SECTION 1

NEW YORK POWER AUTHORITY

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

PARTIAL PARTICIPATION EXERCISE OBJECTIVES

December 14, 1993

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SECTION 1

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

OBJECTIVES

A. PURPOSE

This document provides guidance for the announced 1993 Emergency Plan Partial Participation Exercise. It will be used by James A. FitzPatrick Nuclear Power Plant (JAFNPP) personnel and by all participating local agencies.

This exercise will demonstrate that the various emergency preparedness functions described below can be performed. The exercise will occur on December 14, 1993.

At no time will the exercise be permitted to interfere with the safe operation of JAFNPP. To ensure this goal is achieved, plant management may suspend the exercise or any part of it for any period of time to avoid operational conflict.

B. NEW YORK STATE OBJECTIVES

1.0 Demonstrate the emergency notifications capabilities through the use of the Radiological Emergency Communications System (RECS) hotline.

C. OSWEGO COUNTY OBJECTIVES

1.0 Demonstrate the emergency notifications capabilities through the use of the Radiological Emergency Communications System (RECS) hotline.

2.0 Demonstrate the activities of the nuclear facility liaison officer at the NYPA EOF.

3.0 Demonstrate the ability to make command and control decisions regarding protective actions.

D. POWER AUTHORITY OBJECTIVES

1.0 Accident Detection and Assessment

1.1 Demonstrate the ability of NYPA staff to identify plant system and effluent parameter values characteristic of off-normal conditions.

1.2 Demonstrate the capability of NYPA staff to perform accident assessment based on information obtained from samples, radiation and effluent monitors, in-plant iodine instrumentation and containment radiation monitors.

2.0 Emergency Classification System

2.1 Demonstrate the ability of the plant staff to classify actual or potential emergencies in accordance with NYPA Emergency Plan Implementing Procedures.

3.0 Notification Methods and Procedures

3.1 Demonstrate the ability of NYPA staff to provide emergency notifications to the NRC, New York State and Oswego County in accordance with established procedures.

3.2 Demonstrate the ability of NYPA staff to fully alert, mobilize and activate emergency personnel for both facility and field-based emergency functions.

4.0 Emergency Communications

4.1 Demonstrate the communication capabilities between NYPA, New York State and Oswego County via the Radiological Emergency Communications System (RECS) dedicated hotline.

4.2 Demonstrate the communication capabilities between NYPA and the NRC via the Emergency Notification System (ENS).

4.3 Demonstrate the ability of NYPA staff to coordinate, deploy, and control radiological monitoring teams using the field communications system.

4.4 Demonstrate the emergency communication capabilities among the emergency response facilities.

4.5 Demonstrate the ability of NYPA staff to provide technical information to the NRC, New York State and Oswego County.

5.0 Radiological Exposure Control

5.1 Demonstrate the capability for continuously monitoring and controlling exposures and contamination of emergency workers.

5.2 Demonstrate the methods and resources for distributing dosimetry to emergency workers and keeping records of individual radiation exposures.

5.3 Demonstrate the ability to correlate effluent monitor readings with onsite and offsite exposures.

5.4 Demonstrate the capability to acquire and evaluate onsite meteorological information and the provisions to obtain representative current meteorological information from other sources.

6.0 Protective Response

6.1 Demonstrate the ability to implement protective actions for site personnel up to and including site evacuation.

6.2 Demonstrate the capability to account for all individuals onsite in accordance with procedures.

6.3 Demonstrate the ability of NYPA personnel to recommend protective actions to the State and Oswego County.

6.4 Demonstrate the capability of NYPA staff to determine the source term of any release of radioactive material from the plant.

6.5 Demonstrate the ability for using default source terms for release rate and dose projections.

6.6 Demonstrate the ability of NYPA personnel to project field data and to determine appropriate protective measures, based on protective action guidelines (PAGs), available shelter, evacuation time estimates and all other appropriate factors.

7.0 Staff Augmentation

7.1 Demonstrate the ability of staff to be augmented to handle emergencies at the JAFNPP.

7.2 Demonstrate the ability to identify the need for and to call upon outside support agencies for assistance.

7.3 Demonstrate the ability to direct, coordinate and control emergency activities.

7.4 Demonstrate the ability of NYPA to designate an individual who is in charge of the emergency response and who makes decisions and coordinates emergency activities.

8.0 Shift Staffing

8.1 Demonstrate personnel availability for 24-hour per day emergency response and continuous emergency activities.

8.2 Provide for a line of succession for the emergency director position.

8.3 Demonstrate the Emergency Director's knowledge of and approval of all notifications and protective action recommendations made to offsite authorities.

8.4 Demonstrate NYPA and/or contractor personnel availability for logistics support, technical support, interface with governmental authorities and release of information to the news media.

9.0 Emergency News Center (Joint News Center)

9.1 Demonstrate the ability to brief the media in an accurate, coordinated and timely manner.

9.2 Demonstrate the ability to coordinate the formulation and dissemination of accurate information to the public in a timely fashion, including press releases.

10.0 Fire Brigade

10.1 Demonstrate the ability of the fire brigade to respond to a simulated fire onsite.

11.0 Headquarters Support Personnel

11.1 Demonstrate the use of the New York Power Authority's Emergency Response Center in the White Plains Office.

12.0 Field Monitoring

12.1 Demonstrate the capability to acquire and evaluate air, liquid or solid samples (as appropriate) to assist in assessing the magnitude of any release.

13.0 Release Magnitude

13.1 Demonstrate the use of appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} microcuries per cc in the presence of noble gases.

13.2 Demonstrate the ability to obtain samples of particulate activity in the airborne plume and perform laboratory analysis promptly, as appropriate.

14.0 Post Accident Sampling System (PASS)

14.1 Demonstrate the capability to acquire and analyze PASS sample during a specified time period.

15.0 Potassium Iodide (KI)

15.1 Demonstrate the ability to consider the use of KI in an emergency situation.

16.0 Assembly and Accountability

16.1 Demonstrate the ability to assemble and account for personnel within the protected area.

17.0 Emergency Facilities and Equipment

17.1 Demonstrate the capability of the Technical Support Center facilities, displays and equipment to support emergency operations.

17.2 Demonstrate the capability of the Operational Support Center facilities, displays and equipment to support emergency operations.

17.3 Demonstrate the capability of the (EOF) facilities, displays and equipment to support emergency operations.

17.4 Demonstrate the ability to use onsite monitoring systems to initiate emergency measures and conduct assessments.

17.5 Demonstrate the use of appropriate equipment and procedures for determining field radiation measurements.

18.0 Emergency Plan Improvement

18.1 Demonstrate press releases can be written adequately.

18.2 Demonstrate Protective Action Recommendations (PARs) are not modified solely to match offsite agencies PARs.

18.3 Demonstrate the prioritization of work and the ability to dispatch work teams in a timely fashion to respond to important events.

18.4 This exercise will allow and include response by individuals designated to assume positions in the JAFNPP Emergency Organization. This exercise will serve as practical-based training for individuals that are assigned to the Emergency Plan Organization. These individuals will be coordinated by the JAFNPP Emergency Plan trainer and documented on a training addendum.

18.5 Demonstrate the ability for self-critique and identification of areas requiring improvement.

E. INTENT OF THE FITZPATRICK EXERCISE SCENARIO

This exercise is intended to demonstrate many, but not all, of the Authority's capabilities to respond to emergency conditions. This scenario simulates operating conditions and provides a sequence of events as a basis to demonstrate the ability to exercise the emergency plans and procedures. Free play is encouraged, and the referees will interfere only if operator/player action prematurely terminates the exercise or excessively deviates from the schedule.

F. CONDUCT OF OPERATIONS AND CONTROL OF THE EXERCISE

The Authority will supply official controllers/evaluators for locations where an emergency response is being demonstrated. Prior to the exercise, the controllers and evaluators will be provided with locations, maps, time periods, guidelines (such as training in equipment use and procedures), and an evaluation checklist for their exercise assignments.

The exercise initiating events and information will be controlled by the lead controller at the JAFNPP. The lead controller will have the responsibility to control and coordinate the time sequence of initiating events.

As the initiating events are provided to the JAFNPP staff, they will determine the nature of the emergency and implement appropriate emergency response procedures. These procedures include a determination of the emergency classification and notification of appropriate Federal, State and local authorities.

The simulated accident will continue to develop based on data and information provided to personnel by a controller. Certain inconsistencies (such as technical reasons for equipment failures) may be intentional. Such inconsistencies may be necessary due to the difficulties of simulating an accident that has never occurred, and the requirement to provide a exercise basis which tests the site capabilities to the maximum extent feasible in a limited time. The lead controller shall have the authority to resolve or explain any inconsistencies or problems that may occur during the exercise. With the exception of such potential inconsistencies, the internal operation of the site facilities shall be identical with their intended operation in a real emergency.

G. MAINTAINING EMERGENCY READINESS

Actions taken by the participants will not reduce plant or public safety. The potential for creating real radiological or other emergencies shall be specifically avoided. All messages about real events will be clearly identified.

During the exercise, the ability to recognize real emergency conditions will be maintained. The exercise will be terminated in the event a real emergency condition exists. The exercise scenario will not result in degradation of systems, equipment or supplies, nor will it affect the detection, assessment or emergency response capability of the plant.

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

EXERCISE RULES AND GUIDES

I. Ground Rules

II. Scope

III. Safety Precautions

IV. Exercise Conduct

V. Exercise Report

VI. Special Information

VII. Simulator Pre-Exercise Preparations

VIII. Simulator Communications

IX. Simulator Malfunctions

X. EPIC Screens Available

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

GROUND RULES

The 1993 NRC observed emergency exercise will be conducted on December 14, 1993. The purpose of this exercise is to demonstrate that various emergency preparedness functions can be performed.

Since this exercise is not full-scale, limited participation by Oswego County and New York State is expected.

All exercise participants are required to observe the following exercise Ground Rules for the entire duration of the exercise:

1. Ensure that all communications indicate that this is only an exercise. Make a positive statement that this is an exercise-related message at the beginning and end of all messages or conversations. If communication lines are kept open for extended periods, periodically repeat the caution. This is especially critical when transmitting messages over communications facilities that are monitored by non-Power Authority personnel.

2. Take no actions that affect plant or non-exercise related operations. Communications to or from the simulator must be prefaced with *"This is a drill. This is a drill."*

3. Take immediate action(s) to restore safe operation, if an unsafe condition exists. Ignore exercise situation if actual safety becomes a concern.

4. Use only the information provided in accordance with the exercise ground rules or derived from approved procedures. Do not improvise information.

5. Be sure that the observer/controller is aware of your actions (actual or simulated).

6. Make all required notifications.

7. If samples inside or outside the site are deemed necessary, they will actually be collected, if possible, and their analysis conducted or simulated, as directed. Observer/Controllers will accompany the survey teams and repair teams, both onsite and offsite.

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

GROUND RULES (continued)

8. NRC personnel will be evaluating the performance of the participants at each location.

9. This exercise is conducted to evaluate our plans and procedures. This exercise is also a training vehicle for members of the JAFNPP Emergency Response Organization to practice working together and with outside organizations. Please make note of any improvements in any area that you observe as a participant and submit them to the Observer/ Controllers at the conclusion of the exercise.

10. Controllers will provide appropriate information at the location where that information would normally be available (e.g., Reactor status at the Control Room, dose rate readings with field teams, etc.).

11. Only parameters and readings available to the simulator will be provided. The selected information will be sufficient to make decisions in accordance with JAFNPP plans and procedures.

12. DO NOT BECOME OVERLY CONCERNED WITH THE MECHANICS OF THE REACTOR OR THE CAUSE OF THE ACCIDENT. THIS EXERCISE IS DESIGNED TO TEST JAFNPP PLANS AND PROCEDURES AND IS NOT CONCERNED WITH ESTABLISHING THE PROBABILITY, FEASIBILITY OR DETAILED MECHANICS OF THE SIMULATED ACCIDENT.

13. There will be one or more Observer/Controller at each important location. Controllers will provide information and clarification on which actions are to be simulated or are outside the scope of this exercise in order to keep the exercise progressing in accordance with the scenario. Observer/Controllers will also observe all aspects of the exercise to prepare an in-house evaluation of plans, procedures and training.

14. If, during any part of this exercise, you are having trouble accomplishing your required duties, confusion arises, or clarification is necessary, ask your Controller. Controller assistance or clarification does not necessarily imply failure on your part. Your Controller will know the limitations of information he can provide you, and will assist you only to the extent necessary.

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

SCOPE

The following is a list of the JAF emergency facilities and functions to be demonstrated or simulated during the exercise.

I. Functions and Facilities to be Demonstrated

Simulator Usage
Operational Support Center
Technical Support Center
Emergency Operations Facility
Dose Assessment
Restricted Area Evacuation and Assembly
Offsite Radiological Monitoring
Onsite Communications
Offsite Communications
Onsite Radiological Measuring
Onsite Repair and Corrective Actions
Accident Assessment
Notifications
Communications Systems
Accountability
Facility Ventilation Isolation
Post Accident Sampling System
Fire Brigade

II. Functions and Facilities to be Simulated

Protective Action Recommendations
Security Access Control to Site
Site Evacuation

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

SAFETY PRECAUTIONS

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

Actions taken by the participants shall also avoid actually reducing plant or public safety. The potential for creating real radiological or other emergencies shall be specifically avoided. If a local emergency occurs during a training drill requiring the local agency to terminate its participation in the drill, the agency should notify the State and Oswego County Emergency Operations Centers of the situation. All messages about real events shall be clearly identified as such. For example, precede a real message with "This is NOT, repeat, NOT an exercise message".

The following JAFNPP personnel may cancel or stop the training drill at any time that plant or public safety is jeopardized by the conduct of this exercise.

1. Resident Manager
2. General Manager - Operations
3. (On Shift) Shift Supervisor
4. Emergency Planning Coordinator

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

EXERCISE CONDUCT

Exercises at JAFNPP are conducted under the guidance of Emergency Plan Procedure SAP-1 "Maintaining Emergency Preparedness" (attached). This procedure lists the specific requirements for drills and exercises, and includes the requirements for the development of scenarios for drills and exercises.

Please review the following procedure for specific information concerning the conduct of this exercise.

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: SAP-1

****
* INFORMATIONAL USE *
****

TITLE: MAINTAINING EMERGENCY PREPAREDNESS*

PORC REVIEW: Meeting No. 93-075 Date 6-10-93

APPROVED BY: _____
Resident Manager

APPROVED BY: _____
Emergency Planning Coordinator

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Rev. No. 9

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAP-1

MAINTAINING EMERGENCY PREPAREDNESS*

1.0 PURPOSE

This procedure details the actions to be taken to maintain emergency preparedness at the JAFNPP site. The procedure establishes a method for the conduct and evaluation of a drill or exercise at the JAFNPP. This procedure also outlines the management controls used to ensure that corrective actions are implemented.

2.0 REFERENCES

2.1 NUREG-0654 - "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in support of Nuclear Power Plants"

2.2 JAFNPP Emergency Plan, Volume #1

2.3 ITP-1 MANAGEMENT OF TRAINING GROUP RECORDS

2.4 ITP-3 GENERAL EMPLOYEE TRAINING

2.5 ITP-12 EMERGENCY RESPONSE TRAINING

2.6 AP-02.03 CONTROL AND DISTRIBUTION OF EMERGENCY PLAN AND PROCEDURES

2.7 QA-18.1 QUALITY ASSURANCE AUDIT PROGRAM-PLANT

2.8 SAP-6 DRILL/EXERCISE CONDUCT

2.9 SAP-3 EMERGENCY COMMUNICATIONS TESTING

2.10 IAP-2 CLASSIFICATION OF EMERGENCY CONDITIONS

2.11 JAFNPP EMERGENCY PLAN IMPLEMENTING PROCEDURES, VOLUMES 2 and 3

2.12 NRC Generic Letter 82-23

2.13 Volume 10 Code of Federal Regulations, Part 50.55

3.0 INITIATING EVENTS

Not Applicable

4.0 PROCEDURE

4.1 General - Emergency preparedness at JAFNPP is maintained through an integrated program of training, drills, exercises, plan and procedure maintenance, and audits.

4.1.1 Training - Plant staff and outside support agencies are given formal classroom training in accordance with ITP-12 - EMERGENCY PREPAREDNESS TRAINING. Formal training consists of classroom instruction and written quizzes and examinations. Drills and exercises are utilized to evaluate emergency preparedness, and the results of these are input to subsequent training.

4.1.2 Drills - A drill is a hands on, supervised instruction period aimed at testing, developing and maintaining skills in a particular operation. Drills at JAFNPP are conducted in accordance with the schedule and guidelines of section 4.3 of this procedure.

4.1.3 Exercises - As defined in NUREG-0654, an exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency plans and organizations. Exercises at JAFNPP are conducted in accordance with the schedule and guidelines of section 4.4 of this procedure.

4.1.4 Plan and Procedure Maintenance - Maintenance of the JAFNPP Emergency Plan and Implementing procedures consists of document control activities including distribution control, change control, procedure review, and cross reference review. Plan and procedure maintenance is in accordance with AP-02.03 CONTROL AND DISTRIBUTION OF EMERGENCY PLAN AND IMPLEMENTING PROCEDURES.

4.1.5 Audits - The JAFNPP emergency preparedness program (in accordance with reference 2.12) is audited at least once every 12 months in accordance with Quality Assurance Manual Procedure 18.1 - QUALITY ASSURANCE AUDIT PROGRAM - PLANT. Findings and corrective action records shall be maintained by the QA department in accordance with their procedures.

4.1.6 Drill/Exercise Documentation - Documentation for drills and exercises shall be maintained by the Training Manager. Documentation shall be developed in accordance with section 4.5.

4.1.7 Drill/Exercise Conduct, Observation, Critiques and Deficiencies - A formalized method for evaluating a drill or exercise has been established. SAP-6 - DRILL/EXERCISE CONDUCT details the method for conducting the Drill/Exercise Observation Program, Critique, and Deficiency action.

4.2 Training - The responsibility for training is shared by the Training Manager and the Emergency Planning Coordinator.

4.2.1 Training Manager - The Training Manager is responsible for the formal classroom training of onsite and offsite individuals who have duties in the emergency organization. The Training Manager is also responsible for specialized training services such as fire fighting and emergency medical services. The Training Manager is responsible for fire brigade drills.

4.2.2 Emergency Planning Coordinator - The Emergency Planning Coordinator is responsible for communications, medical emergency (contaminated injury), radiological monitoring and radiation protection drills.

4.2.3 Initial training and periodic retraining shall be conducted in accordance with ITP-1, ITP-3, and ITP-12.

4.2.4 Formal training shall be documented using a Training Report (as defined by Training procedures).

4.2.5 The Training Manager shall be responsible for maintaining all Emergency Plan training records. This shall include records of all formal training sessions, drills and exercises.

4.3 Drills - Responsibility for the conduct of drills is divided between the Emergency Planning Coordinator (EPC) and the Fire Protection Supervisor (FPS)/Fire Protection Training Specialist. There are five drill areas:

A. Communication Drills - Emergency Planning Coordinator.

Communications with Federal, State and local governments within the Emergency Planning Zones shall be tested monthly. Communications between the nuclear facility, State and local emergency operations centers, and field assessment teams shall be tested annually. Communication drills

shall also include the aspect of understanding the content of messages via the observer evaluation. Documentation for communication drills shall be in accordance with procedure SAP-3 - EMERGENCY COMMUNICATIONS TESTING. Communication drills shall be reviewed by the Emergency Planning Coordinator.

B. Fire Drills - Fire Protection Supervisor/Fire Protection Training Specialist.

Fire drills shall be conducted in accordance with the plant technical specifications, Fire Protection Procedures and Training Procedures. Response to an actual fire may be counted as a drill. Documentation of Fire Drills shall be done by the Training Manager in accordance with ITP-13.

C. Medical Emergency Drills - Emergency Planning Coordinator.

A medical emergency drill involving a simulated contaminated individual which contains provisions for participation by the local support services agencies (i.e., Oswego Hospital, SUNY Health Science Center and the Oswego Fire Department Ambulance) shall be conducted annually. The medical drill may be performed as part of the required annual exercise. Response to an actual medical emergency may be counted as a drill. Documentation of Medical Emergency Drills shall be done by completing Form SAP-1.1 "Drill Report" and a drill scenario and providing a completed copy to the Training Manager.

