	____	____	____

	Yes	No	Not Observed
28. Were in-plant teams made aware of routes, exposure rates, and hazards during briefings?	____	____	____
29. Had personnel exposure projections been performed for in-plant team members prior to dispatch?	____	____	____
30. Was adequate dosimetry of the appropriate type available for onsite and in-plant teams?	____	____	____
31. Were procedures followed properly for personnel evacuation to the relocation area?	____	____	____
32. Was each team properly debriefed upon return to the OSC?	____	____	____
33. Were the communication channels from the OSC to the TSC functioning properly?	____	____	____
34. Was a post exercise critique held to evaluate OSC performance?	____	____	____

		Yes	No	Not Observed
1.	Were the teams members selected, familiar with sample retrieval procedures and practices and qualified for Health Physics requirements?	____	____	____
2.	Was Health Physics coverage provided for sample retrieval assistance where radiation hazards existed?	____	____	____
3.	Was the team given an adequate briefing on radiation hazards and contamination problems?	____	____	____
4.	Was a team leader identified?	____	____	____
5.	Was a predetermined route established prior to departure and then used by the team?	____	____	____
6.	Did the team have appropriate equipment?	____	____	____
7.	Were operational checks performed on the equipment?	____	____	____
8.	Did the team use good sample retrieval practices (Dosimetry, Surveys, etc.)?	____	____	____
9.	Were team members familiar with equipment operation?	____	____	____
10.	Were communications maintained?	____	____	____
11.	Did communications contain the statement "THIS IS A DRILL/EXERCISE MESSAGE" or a similar statement?	____	____	____
12.	Were the procedures sufficient to provide acceptable and accurate results?	____	____	____
13.	Did the lab technicians observe good lab practices (e.g., Hot sample shielding and disposal)?	____	____	____
14.	Were the protective clothing requirements adequate?	____	____	____
15.	Were good ALARA practices implemented?	____	____	____

-Damage Control Team Controller-

		Yes	No	Not Observed
1.	Did the team members prepare themselves in a timely manner?	____	____	____
2.	Was the team properly equipped?	____	____	____
3.	Prior to deployment, was the team leader notified?	____	____	____
4.	Was the team properly supported by E&RC personnel?	____	____	____
5.	Was the team briefed prior to dispatch?	____	____	____
6.	Were there enough team members to adequately do the job?	____	____	____
7.	Did the team have adequate communications (radio, near-work phone, etc.)?	____	____	____
8.	Did the Damage Control Team Leader provide adequate instructions?	____	____	____
9.	Were all team members qualified to do the type of work assigned?	____	____	____
10.	Were communications properly maintained with the team?	____	____	____
11.	Was the team kept apprised of the status of the emergency?	____	____	____
12.	Were dose measurements taken for the team?	____	____	____
13.	Did team personnel display proficiency in the use of their equipment?	____	____	____
14.	Was the team able to find its work location?	____	____	____
15.	Was a predetermined route established and followed by the team?	____	____	____
16.	Was the team properly debriefed upon their return to the OSC?	____	____	____
17.	Did the team have the required tools to the work assigned?	____	____	____
18.	Was equipment returned to its original status?	____	____	____

		Yes	No	Not Observed
19.	Was an ALARA review completed?	____	____	____
20.	Did team members sign an RWP?	____	____	____
21.	Did teams properly sign in/out of the OSC?	____	____	____
22.	Were assignments of alternates done once teams were in the field?	____	____	____
23.	Were ingress/egress pathways to work locations identified?	____	____	____
24.	Was a team leader identified for each team?	____	____	____

CAROLINA POWER AND LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

1993 DEFERRED EXERCISE

6.0 SUPPLEMENTARY MATERIAL

PAGE _____ OF _____

PLANT: H. B. Robinson FACILITY OBSERVED: _____

DRILL/EXERCISE TYPE: Annual Exercise (Deferred from 1993)

CONTROLLER'S NAME: _____ DATE: 3 / 30 / 1994

TIME:	OBSERVATION

PLANT: H. B. Robinson FACILITY OBSERVED: _____

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CAROLINA POWER & LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

EXERCISE CRITIQUE FORM

EVALUATOR: _____ DATE: 3 / 30 / 1994

EVALUATION RESPONSIBILITY: _____

(Use additional sheets if required)

OBSERVED STRENGTHS:

_____

_____

_____

_____

OBSERVED DEFICIENCIES:

_____

_____

_____

_____

EVALUATOR COMMENTS:

_____

_____

_____

_____

CAROLINA POWER & LIGHT COMPANY
ROBINSON NUCLEAR PROJECT DEPARTMENT

EXERCISE CRITIQUE FORM

EVALUATOR: _____ DATE: 3 / 30 / 1994

EVALUATION RESPONSIBILITY: _____

(Use additional sheets if required)

OBSERVED STRENGTHS:

_____

_____

_____

_____

OBSERVED DEFICIENCIES:

_____

_____

_____

_____

EVALUATOR COMMENTS:

_____

_____

_____

_____