D. Radiological Monitoring Drills - Emergency Planning Coordinator.

Plant environs and radiological monitoring drills (onsite and offsite) shall be conducted annually. These drills shall include collection and analysis of all sample media (e.g., water, vegetation, soil and air), and provisions for communications and record keeping. This drill may be conducted as part of the JAFNPP Annual Exercise. Documentation for Radiological Monitoring Drills shall be done by completing Form SAP-1.1 "Drill Report" and a drill scenario and providing a completed copy to the Training Manager.

E. Radiation Protection Drills - Emergency Planning Coordinator.

(1) Radiation Protection drills shall be conducted semi-annually which involve response to, and analysis of, simulated elevated airborne and

liquid samples and direct radiation measurements in the environment.

(2) Analysis of in-plant liquid samples with actual or simulated elevated radiation levels including use of the post-accident sampling system shall be included in Radiation Protection drills. This drill may be conducted as part of the JAFNPP Annual Exercise. Documentation of Radiation Protection Drills shall be done by completing Form SAP-1.1 "Drill Report" and drill scenario and providing a completed copy to the Training Manager. Response to an incident involving elevated airborne or liquid activity or elevated radiation levels may be counted as a drill.

4.3.1 Drill Scheduling - The Emergency Planning Coordinator shall be responsible for the scheduling of all drills with the exception of Fire Drills, which is the responsibility of the Fire Protection Supervisor/Fire Protection Training Specialist. To the greatest extent possible drills should be scheduled in conjunction with each other to minimize interference with plant operating schedules. (Example: Exercising fire, medical and communications aspects of the emergency plan in conjunction with the JAFNPP Annual Exercise.)

4.4 Exercises

An emergency response exercise is an event that tests the integrated capability of a major portion of the basic elements contained in the JAFNPP Emergency Plan. An exercise can be comprised of numerous drills conducted simultaneously.

The purpose of the annual exercise, as described in NUREG-0654 is to test a full scale response capabilities of the Plant, State, Local and Federal agencies. The Plant is directly involved and is evaluated on its response to the simulated emergency situation.

The JAFNPP is required to conduct an exercise annually. The exercise shall either be a full scale exercise which will include full participation by State and Local agencies or a small scale exercise that shall include only limited participation of State and Local agencies.

4.4.1 All personnel at JAFNPP may participate in an emergency exercise. (Note: Only Fire Brigade personnel may participate in a fire drill.)

4.4.2 An exercise shall be developed and should include the Alert, Site Area or General Emergency.

4.4.3 The scenario should be varied from year to year such that all major elements of the plans and preparedness organizations are tested within a five year period. Once every six years an exercise shall be off-hours. Some exercises should be unannounced. The EPC shall maintain a five year schedule of all major elements to be tested.

4.4.4 Offsite support agencies should be contacted and included in the development of a JAFNPP Exercise, and requested to supply observers.

4.4.5 Exercises of emergency preparedness should simulate an emergency that results in offsite radiological releases which would require responses by offsite authorities.

4.4.6 Exercises should be conducted under various weather conditions. To facilitate this, since the Emergency Planning Coordinator cannot reliably schedule drills in advance to coincide with adverse weather, it is advisable not to cancel or postpone drills based on unexpected inclemencies unless continuation would constitute undue risk to the participants or to the plant.

4.4.7 The annual exercises shall be planned in advance via a formal scenario incorporating simulated plant, environmental, and personnel related events (input by controllers) to guide the action and allow for free play.

4.4.8 Documentation of the exercise shall be conducted in a manner consistent with section 4.5 of this procedure.

4.5 Drill and Exercise Development and Documentation

4.5.1 Development Responsibilities - The Emergency Planning Coordinator shall insure the development, planning, scheduling and coordination of all drills/exercises involving the JAFNPP Emergency Plan.

4.5.1.1 The Training Manager shall be responsible for the maintenance of copies of all approved drill/exercise scenarios and associated documents in accordance with approved Training Department procedures.

4.5.1.2 The Fire Protection Supervisor shall assist the Emergency Planning Coordinator in preparing drill/exercise scenarios.

4.5.1.3 The Operations Manager shall provide assistance to the Emergency Planning Coordinator in preparing drill/exercise scenarios.

4.5.1.4 The Radiological and Environmental Services Manager shall provide assistance to the Emergency Planning Coordinator in preparing drill/exercise scenarios.

4.5.1.5 The General Manager - Operations, General Manager - Maintenance and the General Manager - Support Services shall provide assistance to the Emergency Planning Coordinator in preparing drill/exercise scenarios.

4.5.1.6 The Vice President of Public Relations shall provide assistance to the Emergency Planning Coordinator in preparing the drill/exercise scenarios.

4.5.1.7 A representative of the PORC with a senior reactor operator's license shall review drill/exercise scenarios.

4.5.2 Drill Scenario Development and Documentation -As a minimum, a drill scenario shall be organized to include the following (See Form SAP-1.4):

(1) Drill Title: (e.g., Refueling accident, loss of coolant accident, etc.). Refer to IAP-2, CLASSIFICATION OF EMERGENCY CONDITIONS for information.

(2) Objectives: The basic objective of the drill.

(3) Scope: Date, time, duration, location, and participating onsite and offsite organizations.

(4) Safety Precautions: Safety precautions to be followed.

(5) Time Schedule: A time schedule of initiating events including expected or simulated plant alarms, indications, or emergency classifications.

(6) Summary: A narrative summary describing the conduct of the events to include such things as simulated casualties, offsite department assistance, rescue of personnel, evacuation required, use of protective clothing, deployment of radiological monitoring teams, and public information activities.

(7) Data: Data related to drill in question.

(8) Drill Report: (With arrangements for qualified observers.) This report describes information pertinent to the understanding of the drill intent. A sign-off sheet for PORC representative, and a list of observers and controllers.

(9) EPIC Screens: An accurate list of EPIC screens will be developed and displayed on the EPIC terminals.

4.5.3 Exercise Scenario Development and Documentation - An exercise scenario shall be organized to include (See Form SAP-1.4):

(1) Exercise Title: (e.g., Refueling accident, loss of coolant accident, etc.) Refer to IAP-2, CLASSIFICATION OF EMERGENCY CONDITIONS for information.

(2) Objectives: State basic objectives of the proposed exercise and which portions of the Emergency Plan will be tested.

(3) Rules and Guidelines: Date, time, duration, location, and participating onsite and offsite organizations. Also to include, date, time, and location of observer briefings and critique. Includes all ground rules, scope, safety precautions and procedure for exercise conduct.

(4) Event Summary: Includes scenario overview, reactor vessel level and pressure graphs, dose assessment displays and meteorological forecasts.

(5) Meetings: A time schedule for training, badging, briefings, plant tours and critiques.

(6) Timeline: A time schedule of major events and emergency classifications.

(7) Messages: Includes completed sheets for use in the exercise detailing activities, events, time, and sequence. See Forms SAP-1.2 and SAP-1.3.

(8) Data: Includes Emergency and Plant Information Computer (EPIC), ARM's and In-plant Rad Maps, PASS data, Environmental Sample Data, and Offsite Rad Data.

(9) Anticipated Actions: A timeline of anticipated actions that should be taken by emergency facilities.

(10) Method of Evaluation: Contents should include the standard to which evaluation shall be made and supporting documentation.

(11) EPIC Screens: An accurate list of EPIC screens will be developed and displayed on the EPIC terminals.

5.0 FIGURES, FORMS AND ATTACHMENTS

5.1 FORM SAP-1.1, Drill Report

5.2 FORM SAP-1.2, Summary Information

5.3 FORM SAP-1.3, Message Sheet

5.4 FORM SAP-1.4, Drill and Exercise Scenario Development Checklist

JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN

DRILL REPORT

Drill/Exercise Title: 1993 Partial Participation Emergency Exercise

Drill/Exercise Date: December 14, 1993

Reviewed By: _____ 10/7/93
Emergency Planning Coordinator/ Date
Fire Protection Supervisor

Reviewed By: _____ 10/8/93
PORC Representative Date

Copies to:

1. JAFNPP EMERGENCY PLANNING COORDINATOR
2. JAFNPP TRAINING MANAGER

DRILL REPORT

1. Time Frame

   a. Drill/Exercise date December 14, 1993

   b. Date of last similar drill/exercise September 1, 1993

   c. Real time span of drill 4½ hours, _____ days

   d. Drill/Exercise time frame 4½ hours, _____ days

   e. Season (circle one)

   Winter Spring Summer (Fall)

   f. Period of the week (circle one)

   (Weekday) Weekend Holiday

   g. What shift shall the drill begin on?

   (7 a.m. - 3 p.m.) 3 p.m. - 11 p.m. 11 p.m. - 7 a.m.

2. Maximum level of emergency classification during the drill/exercise (check one).

   _____ Notification of Unusual Event

   _____ Alert

   _____ Site Area Emergency

   X General Emergency

   _____ Does not apply

3. Organization Involvement (Circle applicable)

   a. NYPA

   Control Room Staff (Yes) / No

   Technical Support Center (TSC) (Yes) / No

   Emergency Operations Facility (EOF) (Yes) / No

DRILL REPORT

3. Organization Involvement (Circle applicable) (Continued)

Site Security	(Yes) / No
Fire Brigade	(Yes) / No
White Plains Office (WPO)	(Yes) / No
Joint News Center (JNC)	(Yes) / No
Operational Support Center (OSC)	(Yes) / No
Alternate Operational Support Center (AOSC)	Yes / (No)
First Aid Team	Yes / (No)

b. Non NYPA

NY State Emergency Management Office	(Yes) / No
NY State Department of Health	Yes / (No)
NY State Office of Disaster Preparedness	Yes / (No)
NY State Bureau of Radiological Health	Yes / (No)
US Nuclear Regulatory Commission	Yes / (No)
US Department of Energy	Yes / (No)
US Coast Guard	Yes / (No)
Niagara Mohawk	Yes / (No)
Oswego County Emergency Management Office	(Yes) / No
Oswego County Sheriff	Yes / (No)
Oswego Hospital	Yes / (No)
SUNY Health Science Center at Syracuse	Yes / (No)
Oswego Fire Department Ambulance	Yes / (No)
General Electric	Yes / (No)

Other (Specify) _____

DRILL REPORT

4. Communications

a. Shall the JAFNPP Radio System be used for communications?
(Yes) / No

b. Should a news release be prepared?
(Yes) / No

c. Activation of Joint News Center?
(Yes) / No

d. Activation of Public Notification System/EBS?
Yes / (No)

5. Drill/Exercise Elements

a. Will key emergency response positions be relieved by shift change?
Yes / (No)

b. Is a contaminated medical injury to be involved?
Yes / (No)

If yes, (1) Onsite response by First Aid Team Yes / No
(2) Offsite response Yes / No

(Circle Agencies Involved)

Oswego Hospital
SUNY Health Science Center at Syracuse
Oswego Fire Department Ambulance
Other _____

c. Will the exercise involve a simulated f[illegible]
(Yes) / No

(1) Onsite response (Yes) / No
(2) Offsite response Yes / (No)

(Circle Agencies Involved)

Oswego Fire Department
Scriba Volunteer Fire Department
Volney Volunteer Fire Corporation
Alcan Fire Department
Minetto Volunteer Fire Department

DRILL REPORT

5. Drill/Exercise Elements (Continued)

d. Will the Security Force response be tested? (Yes) / No

(1) Sabotage/Bomb — Yes / (No)
(2) Intruder — Yes / (No)
(3) Accountability — (Yes) / No

6. Radiological Release — (Yes) / No

a. Meteorological capabilities.

(1) Will real-time meteorology be used? — Yes / (No)
(2) Will fixed meteorology be used? — (Yes) / No

b. Dose Assessment.

(1) Will dose projection be made using computerized model? — (Yes) / No

(2) Will field monitoring teams be dispatched? — (Yes) / No

(3) Will dose projections warrant protective action recommendations? — (Yes) / No

c. Post Accident Sampling.

(1) Are samples of stack iodine/particulate sample required? — (Yes) / No

(2) Should a reactor coolant sample be taken? — (Yes) / No

d. Environmental.

(1) Should environmental media be collected? — (Yes) / No

(2) Should sampling devices be collected from environmental stations? — Yes / (No)

7. Attached is a copy of the scenario for this drill. — (Yes) / No

DRILL REPORT

8. Drill Controllers

	Name	Location
Lead Controller	Catella, Fred	Simulator
Controller	Romanowski, Joseph	Simulator
Controller	Prarie, Mark	Control Room
Controller	Avrakotos, Nicholas	TSC
Controller	Phy, Ken	OSC
Controller	Flaherty, Joseph	EOF
Controller	Fine, Ira	JNC
Drill Controller/Observers		
Cont/Obser	Boucher, Crystal	Chemistry/PASS
Cont/Obser	Heath, Alan	Fire Protection
Cont/Obser	MacCammon, Gordon	Security
Cont/Obser	Farley, Michael	DESTINY
Cont/Obser	Mozzor, Matty	Dose Assessment
Drill Support Personnel		
Operator	Morris, James	Simulator
Hardware	Perrine, Garfield	Simulator
Exercise Coord.	McMillen, Marilyn	TSC
NiMo EOF Transition	Jones, James (NiMo)	EOF

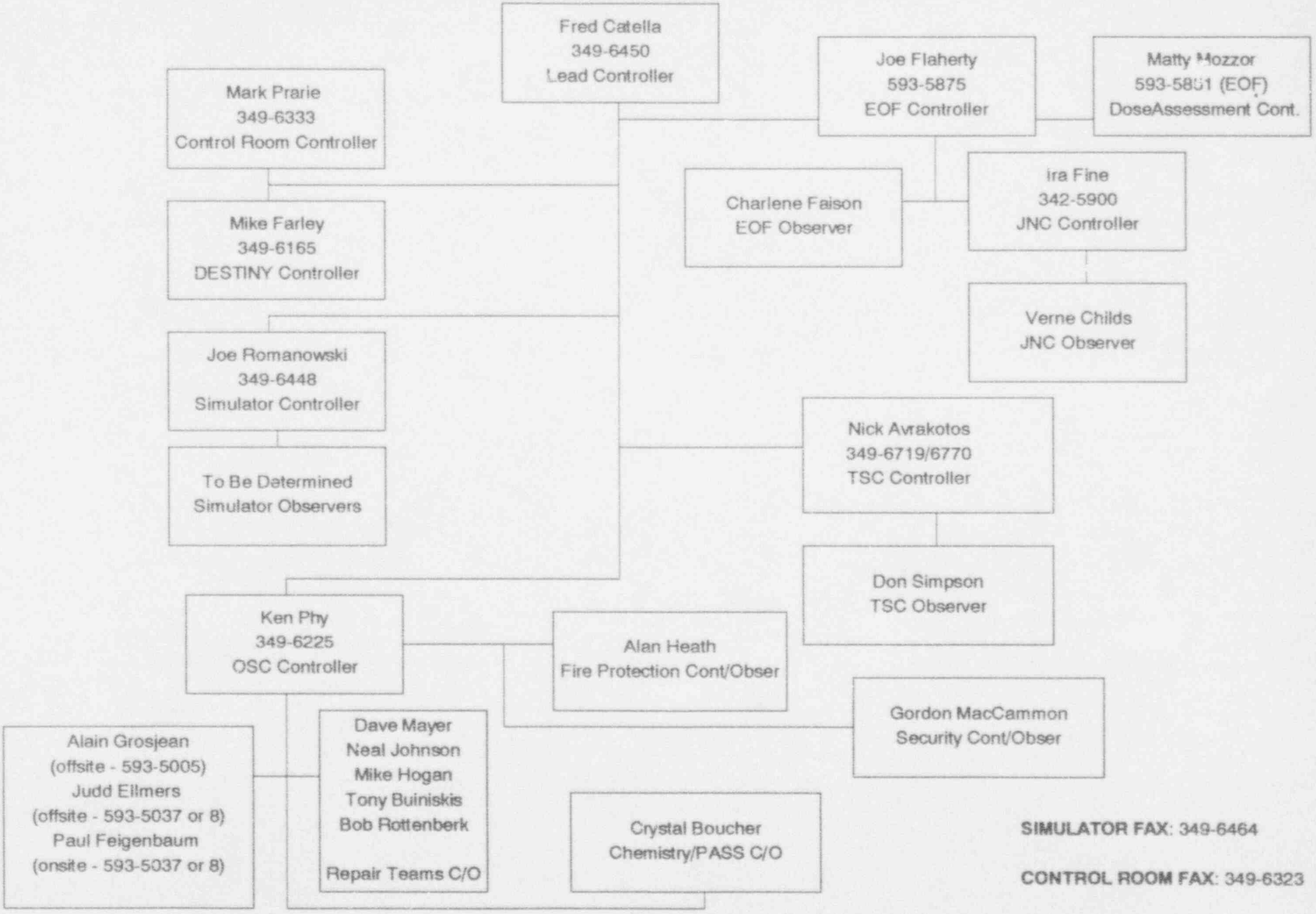
DRILL REPORT

9. Observers

Name	Organization	Area of Responsibility
Simpson, Don	JAF	TSC
Mayer, Dave	JAF	OSC Repair Team C/O
Johnson, Neal	JAF	OSC Repair Team C/O
Hogan, Mike	JAF	OSC Repair Team C/O
Buiniskis, Tony	JAF	OSC Repair Team C/O
Rottenberk, Robt	JAF	OSC Repair Team C/O
To Be Determined	IP-3	OSC Repair Team C/O
Feigenbaum, Paul	WPO	Onsite Field Monitoring
Grosjean, Alain	WPO	Offsite Field Monitoring
Ellmers, Judd	WPO	Offsite Field Monitoring
Childs, Verne	JAF	JNC
Faison, Charlene	WPO	EOF
To Be Determined	IP-3	Simulator

JAFNPP EXERCISE CONTROLLERS/OBSERVERS

December 14, 1993



SIMULATOR FAX: 349-6464

CONTROL ROOM FAX: 349-6323

FORM SAP-1.2

SUMMARY INFORMATION

TIME	
EVENT	
ACTION	
SPECIAL	
EAL	
AOP/EOP	
INPLANT RAD	
OFFSITE RAD	
SUPP. SCENARIO	

FORM SAP-1.3 Page _____ of _____

MESSAGE SHEET

MESSAGE NO. _____

Exercise Time: _____

Issued To: _____

Issued By: _____

MESSAGE

_____

FORM SAP-1.4

DRILL AND EXERCISE SCENARIO DEVELOPMENT
CHECKLIST

(Use this checklist as a reference for drill or exercise development.)

DRILLS

_____ 1. Drill Title

_____ 2. Objectives

_____ 3. Scope

_____ 4. Safety Precautions

_____ 5. Time Schedule

_____ 6. Summary

_____ 7. Data

_____ 8. Drill Report

_____ 9. Accurate List of Valid EPIC Drill Screens

EXERCISES

_____ 1. Exercise Title

_____ 2. Objectives

_____ 3. Rules and Guidelines

_____ 4. Event Summary

_____ 5. Meetings

_____ 6. Timeline

_____ 7. Messages

_____ 8. Data

_____ 9. Anticipated Actions

_____ 10. Method of Evaluation

_____ 11. Accurate List of Valid EPIC Drill Screens

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

SPECIAL INFORMATION

1. Simulate all contacts to any offsite agencies with the exception of Niagara Mohawk, Oswego County and New York State. (RECS calls should be made in accordance with procedure.)

2. Contact to NRC over ENS should be by procedure. Follow their instructions. Expect to have only the initial call and close of drill call.

3. There will be no impact to the new Support and Administration Building. If a site evacuation is conducted, building may be vacated.

4. Training currently scheduled will continue, with the limitation that each manager must ensure that "Emergency Response Organization" staff positions are filled.

5. WPO Emergency Response Center (ERC) will be activated for this drill. Contact to that facility will be expected.

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

SIMULATOR PRE-DRILL PREPARATIONS

1. MIS and Training to verify the computer links between the Simulator and DESTINY.

2. Training to establish simulator malfunction program.

3. MIS to run Simulator Data Transfer Programs on the following:

   a. Simulator Computer
   b. Novell Network
   c. DESTINY

4. MIS to establish and run meteorological data "dummy file."

5. I&C to set up bridge phones and Gaitronics in simulator.

6. Training to set up fax machine in simulator.

7. Public Relations to send fax to all NYPA switchboards regarding drill.

8. Emergency Planning to set up controller communications. I&C to establish progressive conference call, if requested.

9. Emergency Planning to stage controller/observer briefing with past drill report.

10. MIS to switch EPIC terminals and inform Control Room.

11. MIS to switch 708 data, inform Performance Engineering and put message on data.

12. Security to verify employees exempt from drill and accountability during drill, and input exempt names into the accountability system.

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

SIMULATOR TO EMERGENCY FACILITIES COMMUNICATIONS

Phones/Gaitronics to Simulated Control Room/SS

Phones/Gaitronics for the emergency drill have been established in the simulator that tie into the normal plant system. These phones/Gaitronics will be activated only during drills and for testing. Communications in the simulator to be used for drills will be labeled "EP DRILLS ONLY."

	ACTUAL CR EXT.	SIMULATOR CR EXT.
NCO Desk	6666	7666
SS Desk	6665	7665
Asst. SS Desk	6323	7323
4-Way Hotline	Actual	Actual
RECS	Actual	Actual
ENS (FTS)	700-371-5321	Actual - special (plant exit. 6087)
Other Hotlines	Actual	Simulated

In addition to these phones, five special lines have been established for use by drill controllers.

Gaitronics

Two Gaitronics stations have been established in the simulator. One unit and speaker will be set up on the NCO desk and one unit and speaker will be set up in the SS's office. All communications over these should be used using "line 3." All field communications to and from the simulator should be preceded by "This is a drill. This is a drill." Plant staff wanting to contact the simulator control room should state "Simulator Line 3." Every effort must be made during the drill not to interfere or confuse actual Control Room Gaitronics traffic with Simulator Gaitronics traffic.

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

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SIMULATOR TO EMERGENCY FACILITIES COMMUNICATIONS (continued)

Alarms/Announcements

Alarms for drills from the simulator must be directed to the Control Room to activate. Simulator operators should request the alarm via the phone to the Control Room SS (x6665) or via the simulator drill controller. The Control Room operator should state "This is a drill. This is a drill." and then activate the alarm. The operator in the simulator should then immediately follow through with the proper announcement.

Dispatch of Personnel not Physically Located at the Simulator

JAF staff will be dispatched to work via phone or Gaitronics before the OSC is activated by Operations personnel in the simulator.

After the OSC is activated and operational, all staff will be dispatched from the OSC as designated in procedure.

Please note: this includes drill Auxiliary Operators who will be located in the Work Control Center until emergency facility activation (OSC) and then be located in the OSC after that.

Logs, Data Sheets and Turnover

Any logs or data sheets that would require turnover from simulator CR to TSC or other facilities will be handled in the following manner. Simulator operator will hand data sheet to controller who will then fax the data over to the TSC or the Control Room. A fax will be placed in the simulator instructor's area for data transmittals. Verbal turnovers should then be done over the phone.

Turnover to Emergency Director and Public Information

Turnover to the Emergency Director and Public Information should be conducted in person at the simulator as conditions warrant.

Other Communications

Other communications not covered by this short list that require assistance should enlist the help of a controller to resolve.

SECTION 2

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

SIMULATOR MALFUNCTIONS

[illegible] INI[illegible]IAL SETUP

```
I[illegible]T [illegible]S [illegible]
TRU [illegible]10 MSIVTEST
TRF [illegible]
TRF EP06 [illegible]5
TRF EP0[illegible] [illegible]
TRF EP[illegible] [illegible] 50
TRF DG0[illegible] MAN[illegible]
TRF DG[illegible] MANUAL
IMF [illegible]C01:[illegible]
IMF DG01:C
IMF DG01:D
IMF RD10:ALL
IMF RH01:D
IOR Z[illegible] [illegible] OFF
IOR Z[illegible]-4[illegible] ON
IOR Z[illegible]A82[illegible] [illegible]NRM
[illegible] IMF [illegible]A [illegible]
```

[redacted] - E0/400/FP

IRF EP09
IMF ED19:I
IOR ZD11BR1A053B UFF
+00:00:03 IRF EP09 trip
+00:02:00 IRF FP01:A

[redacted]2 - RUNOUT/EEE

IRP RR07
+00:00:03 MRT RR07 100
IMP RX01 (NONE 30) 0.1
IMP RM01:01 (NONE 40) 60 10:00 49.2
IMP RM01:02 (NONE 40) 60.2 10:00 49
IMP RM01:03 (NONE 40) 59.95 10:00 48
IMP RM01:04 (NONE 40) 60.1 10:00 50

Aug 31 11:25 1993 603 Page 1

3 - EOS worse on grp 1

SMF RX01(6)0 0)25 60:00 1.0

f[redacted]4 - ramp RMs

#I=0
IMF RM02:21 22.15
IMF RM02:23 30.82
IMF RM02:24 40.77
IMF RM02:25 38.34
IMF RM02:26 38.3
IMF RM02:27 55
IMF RM02:28 35.2
IMF RM02:29 55.8
IMF RM01:09 28.58
IMF RM01:09 29.02
IMF RM01:19 2.02
IMF RM01:20 2.05

#I=3
+00:03:00
MMF RM02:21 40
MMF RM02:23 46
MMF RM02:24 50
MMF RM02:25 40.2
MMF RM01:09 (NONE 0) 100 00:00 28.58
MMF RM01:09 (NONE 0) 100 00:00 29.02

#I=6
+00:02:00
MMF RM02:26 51
MMF RM02:27 53.7
MMF RM02:28 47.5
MMF RM02:29 53.3

#I=09
+00:04:00
MMF RM02:21 55
MMF RM02:23 64
MMF RM02:24 63
MMF RM01:19 3.0
MMF RM01:20 3.0

#I=10
+00:01:00
MMF RM02:25 65
MMF RM02:26 63.8
MMF RM02:27 65.6
MMF RM02:28 61
MMF RM02:29 66.4

#I=12
+[redacted]02:00
M[redacted]RM02:21 73.5
MMF RM02:23 78.5
MMF RM02:24 76.5
MMF RM01:19 3.5
MMF RM01:20 3.6

$T=15
+00:03:00
MME RM02:25 80
MME RM02:26 76
MME RM02:27 78.1
MME RM02:28 77.3
MME RM02:29 81

$T=17
+00:02:00
MME RM02:21 84
MME RM02:23 84.7
MME RM02:24 83
MME RM02:25 87.5
MME RM02:26 85.5
MME RM01:19 4.5
MME RM01:20 4.3

$T=20
+00:03:00
MME RM02:27 80.8
MME RM02:28 87
MME RM02:29 80.0
CAT: 605

[redacted] camps continue

#T=23
+00:03:00
MME RM02:21 91
MME RM02:23 91.5
MME RM02:24 90
MME RM02:25 92.4
MME RM01:19 5.0
MME RM01:20 5.1

#T=25
+00:02:00
MME RM02:26 92.5
MME RM02:27 90.5
MME RM02:28 93.5
MME RM02:29 90.0

#T=28
+00:03:00
MME RM02:21 93
MME RM02:23 94
MME RM02:24 93
MME RM01:19 6.0
MME RM01:20 6.1

#[redacted]9
+00:01:00
MME RM02:25 95
MME RM02:26 95.3
MME RM02:27 93.4

#T=30
+00:01:00
MME RM02:28 96
MME RM02:29 93.2
MME RM01:19 7.0
MME RM01:20 7.1

#T=35
+00:05:00
MME RM02:21 97.5
MME RM02:23 96.5
MME RM02:24 96.5
MME RM02:25 98
MME RM02:26 98.1
MME RM02:27 97.5
MME RM02:28 97.9
MME RM02:29 97
MME RM01:19 9.0
MME RM01:20 9.1

#T=40
+00:05:00
MME RM02:21 100

RM02:23 100
RM02:24 100
MME RM02:25 100
MME RM02:26 100
MME RM02:27 100
MME RM02:28 100
MME RM02:29 100
MME RM01:19 (NUNI 0)15 80:00 9

SECTION 2

James A. FitzPatrick Nuclear Power Plant
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EPIC SCREENS AVAILABLE

1. PLANT
2. RRC (Radioactivity Release Control)
3. SCR (Secondary Containment Rad Control)
4. LOG1 (Plant Parameters Log)
5. PART3 (NY State Part III Data Form)

SECTION 3

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

EVENT SUMMARY

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Scenario Overview

At 0700, the plant is at 70-75% power after a power reduction to identify leaking fuel pins. Offgas rad levels are elevated due to leaking fuel, and the plant is in Fuel Action Plan Level 2. L-14 is cross-tied to L-13 due to an earlier failure of T-6. The plant is in day 4 of a Limiting Condition of Operation (LCO) status due to inoperable diesels. "A" and "C" Emergency Diesel Generators (EDGs) are inoperable due to a crack in the Emergency Service Water (ESW) line at the tee between 46ESW-2A and 3A. The line is isolated and drained, and weld preparation and grinding is proceeding. The reboiler was taken out of service for testing and calibration of the level controls.

At 0710, a seismic event Emergency Plant Information Computer (EPIC) alarm is received in the Control Room. The operators should enter and execute Abnormal Operation Procedure #14 (AOP-14, Earthquake). Instrument and Control (I&C) personnel should be directed to pull the seismograph tape, Niagara Mohawk should be contacted to confirm the event, and the alarm should be reset. Entry into the Emergency Plan at the Unusual Event level is expected at this point.

At 0745, an earthquake less than design (0.06G) occurs, causing a short and fire in the 10400 bus. The resulting ground fault causes loss of the 10400 bus and subordinate 600V L-gears (with the exception of L-14) and a momentary loss of the 10600 (vital) bus. The "D" EDG fails to start. Only the "B" EDG starts to restore power to the 10600 bus. Fire alarms and intermittent security alarms, alarm.

The problem with the "D" EDG will be given as a longitudinal crack in the air supply to the air start motors. This gives a task to the mechanics to put a patch on the supply pipe to restore the EDG. Availability of the EDG has no strong bearing on the scenario.

Also, coincident with the loss and restoration of the 10600 bus, there will be a failure of one bank of the Area Radiation Monitors (ARMs) and the buckling of a Security light pole that shall fall and in doing so eliminate a Security zone. This will give I&C and/or Engineering the opportunity to troubleshoot and attempt repairs.

Operators should respond to the indications of the earthquake by executing AOP-14 which directs inspections of buildings, structures, systems and components as well as entry into the Emergency Plan.

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Scenario Overview
(continued)

The fire brigade should respond to the fire in the West Electric Bay, which will be extinguished in less than ten minutes. Damage to the 10400 bus will be severe such that the bus in non-recoverable.

Control Room operators should take action in accordance with AOP-17, Loss of 10400 Bus, to start necessary redundant equipment and cross-tie L-gears to the 10300 bus. Reactor Protection System (RPS) "B" will also need to be restored and scrams and isolations reset (10600 trip initiated). A scoop tube lock on the "B" Reactor Water Recirculation (RWR) pump will also need to be reset (10400 trip initiated).

A power reduction should be commenced based on EDG operability status.

Emergency declaration should be made to the Alert #13 level for earthquake. Unusual Event may also be declared based on 3 of 4 EDGs not operable (Unusual Event #7) or commencement of 24-hour shutdown required by Technical Specifications (Unusual Event #4).

Maintenance, I&C and Engineering may take action to temporarily repair the air supply line to the "D" EDG so that it can be started.

At 0820, the buckled Security light pole is knocked over by a strong wind gust that knocks the pole onto a microwave station rendering it inoperable.

At 0915, a failure of one RWR pump flow controller will occur causing a rapid power increase. Fuel failure results. High Range Containment Radiation Monitor (HRCRM), Main Steam Line (MSL) and offgas radiation levels will begin and continue to rise. When the automatic or manual scram signal is reached, a failure to scram will occur. Rods will be able to be inserted in a relatively short period of time by inserting additional scrams. When the Primary Containment Isolation System (PCIS) setpoint for high MSL radiation is reached, the Main Steam Isolation Valves (MSIVs) will close. This should occur at about 0925.

The operators are expected to attempt to manually reduce the RWR pump speed or trip the pump. A manual scram may or may not be directed at this time. With rising process radiation levels, action should be taken in accordance with the Annunciator Response Procedures (ARPs). Ultimately, a scram and isolation

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Scenario Overview
(continued)

should be called for. With the failure to scram, Emergency Operating Procedure #2 (EOP-2, RPV Control) should be entered with the transition to EOP-3, Failure to Scram and entry into AOP-34, Backup Control Rod Insertion. Control rods can be inserted by resetting and inserting additional scrams. This can be accomplished in a relatively short period of time. EOP-3 should be exited with a return to EOP-2. Conditions for an Alert based on either MSL Radiation 3x Normal (Alert #2) or Failure to Scram (Alert #6a) exist.

A Post Accident Sampling System (PASS) sample should be directed or prompted at this point.

At approximately 0940, following the MSIV closure, a leak develops in the drywell causing drywell temperature and pressure to rise. When drywell pressure reaches 2.7 psig, Emergency Core Cooling System (ECCS) and PCIS signals are generated. Leakage from the primary containment into the Reactor Building as a result of the earlier earthquake subsequently begins as drywell pressure rises. Reactor Building ARMs begin and continue to rise. A General Emergency should be declared at this point based on loss of all three fission product barriers.

From approximately 0940 until the end of the scenario, a release will be underway via Standby Gas Treatment (SBGT) to the stack.

Upon reaching 2.7 psig ECCS signal, the 10500 bus will be lost on a ground fault when the "A" and "B" Residual Heat Removal (RHR) pumps start. The "D" RHR pump trips on starting. This leaves only the "C" RHR pump available for containment cooling, but no power is available to the "A" RHR loop valves or to the "A" and "C" Residual Heat Removal Service Water (RHRSW) pumps.

If/when an emergency depressurization is conducted, a break in one of the Safety Relief Valve (SRV) tailpipes is necessary to cause a further increase in containment pressure as the reactor depressurizes.

EOP-4, Primary Containment Control, should be entered and EOP-2 reentered with the rising drywell pressure. The only available RHR pump at this point is "C", which is in the RHR loop with no power to the valves or the "A" side of RHRSW pumps (loss of 10500). Thus torus cooling and containment sprays are not immediately possible or effective. Cross tie from RHRSW to RHR in the "B" loop may be attempted, but will initially be

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Scenario Overview
(continued)

unsuccessful unless mechanics clean the RHRSW strainers. This is provided as an alternate scenario with a success path.

The rising ARM readings in the Reactor Building should prompt entry into EOP-5, Secondary Containment Control, and AOP-9, Loss of Primary Containment Integrity. This should result in a Reactor Building evacuation and isolation of the Reactor Building and should preclude any additional efforts to establish containment sprays.

With the rising radiation readings in the Reactor Building, EOP-5 should be entered. The operators will eventually depressurize the reactor, either at normal rates via the SRVs or through emergency depressurization. In either event, primary containment pressure should remain high enough for a period of time to continue the release into the Reactor Building and out through SBGT.

The release will continue until the end of the drill, with varying release rates after some period of time.

Several nuisance events will occur in addition to the above. Cracks in the fire loop will become evident at 0945 when fire system pressure drops and all pumps attempt to restore system pressure. This system may be restored by Operational Support Center (OSC).

At 1015, the Technical Support Center (TSC) Heating Ventilation Air Conditioning (HVAC) system will fail. This system may also be restored by the OSC.

Finally, at 1040, a call will be received in the Control Room indicating that water is seeping from the east wall of the Sewage Treatment Facility. Efforts should be made to secure release of sewage liquid from the lake.

The exercise will end at 1130 as release pressure is removed and an end to the release is apparent.

SECTION 4

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

MEETINGS

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

MEETINGS

Monday, December 13, 1993

0930 to 1015	NYPA Staff Initial Conditions Briefing (Work Control Center Conference Room)
1230 to 1400	NYPA Controller/Observer Briefing (Support Center Conference Room)
1400 to 1500	NRC Observer Briefing (Support Center Conference Room)
1500 to 1700	NRC Training/Badging
1700 to 1800	NRC Tour of Emergency Facilities

Tuesday, December 14, 1993

0600 to 0645	Simulator Briefing for Control Room Staff
0700 to 1130	NRC Partial Participation Emergency Exercise
1200 to 1330	Facility Debriefing

Wednesday, December 15, 1993

0900 to 1000	NYPA Controllers/Observers Debrief (Support Center Conference Room)
1000 to 1100	NYPA Exercise Critique (Support Center Conference Room)
1100 to 1130	NRC Exercise Critique (Support Center Conference Room)

SECTION 5

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

TIMELINE

I. Timeline

II. Summary Information

III. Data Summary Graphs

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

TIMELINE

Time	Key Events
0700	Initial Conditions • Leaking fuel pins - Failed Fuel Action Plan Level 2 • "A" and "C" EDGs inoperable • Reboiler out of service
0710	EPIC Seismic Alarm ≈0.02G • Unusual Event conditions met
0725	Unusual Event should be declared by this time
0745	Seismic Event ≈0.06G • Short/fire/loss of 10400 bus • Intermittent fire alarms • Momentary loss of 10600 bus • "D" EDG fails to start • Bank of ARMs fail • Intermittent security alarms • Security lighting buckled • Alert level conditions met
0800	Alert should be declared by this time
0820	Security lighting pole fails • Pole falls, destroying a microwave unit and fence
0915	Rapid power increase • Failure of RWR pump flow controller • Fuel failure results • Increase radiation from HRCRM, MSL and Offgas
0925	Scram signal (manual or automatic) • Failure to scram • PASS prompt • Operator action successful to shutdown reactor
0940	Release from containment becomes apparent • General Emergency levels reached
0955	General Emergency should be declared by this time
1000	Loss of loop pressure for fire systems
1010	TSC HVAC failure
1040	Sewage Treatment Facility problem observed • Liquid release to the lake
1130	Drill Ends

TIME	0700
EVENT	The plant is at 70-75% power after a power reduction to identify leaking fuel pins. L-14 is cross-tied to L-13 due to an earlier failure of T-6. "A" and "C" EDGs are inoperable due to a crack in the ESW line at the tee between 46ESW-2A and 3A. The line is isolated and drained, and weld preparation and grinding is proceeding. The plant is in day 4 of a 7-day LCO associated with the diesels. The reboiler was taken out of service for testing and calibration of the level controls. The crew is scheduled to begin ST.
ACTION	Operating crew will review initial data.
SPECIAL	Failed Action Fuel Plan Action Level 2 data sheet attached. ROME PID for "A" and "C" EDG inoperable and reboiler work exist.
EAL	None
AOP/EOP	None
INPLANT RAD	Higher than normal offgas rad levels due to leaking fuel pins. All other conditions normal.
OFFSITE RAD	Normal
SUPP. SCENARIO	None

TIME	0710
EVENT	A seismic event EPIC alarm is received in the Control Room.
ACTION	I&C will be directed to pull the seismograph tape, NiMo should be contacted to confirm the event, and the alarm will be reset. After analysis, Emergency Plan should be entered. SS may activate emergency facilities.
SPECIAL	Seismic alarm is approximately 0.03G.
EAL	Unusual Event #13, Seismic Event
AOP/EOP	The operators should enter and execute AOP-14, Earthquake. Security should be directed to assist in inspecting the site.
INPLANT RAD	Higher than normal offgas rad levels due to leaking fuel pins. All other conditions normal.
OFFSITE RAD	Normal
SUPP. SCENARIO	Supplemental Scenario #1, Seismic Event #1

TIME	0725
EVENT	Response to Seismic Event to be observed.
ACTION	
SPECIAL	
EAL	Unusual Event #13, Seismic Event, should be made by this time.
AOP/EOP	
INPLANT RAD	Higher than normal offgas rad levels due to leaking fuel pins. All other conditions normal.
OFFSITE RAD	Normal
SUPP. SCENARIO	None

TIME	0745
EVENT	A seismic event less than design (0.06G) occurs, causing a short and fire in the 10400 bus. The resulting ground fault causes loss of the 10400 bus and subordinate 600V L gears (with the exception of L-14) and a momentary loss of the 10600 (vital) bus. "D" EDG fails to start. Only the "B" EDG starts to restore power to the 10600 bus. Intermittent fire and security alarms, alarm. Coincident with the loss and restoration of the 10600 bus will be a failure of one bank of the ARMs, and the buckling of a security light pole.
ACTION	Operators should respond to the indications of the earthquake by executing AOP-14 which directs inspections of buildings, structures, systems and components as well as entry into the Emergency Plan. The fire brigade should respond to the fire in the West Electric Bay, which will be extinguished in less than ten minutes. Damage to the 10400 bus will be severe such that the bus is non-recoverable. A power reduction should be commenced based on EDG operability status.
SPECIAL	The problem with the "D" EDG will be given as a longitudinal crack in the air supply to the air start motors. This gives the task to the mechanics to put a patch on the supply pipe to restore the EDG. Availability of the EDG has no strong bearing on the scenario. ARM failure will give I&C and/or Engineering the opportunity to troubleshoot and attempt repairs.
EAL	Emergency declaration should be made for Seismic Event (UE #13). Unusual Event may also be declared based on 3 of 4 EDGs not operable (UE #7) or fire (UE #8) or commencement of 24-hour shutdown required by Technical Specifications (UE #4).
AOP/EOP	Control Room operators should take action in accordance with AOP-14 and AOP-17, Loss of 10400 Bus, to start necessary redundant equipment and cross-tie L Gears to the 10300 bus. RPS "B" will also need to be restored and scrams and isolations reset. A scoop tube lock on the "B" RWR pump will also need to be reset.
INPLANT RAD	Higher than normal offgas rad levels due to leaking fuel pins. All other conditions normal.
OFFSITE RAD	Normal
SUPP. SCENARIO	Supplemental Scenario #2, Seismic Event #2 Supplemental Scenario #3, 10400 Bus/Short/Fire Supplemental Scenario #4, "D" EDG Air Line Failure Supplemental Scenario #5, Loss of ARMs

TIME	0800
EVENT	Response to seismic event to be observed.
ACTION	Maintenance, I&C and Engineering may take action to temporarily repair the air supply line to the "D" EDG so that it can be started and correct any problems in PCIS or nuclear instrumentation.
SPECIAL	None
EAL	Alert #13, Seismic Event, should be made by this time.
AOP/EOP	AOP-14 and AOP-17
INPLANT RAD	Higher than normal offgas rad levels due to leaking fuel pins. All other conditions normal.
OFFSITE RAD	Normal
SUPP. SCENARIO	None

TIME	0820
EVENT	Security lighting pole fails and collapses. Unit hits microwave head and zone is inoperative.
ACTION	Security will investigate, determine cause of zone failure, request OSC assistance in removing light pole, and use compensatory measures for event.
SPECIAL	None
EAL	Alert #13
AOP/EOP	AOP-14 and AOP-17
INPLANT RAD	Higher than normal offgas rad levels due to leaking fuel pins. All other conditions normal.
OFFSITE RAD	Normal
SUPP. SCENARIO	Supplemental Scenario #6, Security Lighting Pole Failure

TIME	0915
EVENT	A failure of one RWR pump flow controller will occur causing a rapid power increase. Fuel failure results. HRCRM, MSL, and offgas radiation levels will begin and continue to rise. Ultimately a scram and isolation should be called for. When the automatic or manual scram signal is reached (due to process radiation levels), a failure to scram will occur. When the PCIS setpoint for high MSL radiation is reached, the MSIVs will close.
ACTION	The operators are expected to attempt to manually reduce the RWR pump speed or trip the pump. A manual scram may or may not be directed because of the pump failure.
SPECIAL	Rods will be able to be inserted in a relatively short period of time by inserting additional scrams.
EAL	An Alert should be declared based on either MSL Radiation 3X Normal (Alert #2) or Failure to Scram (Alert #6a).
AOP/EOP	With the failure to scram, EOP-2 should be entered with the transition to EOP-3 and entry into AOP-34. Control rods can be inserted by resetting and inserting additional scrams. This can be accomplished in a relatively short period of time. EOP-3 should be exited with a return to EOP-2.
INPLANT RAD	Rising process radiation levels. High Range Containment Rad Monitor (HRCRM), Main Steam Line (MSL) or Offgas Rad Monitor action should be taken in accordance with the ARPs.
OFFSITE RAD	Normal
SUPP. SCENARIO	None

TIME	0925
EVENT	A PASS sample should be directed or prompted at this point.
ACTION	PASS sample should be obtained.
SPECIAL	
EAL	Alert #13, Alert #2 or Alert #6a
AOP/EOP	EOP-2, EOP-3 and AOP-34
INPLANT RAD	HRCRM up to 60 R/hr. MSL up to 1819 mR/hr.
OFFSITE RAD	Normal
SUPP. SCENARIO	None

TIME	Approximately 0940
EVENT	Evident that release from containment to the Reactor Building and out through the Stack.
ACTION	Operators should declare General Emergency.
SPECIAL	
EAL	General Emergency # (loss of 3 of 4 fission product barriers)
AOP/EOP	EOP-3
INPLANT RAD	HRCRM = 10890 R/hr. MSL = 3 times normal
OFFSITE RAD	Normal
SUPP. SCENARIO	None

TIME	Approximately 0945
EVENT	Following the MSIV closure, a leak develops in the drywell causing drywell temperature and pressure to rise. When drywell pressure reaches 2.7 psig, ECCS and PCIS signals are generated. Upon reaching 2.7 psig ECCS signal, the 10500 bus will be lost on a ground fault when the "A" and "B" RHR pumps start. The "D" RHR pump trips on starting. This leaves only the "C" RHR pump available for containment cooling, but no power is available to the "A" RHR loop valves or to the "A" and "C" RHRSW pumps.
ACTION	The operator will eventually depressurize the reactor, either at normal rates via the SRVs or through emergency depressurization.
SPECIAL	If/when an emergency depressurization is conducted, a break in one of the SRV tailpipes will cause a further increase in containment pressure as the reactor depressurizes. The only available RHR pump at this point is "C", which is in the RHR loop with no power to the valves or RHRSW pumps (loss of 10500). Torus cooling and containment sprays are not immediately possible or effective.
EAL	General Emergency #
AOP/EOP	EOP-4 should be entered and EOP-2 reentered with the rising drywell pressure.
INPLANT RAD	Leakage from the primary containment into the Reactor Building, as a result of the earlier earthquake, subsequently begins as drywell pressure rises. Reactor Building ARMs begin and continue to rise.
OFFSITE RAD	A release will be underway via Standby Gas Treatment to the Stack.
SUPP. SCENARIO	None

TIME	Approximately 1000
EVENT	Alternate success path: drywell sprays can be initiated if "B" side RHRSW system is cross-tied to RHR, and if the strainers are cleaned. All fire pumps will auto start to restore loop pressure. System pressure will drop to 85 pounds.
ACTION	By 0955, a General Emergency should have been declared.
SPECIAL	Reactor Building rad levels should preclude any additional efforts to establish containment sprays. Primary containment pressure should remain high enough for a period of time to continue the release into the Reactor Building and out through SBGT.
EAL	A General Emergency should be declared at this point based on loss of all three fission product barriers.
AOP/EOP	The rising ARM readings in the Reactor Building should prompt entry into EOP-5 and AOP-9, Loss of Primary Containment.
INPLANT RAD	Rising rad levels in the Reactor Building should result in a Reactor Building evacuation and isolation of the Reactor Building.
OFFSITE RAD	Low Range Stack Monitor up to 559192 cps.
SUPP. SCENARIO	Supplemental Scenario #7, RHR and RHRSW Cross-Tie Supplemental Scenario #8, Loss of Fire Loop

TIME	1010
EVENT	TSC HVAC System Heating/Chiller Unit fails. Heating drops dramatically in TSC. If TSC ventilation enabled, ventilation will fail.
ACTION	TSC should request OSC repair team to repair.
SPECIAL	None
EAL	General Emergency #
AOP/EOP	None
INPLANT RAD	Some Reactor Building Rad Monitors up to 3/4 range. All others rising dramatically.
OFFSITE RAD	Low Range Stack Monitor up to 751351 cps.
SUPP. SCENARIO	Supplemental Scenario #9, TSC Ventilation System Failure

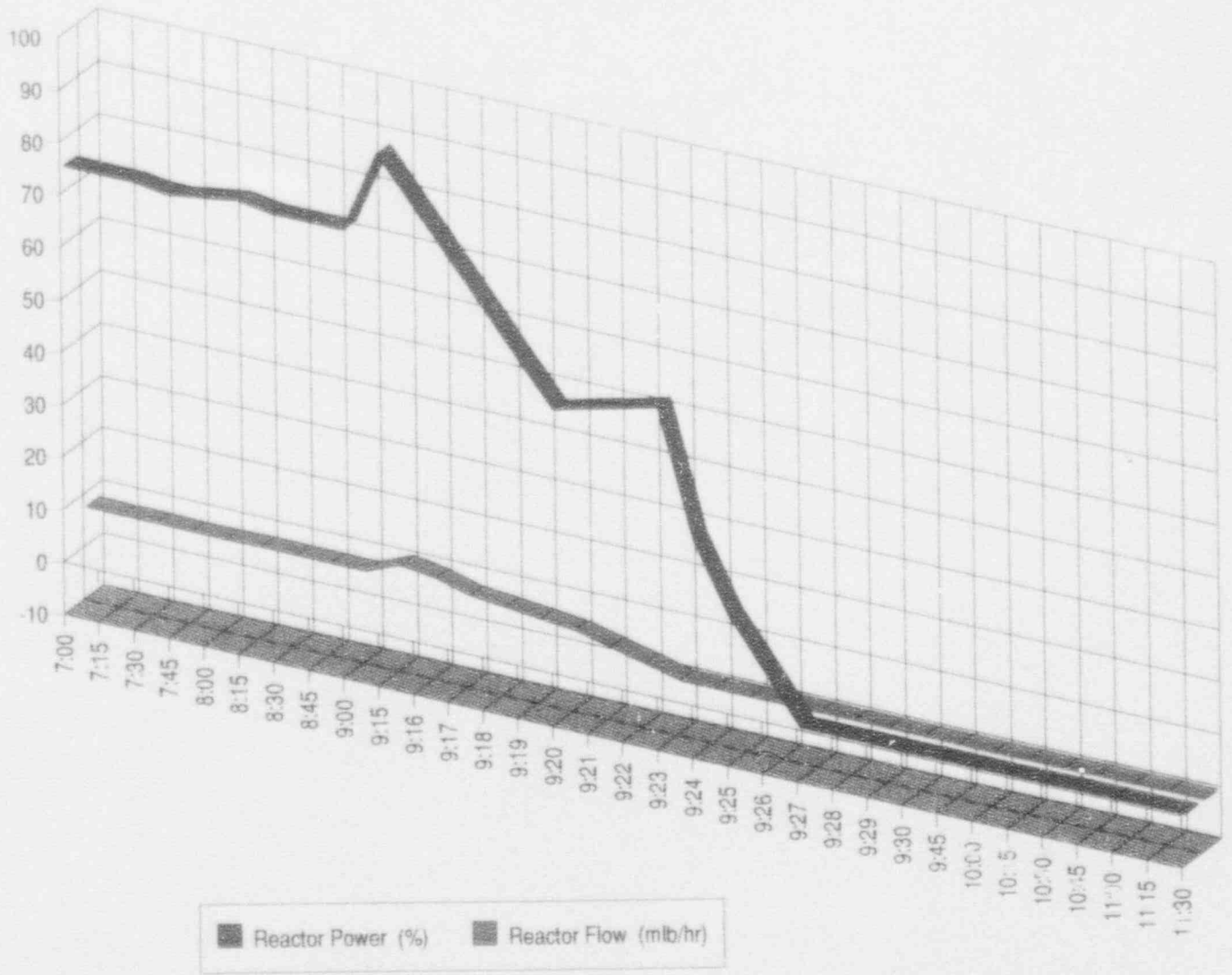
TIME	1040
EVENT	Cracks in Sewage Treatment Facility alarm with liquid release.
ACTION	OSC should investigate and conclude with containment.
SPECIAL	None
EAL	General Emergency #
AOP/EOP	N/A
INPLANT RAD	Most Reactor Building rad monitors are offscale, others are continuing to rise.
OFFSITE RAD	Low Range Stack Monitor is offscale; High Range Stack Monitor is 1 mR/hr. At 100°, 1 mile downwind, dose rate is 1 mR/hr.
SUPP. SCENARIO	Supplemental Scenario #10, Sewage Treatment Facility Leak

TIME	1100
EVENT	Offsite dose rates continue to rise.
ACTION	None
SPECIAL	None
EAL	General Emergency #
AOP/EOP	None
INPLANT RAD	Normal
OFFSITE RAD	Low Range Stack is offscale; High Range Stack is 1 mR/hr. Offsite dose rate at 100°, up to 2.5 miles downwind, is 2 mR/hr.
SUPP. SCENARIO	None

TIME	1115
EVENT	Rising offsite dose rates.
ACTION	None
SPECIAL	None
EAL	General Emergency #
AOP/EOP	None
INPLANT RAD	Normal
OFFSITE RAD	Low Range Stack is offscale; High Range Stack is 1 mR/hr. Offsite dose rate up to 3 mR/hr.
SUPP. SCENARIO	None

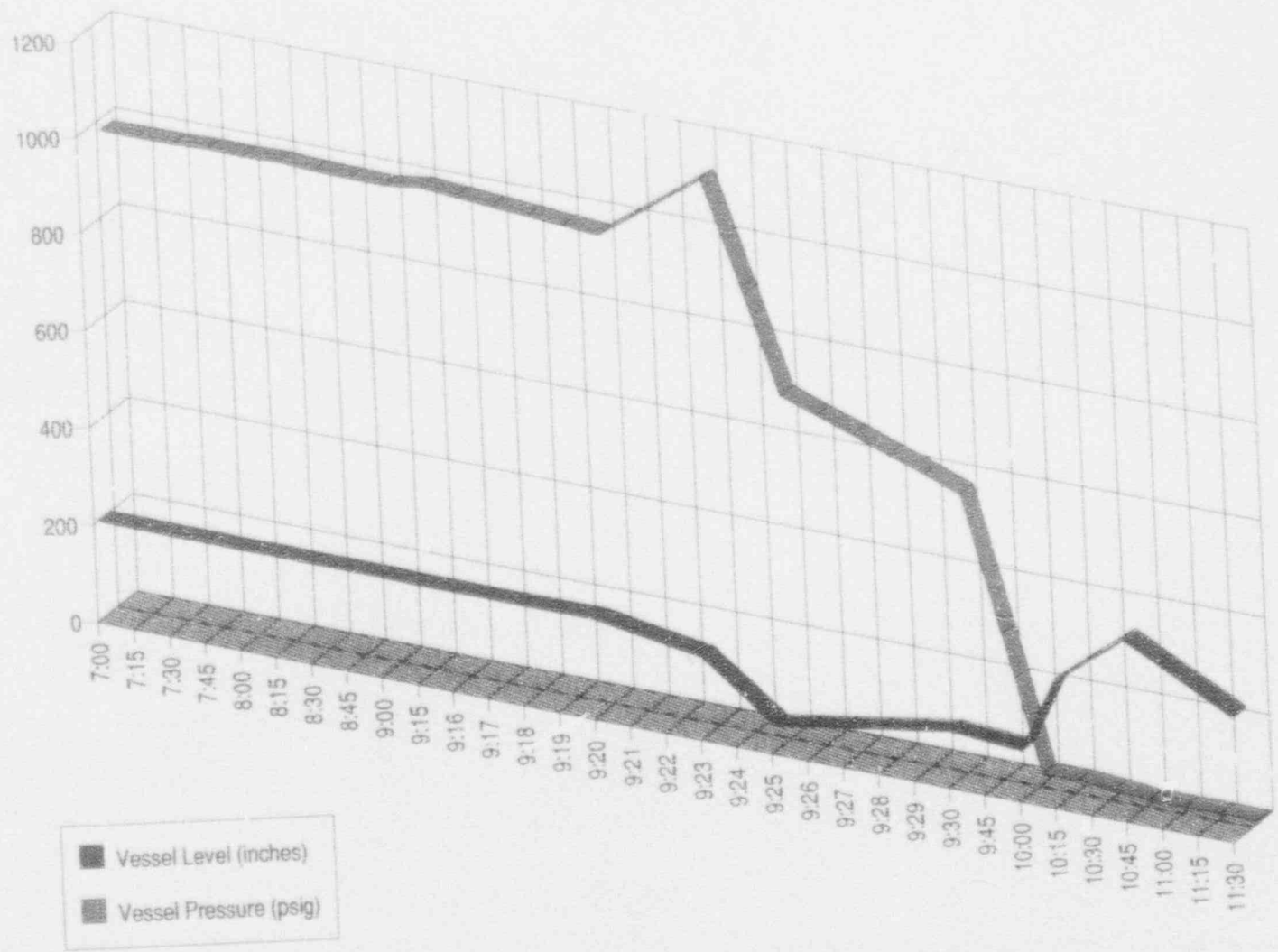
TIME	1130
EVENT	Exercise terminates.
ACTION	Close out call on RECS from EOF. Close out call on NRC FTS (ETS) in TSC.
SPECIAL	None
EAL	General Emergency #
AOP/EOP	None
INPLANT RAD	Reactor Building ARMs offscale.
OFFSITE RAD	Low Range Stack is offscale; High Range Stack is 1 mR/hr. Offsite dose rate up to 3 mR/hr.
SUPP. SCENARIO	None

Overview Graphs



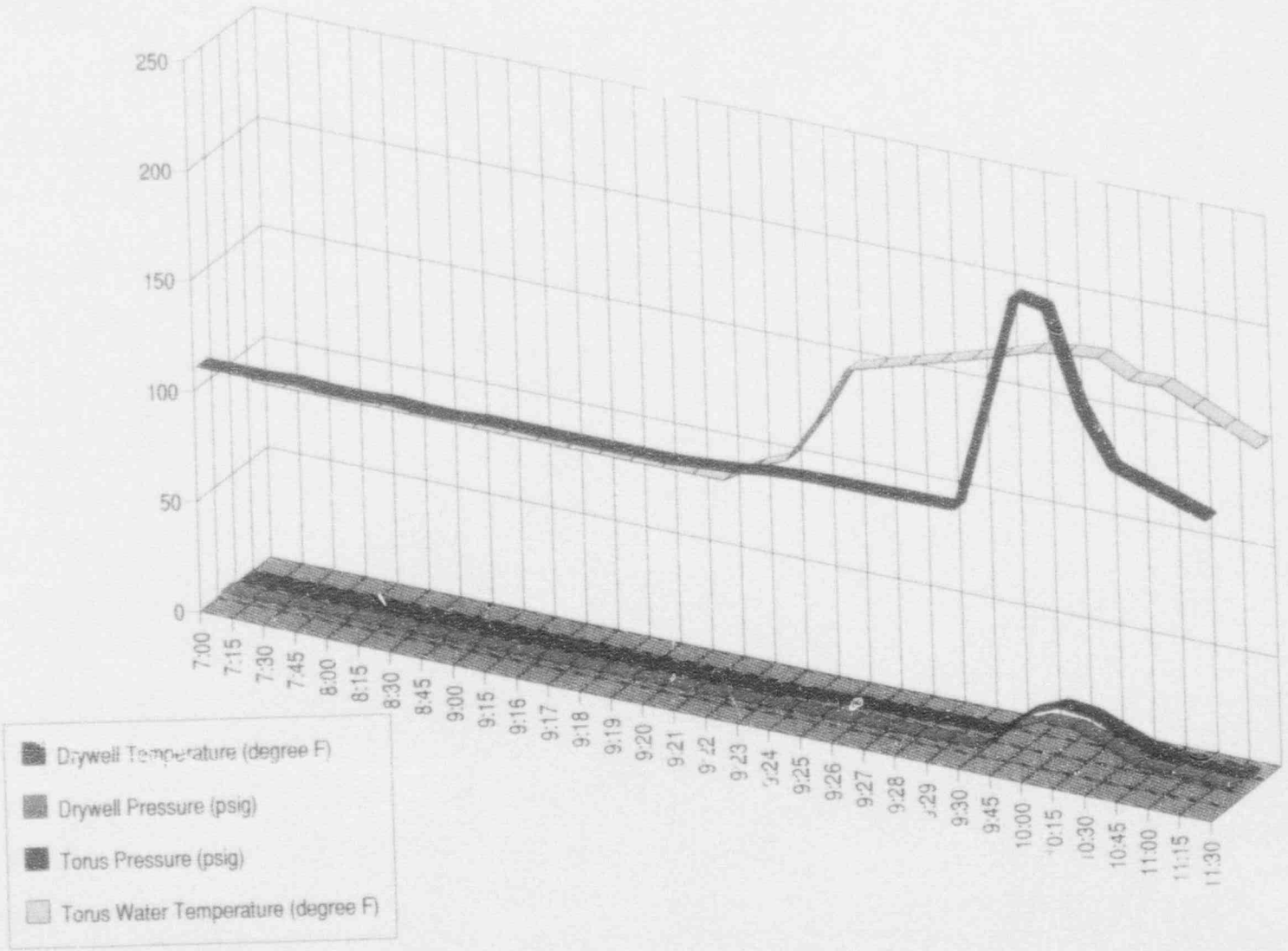
December 14, 1993 Exercise

Overview Graphs



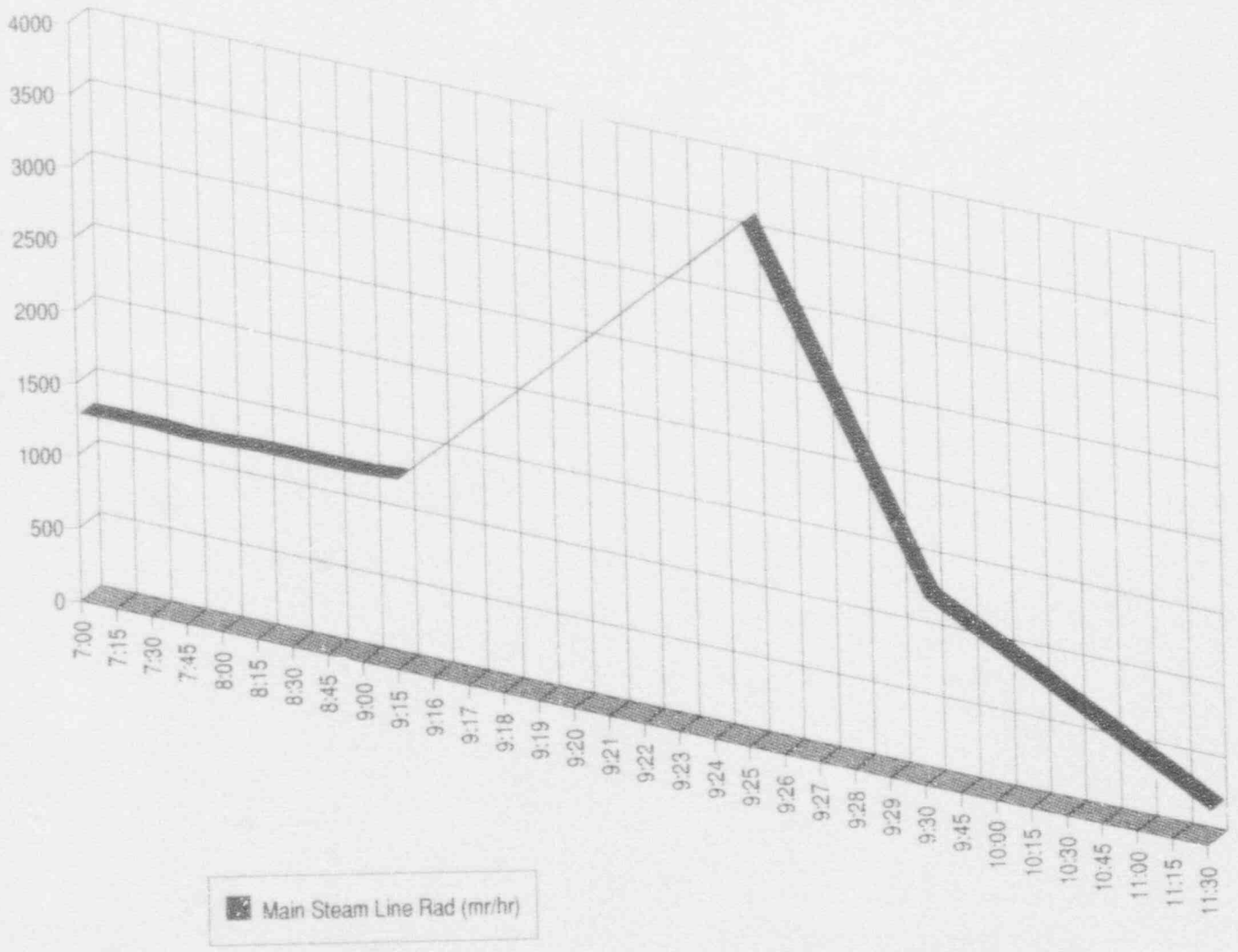
December 14, 1993 Exercise

Overview Graphs



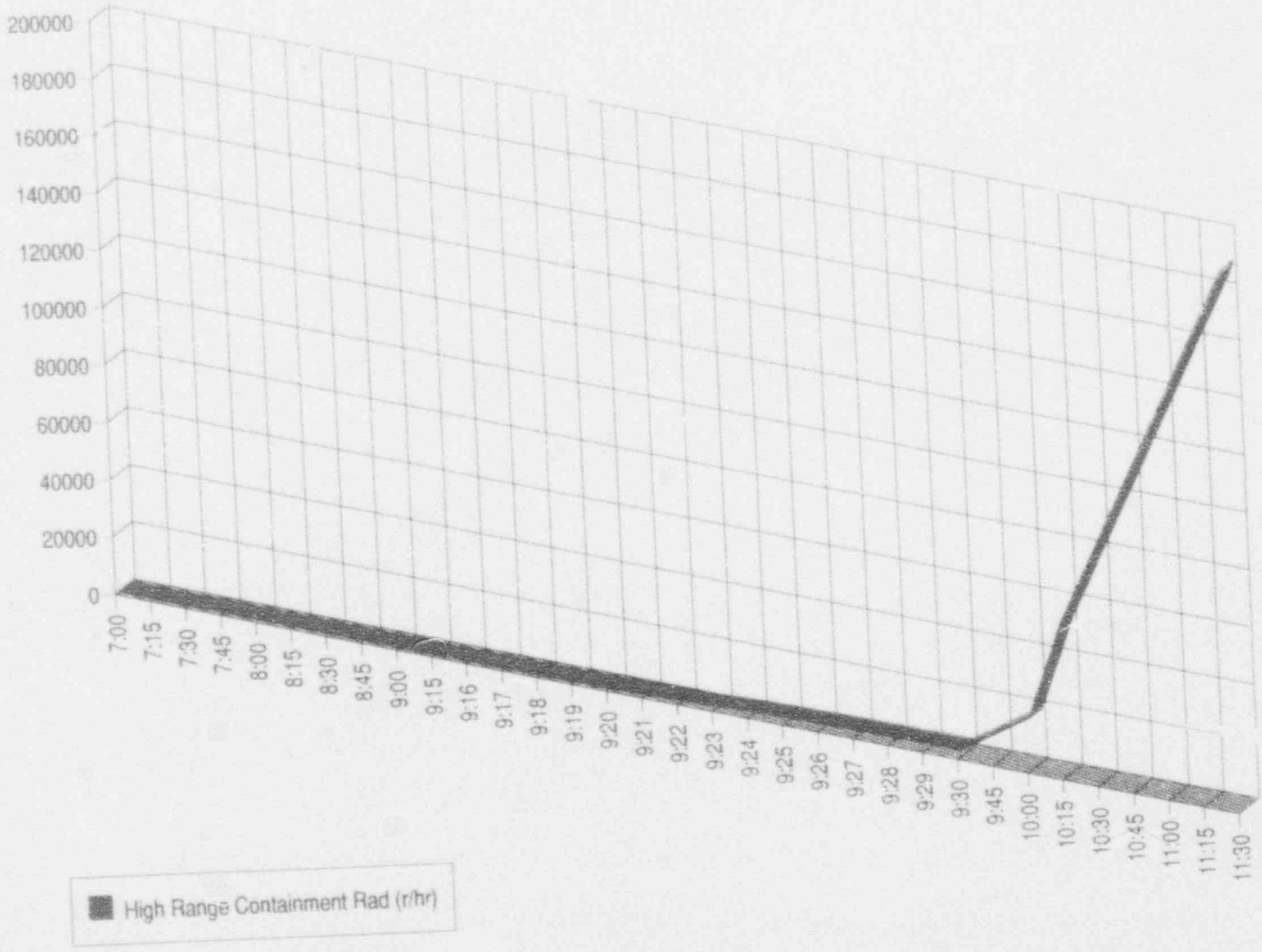
December 14, 1993 Exercise

Overview Graphs

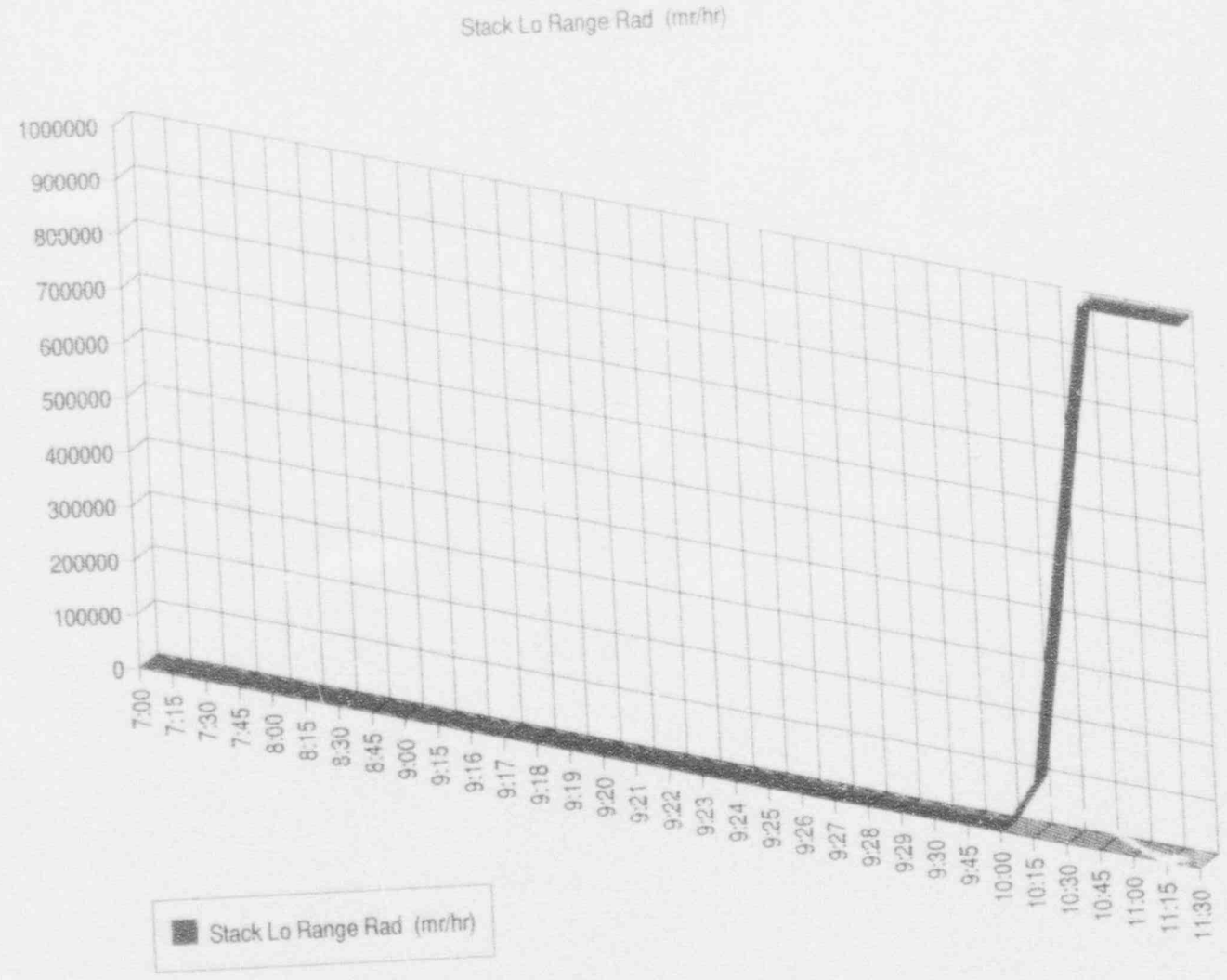


December 14, 1993 Exercise

Overview Graphs



December 14,1993 Exercise


Stack Lo Range Rad (mr/hr)
1000000
900000
800000
700000
600000
500000
400000
300000
200000
100000
0
7:00
7:15
7:30
7:45
8:00
8:15
8:30
8:45
9:00
9:15
9:16
9:17
9:18
9:19
9:20
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9:25
9:26
9:27
9:28
9:29
9:30
9:45
10:00
10:15
10:30
10:45
11:00
11:15
11:30
Stack Lo Range Rad (mr/hr)

SECTION 6

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

DRILL/CONTINGENCY MESSAGES

I. Message Sheets

II. Supplemental Scenarios

III. Plant SPDS Displays

MESSAGE SHEET

MESSAGE NO. 1

Exercise Time: 0700

Issued To: All "Players"

Issued By: All Controllers

MESSAGE

Initial Conditions are as follows:

The plant is at 70-75% power, after a power reduction to identify leaking fuel pins.

L-14 is cross-tied to L-13 due to an earlier failure of T-6.

"A" and "C" EDGs are inoperable due to a crack in ESW1 line at the tee between 46ESW-2A and 3A. The line is isolated and drained, and weld preparation and grinding is proceeding. The plant is in day 4 of a 7-day LCO.

The reboiler was taken out of service for testing and calibration of the level controls.

The crew is scheduled to begin ST.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

FAILED FUEL PLAN ACTION LEVEL 2 DATA

JAF CURRENT CHEMISTRY SUMMARY FOR _____

Rx Water DATE/TIME _____ CPI, 40, [redacted] [<0.37] POWER 70 % _____ MWth

Conductivity 0.162 µS/cm [<0.20] pH 6.06 I-131DE 5.04x10^{-3} µCi/gm [< 1E-4]

Chloride <1 ppb [<15] ECP — mv SHE [<-250] Total I 2.31x10^{-4} µCi/ml

Sulfate 5.0 ppb [<15] O2 89.2 ppb Activity 9.94x10^{-3} µCi/ml

Silica 10 ppb [<100] H2 0.005 ppb Sol Zinc 4.81 ppb [4-6] _____ Date

RWCU EFFLUENT

SAMPLE DATE/TIME _____ / _____

	A	B
Date/Time In Service	_____	_____
Cond µS/cm	0.056 [<0.08]	.056 [<0.08]
Silica ppb	<5 [<75]	<5 [<75]
Activity µCi/ml	1.2x10^{-4}	1.1x10^{-4}

FEEDWATER / **CONDENSATE**

DATE/TIME _____ / _____

	Cond µS/cm		O_2
Feedwater	[<0.06] 0.055	[20-50]	19.4
CDI	[--] 0.084	[--]	14.93
CDO	[<0.08] 0.053	[--]	286

H2 _____ ppb

H2 Flow — cfm 02 Flow — cfm

Fe [<2.0] — ppb Cu [<0.1] — ppb

S.W. CHLORINE (PPM) DATE 1.9 A — B — C — SW out [0.5-2] 1.7

Offgas: Date _____ µCi/sec [<600] _____ Recomb. Flow _____ cfm Oxygen _____ cfm

Liquids: Date _____ gallons 1.52 mo 1.52 yr Curies 0.613 mo 0.613 yr (Includes Tritium)

	Sample Date	Cond µS/cm	Chloride ppb	Sulfate ppb	Silica ppb	TOC ppb	Activity µCi/ml
RW-IA	_____	33.5	---	---	2290	4936	5.76x10^{-4}
Limit		[<300]				[<6000]	[<1.0]
RW-OUT	_____	0.116	---	---	75.2	235	ND
Limit		[<10]			[<200]	[<1500]	[<1.0E-2]
DWST	_____	0.095	<1	<1	<5	178	ND
Limit		[<1.0]	[<20]	[<20]	[<20]	[<400]	[< LLD]
WST	_____	0.420	<1	<1	10	324	3.22x10^{-5}
Limit		[<1.0]	[<20]	[<20]	[<100]	[<400]	[<1.5E-4]

CURRENT CHEMISTRY OUT OF SPECIFICATION: NOTIFICATIONS

CIR #	Date	Sys	Parameter	Limit	Value	Action
92-053	6/19/92	Aux Boiler Oil Sep Pit / Oil & Grease				
93-003	1/5/93	Reverse Osmosis Outlet				
93-069	5/4/93	TBCLC	Diss O_2			

JAF CURRENT CHEMISTRY SUMMARY FOR _____

Rx Water DATE/TIME _____ CPI _____ [<0.37] POWER _____ % _____ MWth

Conductivity _____ µS/cm [<0.20] pH _____ I-131DE _____ µCi/gm [< 1E-4]

Chloride _____ ppb [<15] ECP _____ mv SHE [<-250] Total I _____ µCi/ml

Sulfate _____ ppb [<15] 02 _____ ppb Activity _____ µCi/ml

Silica _____ ppb [<100] H2 _____ ppb Sol Zinc _____ ppb [4-6] _____ Date

RWCU EFFLUENT

SAMPLE DATE/TIME _____ / _____

	A	B
Date/Time In Service	_____	_____
Cond µS/cm	_____ [<0.08]	_____ [<0.08]
Silica ppb	_____ [<75]	_____ [<75]
Activity µCi/ml	_____	_____

FEEDWATER / **CONDENSATE**

_____ DATE/TIME _____

	Cond µS/cm	O_2
Feedwater	[<0.06] _____	[20-50] _____
CDI	[--] _____	[--] _____
CDO	[<0.08] _____	[--] _____

H2 _____ ppb

H2 Flow _____ cfm 02 Flow _____ cfm

Fe [<2.0] _____ ppb Cu[<0.1] _____ ppb

S.W. CHLORINE (PPM) DATE _____ A _____ B _____ C _____ SW out [0.5-2] _____

Offgas: Date _____ µCi/sec [<600] _____ Recomb. Flow _____ cfm Oxygen _____ cfm

Liquids: Date _____ gallons _____ mo _____ yr Curies _____ mo _____ yr (Includes Tritium)

	Sample Date	Cond µS/cm	Chloride ppb	Sulfate ppb	Silica ppb	TOC ppb	Activity µCi/ml
RW-IN	_____	_____	---	---	_____	_____	_____
Limit		[<300]				[<6000]	[<1.0]
RW-OUT	_____	_____	---	---	_____	_____	_____
Limit		[<10]			[<200]	[<1500]	[<1.0E-2]
DWST	_____	_____	_____	_____	_____	_____	_____
Limit		[<1.0]	[<20]	[<20]	[<20]	[<400]	[< LLD]
WST	_____	_____	_____	_____	_____	_____	_____
Limit		[<1.0]	[<20]	[<20]	[<100]	[<400]	[<1.5E-4]

CURRENT CHEMISTRY OUT OF SPECIFICATION: NOTIFICATIONS

CIR #	Date	Sys	Parameter	Limit	Value	Action
92-053	6/19/92	Aux Boiler Oil Sep Pit / Oil & Grease				
93-003	1/5/93	Reverse Osmosis Outlet				
93-069	5/4/93	TBCLC	Diss O_2			

MESSAGE SHEET

MESSAGE NO. 2

Exercise Time: ≈0700

Issued To: Person Reading Meteorological Data

Issued By: Simulator/TSC/CR Controllers

MESSAGE

Wind Direction - from 270°
Wind Speed - 3 mph
Stability Class - E (very stable)
Sky Cover - Sunny
Precipitation - none

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 3

Exercise Time: 0710

Issued To: Security Guard in CAS

Issued By: Security Controller

MESSAGE

The building shakes for about ten (10) seconds at the same time seven (7) different zones alarm. Zone # continues alarming after the shaking stops. Report occurrence to the Control Room.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 4

Exercise Time: ≈0710

Issued To: MIS personnel

Issued By: OSC Controller

MESSAGE

The building shakes for about ten (10) seconds. Loud creaking noises and bangs are heard during the shaking.

Call the Control room and inform them of this.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 5

Exercise Time: ≈0710

Issued To: Control Room/Simulator Staff

Issued By: Simulator Controller

MESSAGE

The building shakes for about ten (10) seconds.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 6

Exercise Time: 0725

Issued To: Control Room

Issued By: Lead Controller

MESSAGE

PROMPT

If an UNUSUAL EVENT has not been declared, the Shift Supervisor should be prompted to declare an UNUSUAL EVENT #13.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 7

Exercise Time: 0745 or as OSC Repair Team arrives to repair EDGs

Issued To: OSC crew assigned to repair EDGs

Issued By: OSC Controller/Observer

MESSAGE

There is a longitudinal crack in the air start piping just downstream of EDG-47 and EDG-50 valves. One air bank is isolated and fully charged (normal standby mode); the other air bank is depleted, with the air compressor running continuously.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 8

Exercise Time: 0745 or as OSC Repair Team arrives to inspect ARMs

Issued To: OSC crew assigned to repair ARMs

Issued By: OSC Controller/Simulator Controller

MESSAGE

Indications as follows:

1. Trip unit meter downscale.
2. Auxiliary unit meter downscale.
3. 09-3-1-19 annunciator in.
4. No local horns will sound.
5. Local alarm "Power Available" lamps lit.
6. No upscale alarms, annunciator or indicators will be received.
7. EPIC points downscale.
8. Power supply "High Voltage" lamps not lit.
9. D-C volts meter will indicate 0V.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 9

Exercise Time: After 0745

Issued To: Security Guard in CAS

Issued By: Security Controller

MESSAGE

Numerous zone alarms come in simultaneously. Some alarms continue intermittently for up to five (5) minutes.

Security patrol reports that light pole near Security Building appears to be bent and leaning toward the ground.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 10

Exercise Time: After 0745

Issued To: Fire Brigade Leader

Issued By: OSC Controller (West Electric Bay)

MESSAGE

Indications as follows:

1. A fire occurred in the West Electric Bay.
2. The fire appears to be out.
3. Smoke and fire damage on electrical gear is evident.
4. Electrical equipment is covered with black soot.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 11

Exercise Time: 0800

Issued To: Control Room

Issued By: Lead Controller

MESSAGE

PROMPT

If an ALERT has not been declared, the Shift Supervisor should be prompted to declare an ALERT #13.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 12

Exercise Time: 0820

Issued To: Security Guard in CAS

Issued By: Security Controller

MESSAGE

Security zone adjacent to buckled light pole alarms. Security patrol indicates pole has collapsed and security microwave has been hit.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 13

Exercise Time: ≈0850

Issued To: Person Reading Meteorological Data

Issued By: Simulator/TSC/CR Controllers

MESSAGE

Wind Direction - from 275°
Wind Speed - 4 mph
Stability Class - D (very stable)
Sky Cover - Sunny
Precipitation - none

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 14

Exercise Time: After 0925

Issued To: Emergency Director

Issued By: TSC Controller

MESSAGE

PROMPT

This is a prompt for Post Accident Sample System (PASS).

Please request a PASS sample at this point to allow enough time for the sample to be processes.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 15

Exercise Time: ≈0930

Issued To: Person Reading Meteorological Data

Issued By: Simulator/TSC/CR Controllers

MESSAGE

Wind Direction - from 280°
Wind Speed - 5 mph
Stability Class - C (very stable)
Sky Cover - Sunny
Precipitation - none

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 16

Exercise Time: 0955

Issued To: Control Room

Issued By: Lead Controller

MESSAGE

PROMPT

If a GENERAL EMERGENCY has not been declared, the Shift Supervisor should be prompted to declare a GENERAL EMERGENCY #.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 17

Exercise Time: ≈1000

Issued To: Simulator Control Room

Issued By: Simulator Controller

MESSAGE

All fire pumps have started.
System pressure has dropped to 85 pounds.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 18

Exercise Time: ≈1040

Issued To: TSC Manager

Issued By: TSC Controller

MESSAGE

Chemistry technician reports large crack in east wall of the Sewage Treatment Facility with liquid seeping out of crack.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

MESSAGE SHEET

MESSAGE NO. 19

Exercise Time: ≈ 1130

Issued To: Emergency Facilities

Issued By: Lead Controllers

MESSAGE

Drill is terminated. Notify all agencies. Instruct personnel to remain in place for a debriefing.

Place call to the NRC via FTS in the TSC.

Place RECS line call via RECS in the EOF.

THIS IS A DRILL

DO NOT initiate actions affecting normal plant operations

SUPPLEMENTAL SCENARIO NO. 1

SEISMIC EVENT #1

Time: 0710

Location: Throughout the Plant Site

Responsibility: Simulator/OSC/Security Controllers

A. Initial Notification

At 0710, vibration is noticed in the Control Room. Calls also are received in the Control Room from various locations on site, including I&C, Security and the Warehouse.

B. Postulated Event

A seismic event occurs resulting in an approximate 0.03G force.

C. Restoration Guidelines

Operations and Security should walk down the site. Operations should execute AOP-14. No damage should be noted. Event can be terminated after walk downs. Security zones are restorable; no visible damage.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 2

SEISMIC EVENT #2

Time: ≈0745

Location: Throughout the Plant Site

Responsibility: Simulator/OSC/Security Controllers

A. Initial Notification

At ≈0745, vibration and loud creaking and straining is noticed and heard in the Control Room. Numerous calls from around the plant site indicate continued seismic activity.

B. Postulated Event

A seismic event occurs resulting in an approximate 0.03G force.

C. Restoration Guidelines

Operations should execute AOP-14 and AOP-17. Scrams and isolations need to be reset.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 3

10400 BUS/SHORT/FIRE

Time: After 0745

Location: West Electric Bay

Responsibility: OSC Controller

A. Initial Notification

Fire alarm panel indicates a fire in the West Electric Bay.

B. Postulated Event

Electrical fire related to a short in 10400 bus occurs. Smoke and soot is evident in West Electric Bay but no fire.

C. Restoration Guidelines

Fire brigade should investigate and ventilate the area.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 4

"D" EDG AIR LINE FAILURE

Time: 0745

Location: "D" EDG Room

Responsibility: OSC Controller

A. Initial Notification

At 0730, an earthquake causes the momentary loss of 10600 bus, "B" EDG starts, and "D" EDG fails to start.

B. Postulated Event

There is a longitudinal crack in the air start piping, just downstream of EDG-47 and EDG-50 valves. One air bank is isolated and fully charged (normal standby mode). The other air bank is depleted, with the air compressor running continuously.

C. Restoration Guidelines

At about 0900, when the repair crew arrives, air is blowing out of crack, located under deck plate, between isolation valves 47 and 50, and the "D" EDG skid. The air must be isolated, by closing the open isolation valve (47 or 50, whichever is lined up). This will stop the air leak.

The repair team leader should report conditions found to the OSC Manager and estimated repair time. It is expected that the repair team will repair the leak with rubber gasketing and clamps.

After repair is complete, either the 47 or 50 valve can be opened (whichever is fully charged), adequate repair verified, and the EDG started. Estimated time for repair is one hour.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 5

LOSS OF ARMS

Time: 0745

Location: Control Room

Responsibility: OSC Controller/Simulator Controller

A. Initial Notification

Annunciator 09-3-1-19, ARM Downscale, will appear. Operations will discover numerous ARMs on back panel are not operational.

B. Postulated Event

A short develops outside of the power supply, causing a common failure to a bank of ARMs.

C. Restoration Guidelines

Operations will request I&C/OSC to repair. With I&C repair, the following may be noted:

1. Trip unit meter will indicate downscale.
2. Auxiliary unit meter (local) will indicate downscale.
3. K1 (at trip unit) will cause 09-3-1-19 to annunciate.
4. No local audio alarm horns will sound or beacons light.
5. Local alarm "Power Available" lamps will remain lit (normal).
6. No upscale alarms, annunciators or indications will be received.
7. EPIC points will indicate downscale.

In addition, upon a loss of power event, the following will occur for the power supply:

1. High voltage lamp will not be lit.
2. D-C volts meter will indicate 0V.

If technicians replace power supply, replaced unit fails again. If technicians opt to find short prior to replacing power supply, short will not be found during exercise period.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 6

SECURITY LIGHTING POLE FAILURE

Time: ≈0820

Location: Security CAS

Responsibility: Security Controller

A. Initial Notification

Zone alarms and security patrol indicate that buckled light pole has collapsed, destroying a microwave unit.

B. Postulated Event

Security lighting pole damaged in seismic event fails in high gust of wind.

C. Restoration Guidelines

Zone may be restored at any time by I&C repair team upon discussion with controller.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 7

RHR AND RHRSW CROSS-TIE

Time: ≈1000

Location: Simulator Control Room

Responsibility: Simulator Controller

A. Initial Notification

Operator action.

B. Postulated Event

If operator decides to cross-tie the "B" side of RHRSW to RHR, this will be allowed to be accomplished, but will be unsuccessful until mechanics clear out strainer baskets.

After attempt is made, no flow or high DP will be indicated.

C. Restoration Guidelines

OSC repair team can accomplish this cross-tie if action is taken to clear strainers.

D. Radiological Conditions

As listed in Section 7.

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 8

LOSS OF FIRE LOOP

Time: ≈1000

Location: Simulator Control Room

Responsibility: Simulator Controller

A. Initial Notification

Operator shall be handed a message sheet indicating that all the fire pumps have started and system pressure has been reduced to approximately 85 pounds.

B. Postulated Event

A break of the system loop, brought on by the seismic event, is bleeding off pressure and liquid.

C. Restoration Guidelines

Fire Protection Controller has discretion to locate fire line break anywhere. Break can or cannot be repaired at Fire Protection Controller's discretion.

D. Radiological Conditions

Dependent upon break area.

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 9

TSC VENTILATION SYSTEM FAILURE

Time: ≈1010

Location: TSC

Responsibility: TSC Controller

A. Initial Notification

Temperature in the TSC drops dramatically.

B. Postulated Event

TSC air exchange unit fails to isolate heated air. Event to be controlled by TSC Controller via Operations. Symptoms per controller to OSC repair team.

C. Restoration Guidelines

Heating may be restored at any time after OSC repair team dispatched and problem troubleshooted.

D. Radiological Conditions

None

E. Personnel Contamination

None

SUPPLEMENTAL SCENARIO NO. 10

SEWAGE TREATMENT FACILITY LEAK

Time: 1040

Location: Sewage Treatment Facility

Responsibility: OSC Controller

A. Initial Notification

A call is received from the Chemistry Technician that a large crack exists in the east wall of the Sewage Treatment Facility, and the liquid is draining out of the crack forming a large pool of liquid on the ground.

B. Postulated Event

Seismic event cracked holding tank in Sewage Treatment Facility. Liquid waste is draining onto the ground and possibly into the lake.

C. Restoration Guidelines

The leak will be stopped whenever a containment is built to stop liquid release.

D. Radiological Conditions

None

E. Personnel Contamination

None

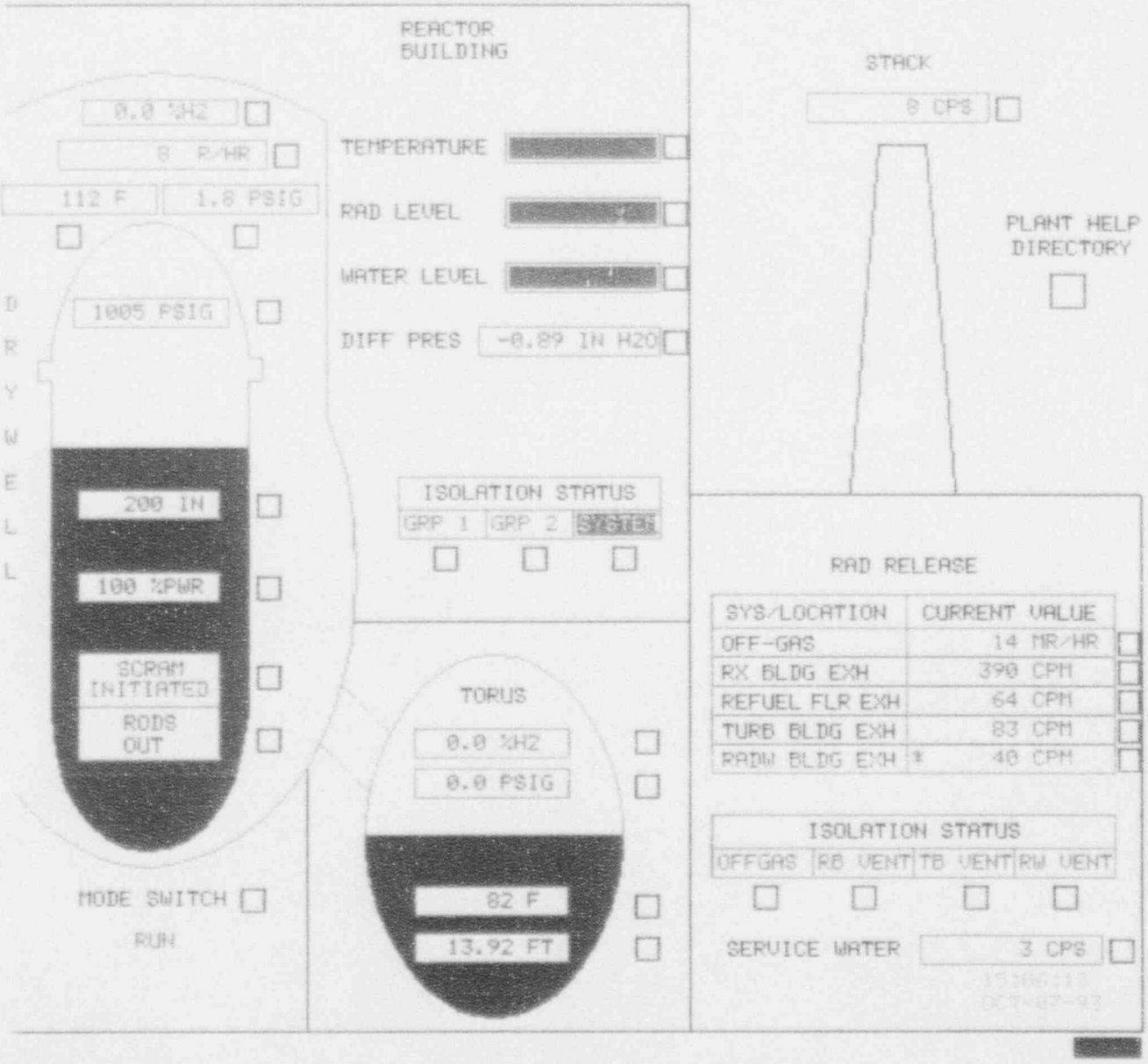
NORMAL PLANT OPERATING PARAMETERS

100% POWER

14:21:19 C71T4-TRBL [redacted] // 14:21:18 71XFMR-T4-M [redacted]

PLANT

PLANT



14:21:19 C71T4-TRBL [redacted] // 14:21:18 71XFMR-T4-M [redacted]

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	TEMP F	WL FT	TEMP F	PRES PSIG	H2 %				
99.9	1004.6	200.2	81.8	13.9	112.3	1.8	0.0	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	0.6	24	999
RX BLDG ELEV 344	2.8	17	997
NEW FUEL VAULT	6.3	14	994
RWCU PRECOAT AREA	16.3	64	984
RWCU HX ROOM	4.5	46	996
FUEL POOL PUMP ROOM	147.8	152	852
CONTAMIN EQUIP STRG	3.0	47	997
RWCU PUMP AREA	2.4	28	998
RX BLDG SAMPLE AREA	4.9	25	995
RBCLC HX AREA	0.9	4	999
RX BLDG ELEV 272	4.4	36	996
TIP CUBICLE	9.6	115	990
EAST HCU AREA	4.1	26	996
WEST HCU AREA	2.0	33	998
EAST CRESC AREA	8.2	102	992
CRD REMOVAL HATCH	1.0	24	999
WEST CRESC AREA	9.4	91	991
WEST REFUEL FLOOR	373.4	627	199627

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	74.0	926	269926
BELOW REFUEL FLOOR EXH	358.9	641	269641

14:21:19 C71T4-TRBL [redacted] // 14:21:18 71XFMR-T4-M [redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX PWR %	RPV PRES PSIG	RPV WL IN	TORUS TEMP F	TORUS WL FT	DRYWELL TEMP F	DRYWELL PRES PSIG	PC H2 %	RX BLDG			OFFSITE
99.9	1004.5	200.3	81.8	13.9	112.3	1.6	0.0	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-0.89 IN H2O

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
CNT SAMPLE	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW-TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
14 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	SDC ISOL	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	2
OFF-GAS	103
STACK	9696
RX BLDG EXH	121797
TURB BLDG EXH	64210
RADW BLDG EXH	27737

LOW RANGE CONTINUOUS OFFSITE REL RATES				
LOCATION	RATES	X	CF	= uCI/SEC(ml)
STACK	0 CPS		CF	0.7581E+01
RX BLDG EXH	358 CPM		CF	0.2508E+03
REFUEL FLR EXH	64 CPM		CF	0.2562E+02
TURB BLDG EXH	88 CPM		CF	0.6708E+02
RADW BLDG EXH	* 40 CPM		CF	*0.6400E+01
SW EFF (ml)	3 CPS		CF	0.1334E-05

HIGH RANGE CONTINUOUS OFFSITE REL RATES				
LOCATION	RATES	X	CF	= CI/SEC
STACK	0 MR/HR		CF	0.2192E+00
TURB BLDG EXH	0 MR/HR		CF	0.9275E+01
RADW BLDG EXH	0 MR/HR		CF	0.9031E+01

[redacted]

14:21:19 C71T4-TREL [redacted] // 14:21:18 71XFMR-T4-M [redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	2434.2	DW PRS	1.84
CTPAVG-P6	2436.4	DW/TRS DP	1.87
CORE MWT	2431.7	A %O2 MON	2.68
CORE %CTP	99.8	B %O2 MON	******
CORE % WT	97.9	A %H2 MON	0.00
CORE%WTAV	98.1	B %H2 MON	******
RX LVL	200.0	DW T	112.3
RX PRS	1004.7		
GEN MWE	821.9	TRS PRS	-0.02
GEN MVAR	224	TRS LVL	13.92
GEN H2PRS	59.1	TRS WTR T	81.8
600 VOLTS	598	TRS AIR T	88.4
PLANT EFF	33.7		
CST LVL	272.4	N2 PRS	118.1
CND VAC	27.50		
CND DT	27.3	RWCU IN T	518.9
CND LVL	-0.2	CUFD IN T	101.5
LAKE T	60.2	RX DRN T	521.2
RBCL T	81.5	RX FLG T	513.4
TBCL T	75.5	BAROM PRS	29.60

OCT-07-93 15:02:50

[redacted]

15:02:44 20LS-357 [redacted] // 14:21:19 C7IT4-TRBL [redacted]

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

Sequence No. _____

APRM REACTOR POWER	99.74	%
IRM REACTOR POWER	1.865	%
SRM REACTOR POWER	0.9668E+06	CPS
RX WATER LEVEL	200.2	Inch TAF
FEEDWATER FLOW	10.41	MLB/HR
RCIC FLOW	0.0000E+00	GPM
REACTOR PRESSURE	1004.	PSIG
HPCI FLOW	0.0000E+00	GPM
LPCI A FLOW	-0.3750	GPM
LPCI B FLOW	+1.375	GPM
"A" CORE SPRAY FLOW	0.0000E+00	GPM
"B" CORE SPRAY FLOW	0.0000E+00	GPM
DRYWELL SUMP LEVEL	[redacted]	FT
STACK GAS RAD.	7.355	UCI/sec
RX BLDG VENT RAD.	244.1	UCI/sec
RFUEL FLR EXH RAD.	27.60	UCI/sec
TB BLDG VENT RAD.	62.61	UCI/sec
RW BLDG VENT RAD.	* 6.954	UCI/sec
SERVICE WATER RAD.	0.1427E-05	UCI/ml
STACK HI RANGE RAD.	0.2861	CI/sec
TB BLD HI RANGE RAD.	9.311	CI/sec
RW BLD HI RANGE RAD.	1.022	CI/sec
OFFGAS RAD.	14.58	mR/Hr
DRYWELL RAD.	7.680	R/Hr
HIGHEST MSL RAD MON	1725.	mR/Hr
DRYWELL PRESSURE	1.838	PSIG
DRYWELL TEMPERATURE	112.3	Deg F
TORUS WATER AVG TMP	81.73	Deg F
TORUS WATER LEVEL	13.92	FT
DRYWELL H2 CONC	0.0000E+00	%
DRYWELL O2 CONC	2.673	%
CST LEVEL	272.4	Inch

Emergency Director Approval: _____ TIME: _____

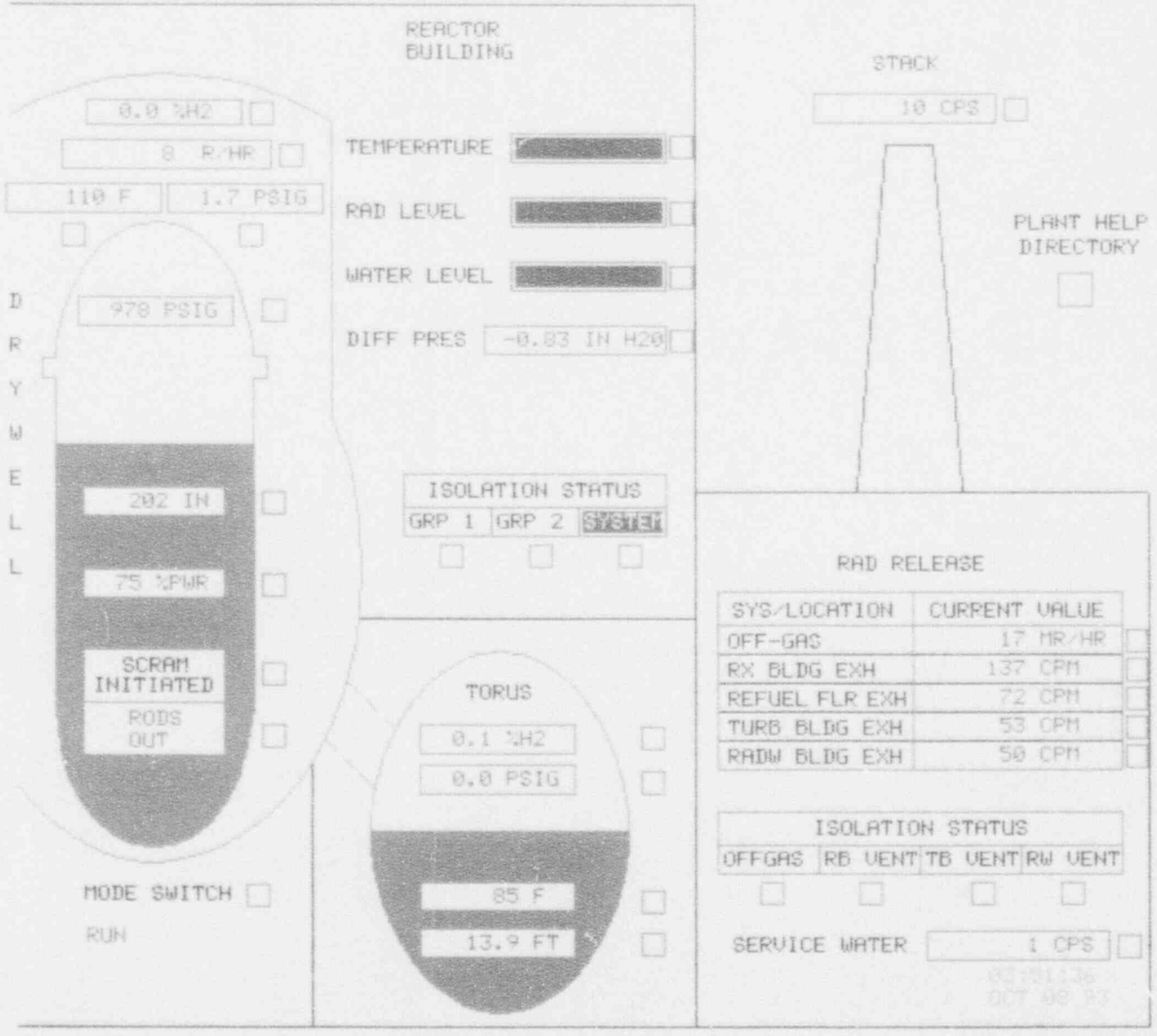
[redacted]

PLANT OPERATING PARAMETERS

at ≈0700 in the Scenario

03:40:13 12CRS-135 [redacted] // 03:20:57 93TS-4A [redacted]

PLANT



03:40:13 12CRS-135 [redacted] // 03:20:57 93TS-4A [redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	TEMP F	WL FT	TEMP F	PRES PSIG	H2 %				
74.6	977.6	201.8	84.7	13.9	111.0	1.8	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-0.83 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
CNT SAMPLE	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
17 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	SDC ISOL	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	0
OFF-GAS	94
STACK	6911
RX BLDG EXH	127974
TURB BLDG EXH	93584
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	10 CPS	CF	9.0449
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	72 CPM	CF	28.8564
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	0.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = CI/SEC		
STACK	0 MR/HR	CF	0.3810
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

03:40:13 12CRS-135 [redacted] // 03:20:57 93TS-4A [redacted]

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
[redacted] PWR %	[redacted] PRES PSIG	[redacted] WL IN	[redacted] TEMP F	[redacted] WL FT	[redacted] TEMP F	[redacted] PRES PSIG	[redacted] H2 %	[redacted]	[redacted]	[redacted]	[redacted]
75.2	977.7	201.9	84.7	13.9	110.8	1.8	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	0.8	4	999
RX BLDG ELEV 272	1.8	38	998
TIP CUBICLE	4.4	121	996
EAST HCU AREA	3.5	26	996
WEST HCU AREA	3.5	31	996
EAST CRESC AREA	17.6	92	982
CRD REMOVAL HATCH	2.6	22	997
WEST CRESC AREA	17.6	82	982
WEST REFUEL FLOOR	351.1	649	199649

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	72	928	269928
BELOW REFUEL FLOOR EXH	137	863	269863

03:40:13 12CRS-135 [redacted] // 03:20:57 93TS-4A [redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1864.7	DW PRS	1.77
CTPAVG-P6	1827.5	DW/TRS DP	1.74
CORE MWT	1817.7	A %O2 MON	2.41
CORE %CTP	74.6	B %O2 MON	0.00
CORE % WT	66.3	A %H2 MON	0.09
RX LVL	201.7	B %H2 MON	0.00
RX PRS	977.7	DW T	111.1
GEN MWE	548.8		
GEN MVAR	173	TRS PRS	0.021
GEN H2PRS	55.1	TRS LVL	13.89
600 VOLTS	600	TRS WTR T	84.7
PLANT EFF	30.0	TRS AIR T	80.5
CST LVL	287.9	N2 PRS	120.0
CND VAC	27.42		
CND DT	23.4	RWCU IN T	495.7
CND LVL	-1.0	CUFD IN T	81.7
LAKE T	50.0	RX DRN T	450.1
		RX FLG T	451.3
RBCL T	81.7		
TBCL T	78.1	BAROM PRS	29.94

03:40:13 12CRS-135 [redacted] // 03:20:57 93TS-4A [redacted]

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

Sequence No. _____

APRM REACTOR POWER	75.67	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	211745.69	CPS
RX WATER LEVEL	201.72	Inch TAF
FEEDWATER FLOW	7.22	MLB/HR
RCIC FLOW	0.00	GPM
REACTOR PRESSURE	977.67	PSIG
HPCI FLOW	0.00	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	0.00	GPM
"B" CORE SPRAY FLOW	0.00	GPM
DRYWELL SUMP LEVEL	19.64	Inch
STACK GAS RAD.	9.04	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	28.86	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.38	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	16.54	mR/Hr
DRYWELL RAD.	8.05	R/Hr
HIGHEST MSL RAD MON	825.66	mR/Hr
DRYWELL PRESSURE	1.75	PSIG
DRYWELL TEMPERATURE	110.66	Deg F
TORUS WATER AVG TMP	84.68	Deg F
TORUS WATER LEVEL	13.89	FT
DRYWELL H2 CONC	0.00	%
DRYWELL O2 CONC	0.00	%
CST LEVEL	288.34	Inch

Emergency Director Approval: _____ TIME: _____

PLANT OPERATING PARAMETERS

at ≈0915 in the Scenario

03:59:53 33PT-103 [redacted] PSIG // 03:40:13 12CRS-135 [redacted]

PLANT

PLANT

REACTOR BUILDING

0.0 %H2

8 R/HR

111 F | 1.3 PSIG

TEMPERATURE [redacted]

RAD LEVEL [redacted]

WATER LEVEL [redacted]

DIFF PRES -0.83 IN H20

DRYWELL

988 PSIG

200 IN

91 %PWR

SCRAM INITIATED

RODS OUT

ISOLATION STATUS

GRP 1	GRP 2	SYSTEM

TORUS

0.1 %H2

0.0 PSIG

85 F

13.9 FT

MODE SWITCH

RUN

STACK

10 CPS

PLANT HELP DIRECTORY

RAD RELEASE

SYS/LOCATION	CURRENT VALUE
OFF-GAS	17 MR/HR
RX BLDG EXH	137 CPM
REFUEL FLR EXH	72 CPM
TURB BLDG EXH	53 CPM
RADW BLDG EXH	50 CPM

ISOLATION STATUS

OFFGAS	RB VENT	TB VENT	RW VENT

SERVICE WATER 1 CPS

04:01:32 07NM-LOGIC-L NORMAL // 03:59:53 33PT-103 [redacted] PSIG

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	TEMP F	WL FT	TEMP F	PRES PSIG	H2 %				
86.5	988.8	201.6	84.7	13.9	111.7	1.8	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-0.83 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
CNT SAMPLE	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
18 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	SDC ISOL	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	0
OFF-GAS	96
STACK	6911
RX BLDG EXH	127939
TURB BLDG EXH	93584
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	10 CPS	CF	9.0449
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	72 CPM	CF	28.8564
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X	CF	= CI/SEC
STACK	0 MR/HR	CF	0.3810
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

04:01:32 07NM-LOGIC-L NORMAL // 03:59:53 33PT-103 [redacted] PSIG

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	TEMP F	WL FT	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
86.5	988.9	201.9	84.7	13.9	111.6	1.8	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	0.8	4	999
RX BLDG ELEV 272	1.9	38	998
TIP CUBICLE	4.7	120	995
EAST HCU AREA	3.7	26	996
WEST HCU AREA	3.7	31	996
EAST CRESC AREA	18.7	91	981
CRD REMOVAL HATCH	2.8	22	997
WEST CRESC AREA	18.7	81	981
WEST REFUEL FLOOR	374.6	625	199625

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	72	928	269928
BELOW REFUEL FLOOR EXH	137	863	269863

04:04:13 02-3FT-64A-W 26.565M#/HR // 04:04:10 71BKR-10110[redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1866.0	DW PRS	1.79
CTPAVG-P6	1951.0	DW/TRS DP	1.76
CORE MWT	1440.3	A %O2 MON	2.41
CORE %CTP	59.1	B %O2 MON	0.00
CORE % WT	24.5	A %H2 MON	0.09
RX LVL	204.0	B %H2 MON	0.00
RX PRS	969.6	DW T	111.7
GEN MWE	470.5		
GEN MVAR	189	TRS PRS	0.021
GEN H2PRS	55.1	TRS LVL	13.89
600 VOLTS	600	TRS WTR T	84.7
PLANT EFF	33.4	TRS AIR T	80.5
CST LVL	287.9	N2 PRS	120.0
CND VAC	27.24		
CND DT	[redacted]	RWCU IN T	498.8
CND LVL	-1.0	CUFD IN T	81.8
LAKE T	50.0	RX DRN T	450.0
		RX FLG T	451.3
RBCL T	81.1		
TBCL T	78.7	BAROM PRS	29.94

(CT 08 93) 04:04:34

03:09:53 03RM-10G[illegible]PSIG // 03:40:13 I2ERS+835 [illegible]400PSIG

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

Sequence No. _____

APRM REACTOR POWER	87.22	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	500898.25	CPS
RX WATER LEVEL	201.62	Inch TAF
FEEDWATER FLOW	8.47	MLB/HR
RCIC FLOW	0.00	GPM
REACTOR PRESSURE	988.65	PSIG
HPCI FLOW	0.00	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	0.00	GPM
"B" CORE SPRAY FLOW	0.00	GPM
DRYWELL SUMP LEVEL	19.96	Inch
STACK GAS RAD.	9.04	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	28.86	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.38	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	18.32	mR/Hr
DRYWELL RAD.	33.59	R/Hr
HIGHEST MSL RAD MON	1179.23	mR/Hr
DRYWELL PRESSURE	1.78	PSIG
DRYWELL TEMPERATURE	111.47	Deg F
TORUS WATER AVG TMP	84.69	Deg F
TORUS WATER LEVEL	13.89	FT
DRYWELL H2 CONC	0.00	%
DRYWELL O2 CONC	0.00	%
CST LEVEL	287.70	Inch

Emergency Director Approval: _____ TIME: _____

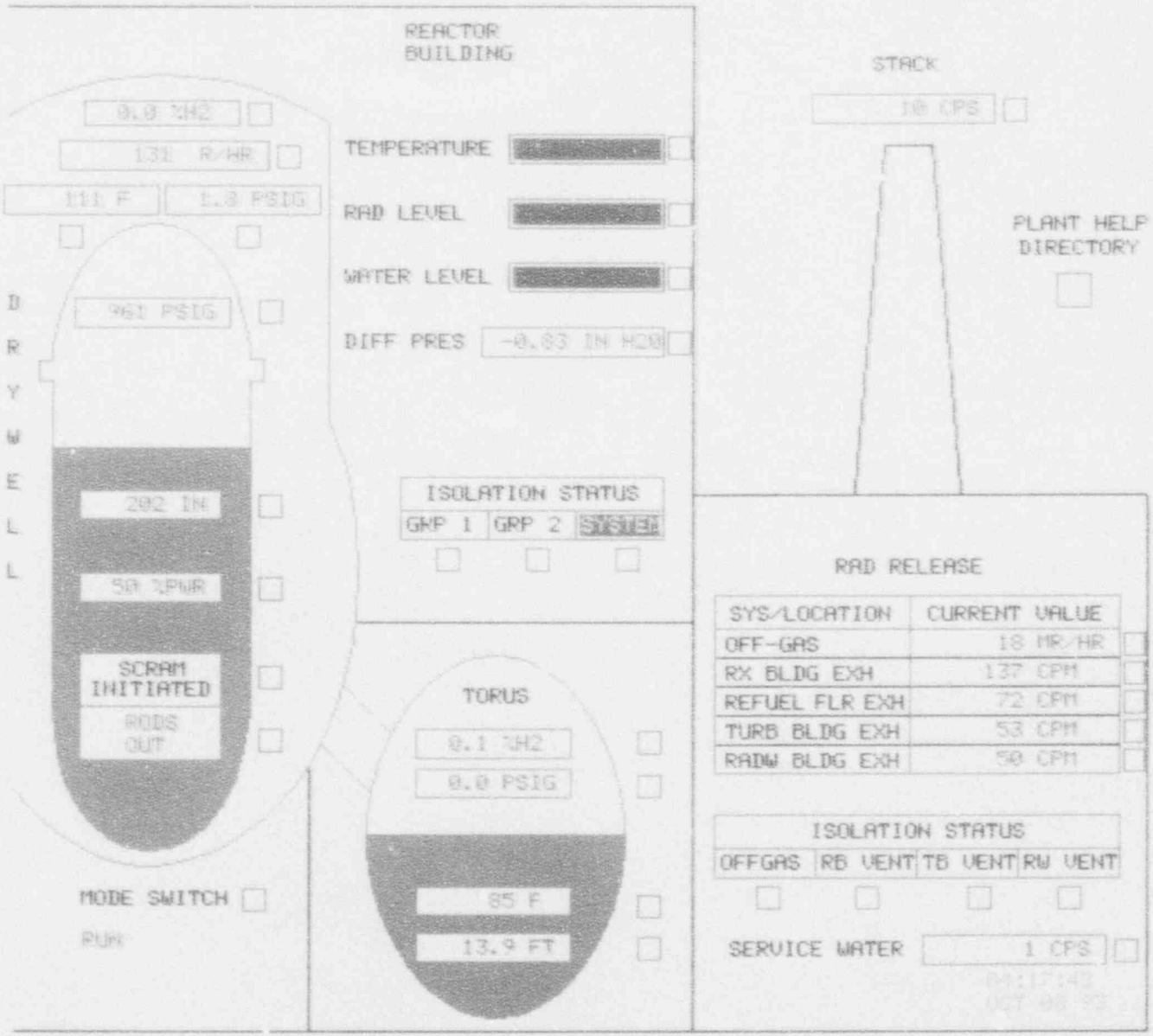
PLANT OPERATING PARAMETERS

at ≈0920 in the Scenario

04:04:13 02-3FT-64A-W 29.205M#/HR // 04:04:10 71BKR-10110C [redacted]

PLANT

PLANT



04:21:44 03DPT-231H-I[redacted] // 04:21:44 03DPT-231D-I[redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
[redacted]	PRES PSIG	WL IN	TEMP F	WL FT	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	960.7	201.6	84.7	13.9	111.2	1.8	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-0.83 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
CNT SAMPLE	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
10 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	SDC ISOL	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	0
OFF-GAS	82
STACK	6911
RX BLDG EXH	127966
TURB BLDG EXH	93584
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	10 CPS	CF	9.0449
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	72 CPM	CF	28.8564
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X	CF	= CI/SEC
STACK	0 MR/HR	CF	0.3810
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

04:04:13 02-3FT-64A-W 29.186M#/HR // 04:04:10 718KR-101100[redacted]

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	TEMP F	WL FT	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
50.9	968.6	202.2	84.7	13.9	111.3	1.8	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	0.7	4	999
RX BLDG ELEV 272	1.5	38	998
TIP CUBICLE	3.8	121	996
EAST HCU AREA	3.0	27	997
WEST HCU AREA	3.0	32	997
EAST CRESC AREA	15.1	95	985
CRD REMOVAL HATCH	2.3	23	998
WEST CRESC AREA	15.1	85	985
WEST REFUEL FLOOR	302.7	697	199697

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	72	928	269928
BELOW REFUEL FLOOR EXH	137	863	269863

04:23:20 33FCV-133-0 CLOSED // 04:23:17 07RBM-A/B-B OFF

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1864.5	DW PRS	1.78
CTPAVG-P6	1669.1	DW/TRS DP	1.75
CORE MWT	781.0	A %O2 MON	2.41
CORE %CTP	[redacted]	B %O2 MON	0.00
CORE % WT	32.4	A %H2 MON	0.09
RX LVL	210.0	B %H2 MON	0.00
RX PRS	[redacted]	DW T	110.7
GEN MWE	[redacted]		
GEN MVAR	223	TRS PRS	0.053
GEN H2PRS	55.0	TRS LVL	13.90
600 VOLTS	601	TRS WTR T	84.8
PLANT EFF	21.2	TRS AIR T	80.5
CST LVL	286.2	N2 PRS	120.0
CND VAC	28.66		
CND DT	20.7	RWCU IN T	486.9
CND LVL	-1.6	CUFD IN T	78.8
LAKE T	50.0	RX DRN T	449.5
RBCL T	78.1	RX FLG T	450.8
TBCL T	77.2	BAROM PRS	29.94

OCT 06 93 04:23:20

04:04:13 02-3FT-64A-W 29.205M#/HR // 04:04:10 71BKR-101100[redacted]

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

Sequence No. _____

APRM REACTOR POWER	49.68	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	46244.28	CPS
RX WATER LEVEL	202.38	Inch TAF
FEEDWATER FLOW	4.97	MLB/HR
RCIC FLOW	0.00	GPM
REACTOR PRESSURE	960.58	PSIG
HPCI FLOW	0.00	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	0.00	GPM
"B" CORE SPRAY FLOW	0.00	GPM
DRYWELL SUMP LEVEL	20.18	Inch
STACK GAS RAD.	9.04	UCI/sec
RX BLDG VENT RAD.	95.00	UCI/sec
RFUEL FLR EXH RAD.	26.86	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.38	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	17.81	mR/Hr
DRYWELL RAD.	130.83	R/Hr
HIGHEST MSL RAD MON	2372.28	mR/Hr
DRYWELL PRESSURE	1.79	PSIG
DRYWELL TEMPERATURE	111.37	Deg F
TORUS WATER AVG TMP	84.70	Deg F
TORUS WATER LEVEL	13.89	FT
DRYWELL H2 CONC	0.00	%
DRYWELL O2 CONC	0.00	%
CST LEVEL	287.45	Inch

Emergency Director Approval: _____ TIME: _____

PLANT OPERATING PARAMETERS

at ≈0923 in the Scenario

04:24:16 02-3LT-83B [redacted] IN // 04:24:16 02-3LT-83A [redacted] IN

PLANT

PLANT

REACTOR BUILDING

0.0 %H2

218 R/HR

113 F | 1.8 PSIG

TEMPERATURE [redacted]

RAD LEVEL [redacted]

WATER LEVEL [redacted]

DIFF PRES -0.81 IN H20

DRYWELL

[redacted] PSIG

[redacted] IN

[redacted] %PWR

SCRAM INITIATED

[redacted]

MODE SWITCH

SHUTDOWN

ISOLATION STATUS

GRP 1	GRP 2	SYSTEM

TORUS

0.0 %H2

0.3 PSIG

[redacted] F

14.0 FT

STACK

10 CPS

PLANT HELP DIRECTORY

RAD RELEASE

SYS/LOCATION	CURRENT VALUE
OFF-GAS	14 MR/HR
RX BLDG EXH	137 CPM
REFUEL FLR EXH	72 CPM
TURB BLDG EXH	53 CPM
RADW BLDG EXH	50 CPM

ISOLATION STATUS

OFFGAS	RB VENT	TB VENT	RW VENT

SERVICE WATER 1 CPS

04:24:39
OCT 08 '93

04:27:33 29PS-202B [redacted] // 04:27:33 29PS-202A [redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	115.4	1.9	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-1.06 IN H20

SRVs OPEN	3

GROUP 2 ISOLATION VALVE STATUS				
[redacted]	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
0 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	SDC ISOL	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	6000
OFF-GAS	268
STACK	11777
RX BLDG EXH	[redacted]
TURB BLDG EXH	[redacted]
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES				
LOCATION	RATES	X	CF	= uCI/SEC(ml)
STACK	[redacted]	CPS	CF	9.0492
RX BLDG EXH	[redacted]	CPM	CF	95.9000
REFUEL FLR EXH	40	CPM	CF	19.0744
TURB BLDG EXH	53	CPM	CF	40.2785
RADW BLDG EXH	50	CPM	CF	0.0482
SW EFF (ml)	1	CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES				
LOCATION	RATES	X	CF	= CI/SEC
STACK	0	MR/HR	CF	0.3810
TURB BLDG EXH	0	MR/HR	CF	5.0213
RADW BLDG EXH	0	MR/HR	CF	1.0275

04:26:02 02-3LT-79 [redacted] IN // 04:26:02 02-3LT-73 [redacted] IN

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	TEMP °F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	114.9	1.9	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	0.5	4	999
RX BLDG ELEV 272	1.2	39	999
TIP CUBICLE	2.9	122	997
EAST HCU AREA	2.3	28	998
WEST HCU AREA	2.3	33	998
EAST CRESC AREA	11.6	98	988
CRD REMOVAL HATCH	1.7	23	998
WEST CRESC AREA	11.6	88	988
WEST REFUEL FLOOR	231.4	769	199769

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	48	952	269952
BELOW REFUEL FLOOR EXH	137	863	269863

04:28:07 38FT-101 [redacted] CFM // 04:27:51 02CS-2E-826 [redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1840.9	DW PRS	1.91
CTPAVG-P6	1053.0	DW/TRS DP	[redacted]
CORE MWT	456.0	A %O2 MON	[redacted]
CORE %CTP	[redacted]	B %O2 MON	0.00
CORE % WT	11.8	A %H2 MON	[redacted]
RX LVL	[redacted]	B %H2 MON	0.00
RX PRS	829.1	DW T	115.7
GEN MWE	0.0		
GEN MVAR	0	TRS PRS	1.849
GEN H2PRS	55.0	TRS LVL	[redacted]
600 VOLTS	0	TRS WTR T	[redacted]
PLANT EFF	0.0	TRS AIR T	122.2
CST LVL	263.8	N2 PRS	120.0
CND VAC	23.92		
CND DT	2.1	RWCU IN T	478.3
CND LVL	-7.3	CUFD IN T	87.5
LAKE T	50.0	RX DRN T	449.1
		RX FLG T	450.1
RBCL T	87.4		
TBCL T	87.5	BAROM PRS	29.94

OCT 08 96 04:28:37

04:25:15 05-K14-B RESET // 04:25:15 05-K14-A RESET

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

Sequence No. _____

APRM REACTOR POWER	[redacted]	%
IRM REACTOR POWER	74.20	%
SRM REACTOR POWER	3279989760.0	CPS
RX WATER LEVEL	[redacted]	Inch TAF
FEEDWATER FLOW	0.00	MLB/HR
RCIC FLOW	394.86	GPM
REACTOR PRESSURE	[redacted]	PSIG
HPCI FLOW	4243.55	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	0.00	GPM
"B" CORE SPRAY FLOW	0.00	GPM
DRYWELL SUMP LEVEL	20.41	Inch
STACK GAS RAD.	9.05	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	28.86	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.38	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	12.01	mR/Hr
DRYWELL RAD.	[redacted]	R/Hr
HIGHEST MSL RAD MON	25.63	mR/Hr
DRYWELL PRESSURE	1.83	PSIG
DRYWELL TEMPERATURE	113.82	Deg F
TORUS WATER AVG TMP	[redacted]	Deg F
TORUS WATER LEVEL	[redacted]	FT
DRYWELL H2 CONC	0.00	%
DRYWELL O2 CONC	0.00	%
CST LEVEL	285.37	Inch

Emergency Director Approval: _____ TIME: _____

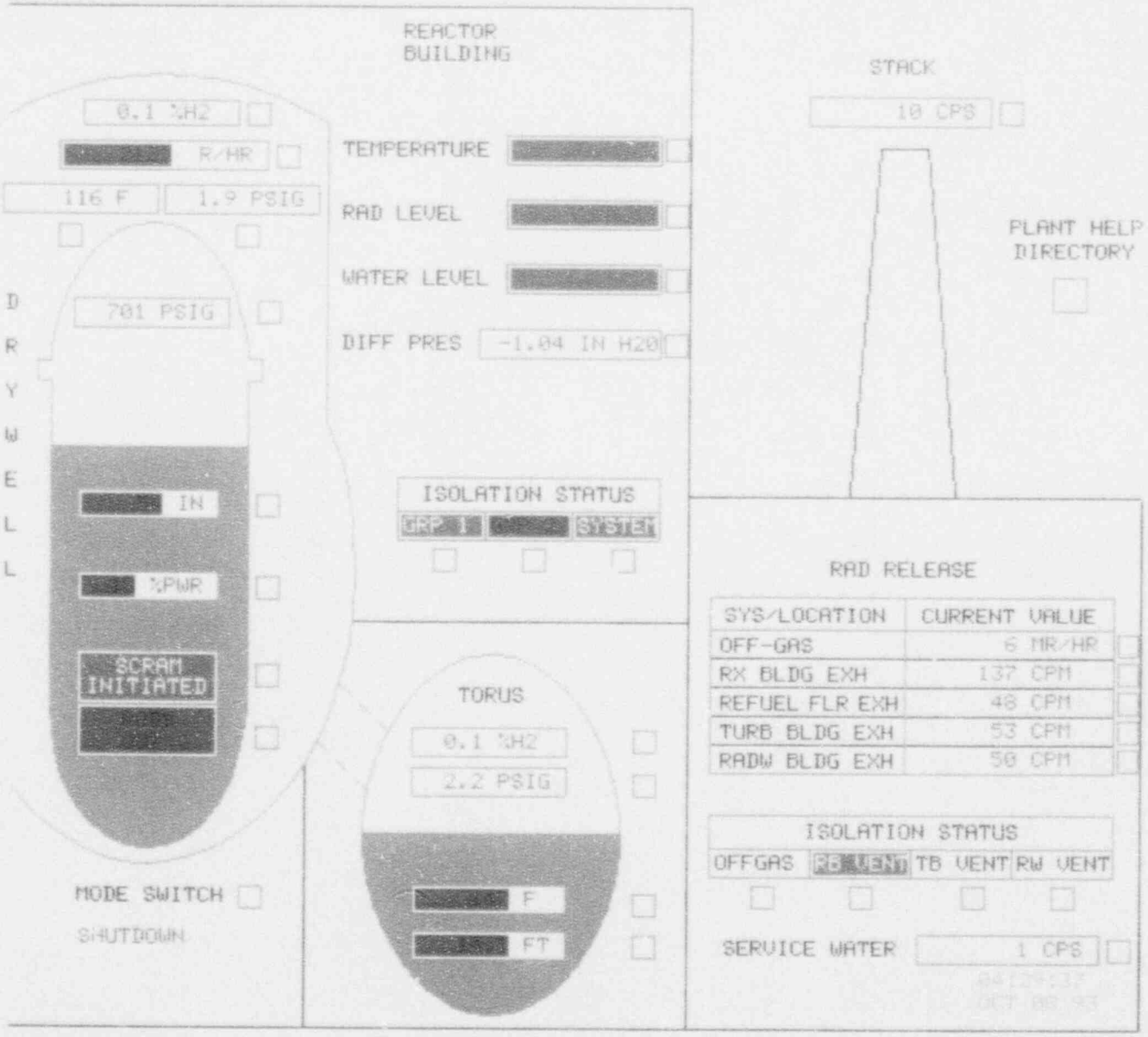
PLANT OPERATING PARAMETERS

at ≈0925 in the Scenario

04:29:06 TCTG04 [redacted] // 04:29:05 94PS-104/105 [redacted]

PLANT

PLANT



04:32:37 07-P [redacted] // 04:32:37 07-K [redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
[redacted]	PRES PSIG	[redacted]	[redacted]	[redacted]	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	612.6	[redacted]	[redacted]	[redacted]	116.5	2.3	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-1.02 IN H20

SRVs OPEN	5

GROUP 2 ISOLATION VALVE STATUS				
[redacted]	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
6 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	SDC ISOL	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	6000
OFF-GAS	[redacted]
STACK	11776
RX BLDG EXH	0
TURB BLDG EXH	[redacted]
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	10 CPS	CF	9.0507
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	48 CPM	CF	19.0744
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = CI/SEC		
STACK	0 MR/HR	CF	0.3810
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

04:32:46
UST 88 93

04:31:37 23LT-201A [redacted] FT // 04:31:03 20TIS-532 [redacted]

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
[redacted]	PRES PSIG	[redacted]	[redacted]	[redacted]	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	649.7	[redacted]	[redacted]	[redacted]	116.3	2.1	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 3[illegible]	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	0.5	4	999
RX BLDG ELEV 272	1.2	39	999
TIP CUBICLE	3.0	122	997
EAST HCU AREA	2.4	28	998
WEST HCU AREA	2.4	33	998
EAST CRESC AREA	12.1	98	988
CRD REMOVAL HATCH	1.8	23	998
WEST CRESC AREA	12.1	88	988
WEST REFUEL FLOOR	242.6	758	199758

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	48	952	269952
BELOW REFUEL FLOOR EXH	137	863	269863

04:32:57 07N1-33G [redacted]% // 04:32:57 07N1-33F [redacted]%

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1812.2	DW PRS	2.34
CTPAVG-P6	645.5	DW/TRS DP	[redacted]
CORE MWT	1.0	A %O2 MON	[redacted]
CORE %CTP	0.0	B %O2 MON	0.00
CORE % WT	6.1	A %H2 MON	[redacted]
RX LVL	[redacted]	B %H2 MON	0.00
RX PRS	633.1	DW T	116.5
GEN MWE	0.0		
GEN MVAR	0	TRS PRS	2.672
GEN H2PRS	55.0	TRS LVL	[redacted]
600 VOLTS	0	TRS WTR T	[redacted]
PLANT EFF	0.0	TRS AIR T	155.8
CST LVL	[redacted]	N2 PRS	120.0
CND VAC	12.68		
CND DT	0.3	RWCU IN T	431.7
CND LVL	-9.1	CUFD IN T	87.4
LAKE T	50.0	RX DRN T	446.2
		RX FLG T	447.3
RBCL T	87.3		
TBCL T	81.0	BAROM PRS	29.94

04:30:11 94TS-EHT-2/4[redacted] // 04:29:40 94RTD-TFP-02[redacted]DEG F

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

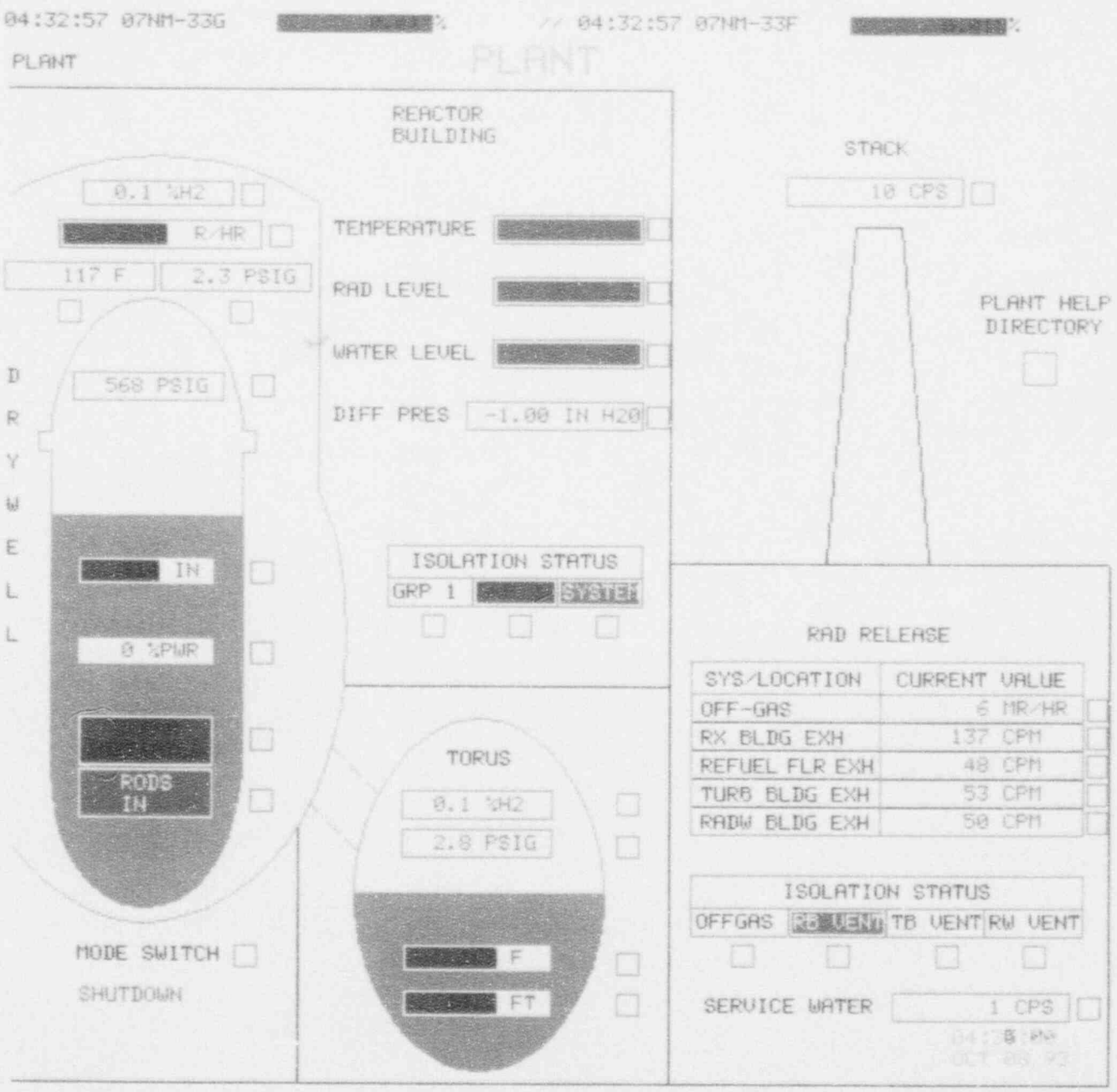
Sequence No. _____

APRM REACTOR POWER	[redacted]	%
IRM REACTOR POWER	43.82	%
SRM REACTOR POWER	1828088832.0	CPS
RX WATER LEVEL	[redacted]	Inch TAF
FEEDWATER FLOW	0.00	MLB/HR
RCIC FLOW	397.53	GPM
REACTOR PRESSURE	656.09	PSIG
HPCI FLOW	4267.44	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	0.00	GPM
"B" CORE SPRAY FLOW	[redacted]	GPM
DRYWELL SUMP LEVEL	20.64	Inch
STACK GAS RAD.	9.05	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	19.07	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.38	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	6.00	mR/Hr
DRYWELL RAD.	[redacted]	R/Hr
HIGHEST MSL RAD MON	21.22	mR/Hr
DRYWELL PRESSURE	2.01	PSIG
DRYWELL TEMPERATURE	116.15	Deg F
TORUS WATER AVG TMP	[redacted]	Deg F
TORUS WATER LEVEL	[redacted]	FT
DRYWELL H2 CONC	0.09	%
DRYWELL O2 CONC	2.41	%
CST LEVEL	245.78	Inch

Emergency Director Approval: _____ TIME: _____

PLANT OPERATING PARAMETERS

at ≈0930 in the Scenario


04:32:57 07NM-33G
04:32:57 07NM-33F
PLANT
REACTOR BUILDING
0.1 %H2
R/HR
117 F
2.3 PSIG
568 PSIG
IN
0 %PWR
RODS IN
MODE SWITCH
SHUTDOWN
DRYWELL
TEMPERATURE
RAD LEVEL
WATER LEVEL
DIFF PRES
-1.00 IN H20
ISOLATION STATUS
GRP 1
SYSTEM
TORUS
0.1 %H2
2.8 PSIG
F
FT
STACK
10 CPS
PLANT HELP DIRECTORY
RAD RELEASE
SYS/LOCATION
CURRENT VALUE
OFF-GAS
6 MR/HR
RX BLDG EXH
137 CPM
REFUEL FLR EXH
48 CPM
TURB BLDG EXH
53 CPM
RADW BLDG EXH
50 CPM
ISOLATION STATUS
OFFGAS
RB VENT
TB VENT
RW VENT
SERVICE WATER
1 CPS

04:37:28 13SPI-1 [redacted] RPM // 04:37:23 23SPI-161 [redacted] RPM

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	[redacted]	[redacted]	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	379.9	220.6	[redacted]	[redacted]	116.1	2.4	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-1.00 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
[redacted]	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
6 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	[redacted]	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	6000
OFF-GAS	0
STACK	11730
RX BLDG EXH	[redacted]
TURB BLDG EXH	[redacted]
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF	= uCI/SEC(ml)	
STACK	10 CPS	CF	9.0428
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	48 CPM	CF	19.0744
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X	CF	= CI/SEC
STACK	0 MR/HR	CF	0.3685
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

04:37:13 33PT-102 [redacted] PSIG // 04:36:29 07NM-LOGIC-B NORMAL

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	[redacted]	[redacted]	TEMP F	PRES PSIG	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	425.3	217.0	[redacted]	[redacted]	116.3	2.4	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	0.5	5	1000
RX BLDG ELEV 272	1.0	39	999
TIP CUBICLE	2.5	122	998
EAST HCU AREA	2.0	28	996
WEST HCU AREA	2.0	33	998
EAST CRESC AREA	10.3	100	990
CRD REMOVAL HATCH	1.5	23	999
WEST CRESC AREA	10.0	90	990
WEST REFUEL FLOOR	200.0	800	199800

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	48	952	269952
BELOW REFUEL FLOOR EXH	137	863	269863

04:47:29 23PT-68D [redacted] PSIG // 04:47:29 23PT-68C [redacted] PSIG

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1738.4	DW PRS	[redacted]
CTPAVG-P6	-0.0	DW/TRS DP	[redacted]
CORE MWT	0.0	A %O2 MON	[redacted]
CORE %CTP	0.0	B %O2 MON	0.00
CORE % WT	5.6	A %H2 MON	[redacted]
RX LVL	[redacted]	B %H2 MON	0.00
RX PRS	45.7	DW T	[redacted]
GEN MWE	0.0		
GEN MVAR	0	TRS PRS	[redacted]
GEN H2PRS	55.0	TRS LVL	[redacted]
600 VOLTS	0	TRS WTR T	[redacted]
PLANT EFF	0.0	TRS AIR T	168.5
CST LVL	[redacted]	N2 PRS	120.0
CND VAC	0.01		
CND DT	0.0	RWCU IN T	338.4
CND LVL	[redacted]	CUFD IN T	79.5
LAKE T	50.0	RX DRN T	426.5
		RX FLG T	430.0
RBCL T	79.4		
TBCL T	76.8	BAROM PRS	29.94

OCT 00 97 04:47:49

04:36:13 02-3PT-52D [redacted] PSIG // 04:36:08 06LT-52C 167.553IN

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

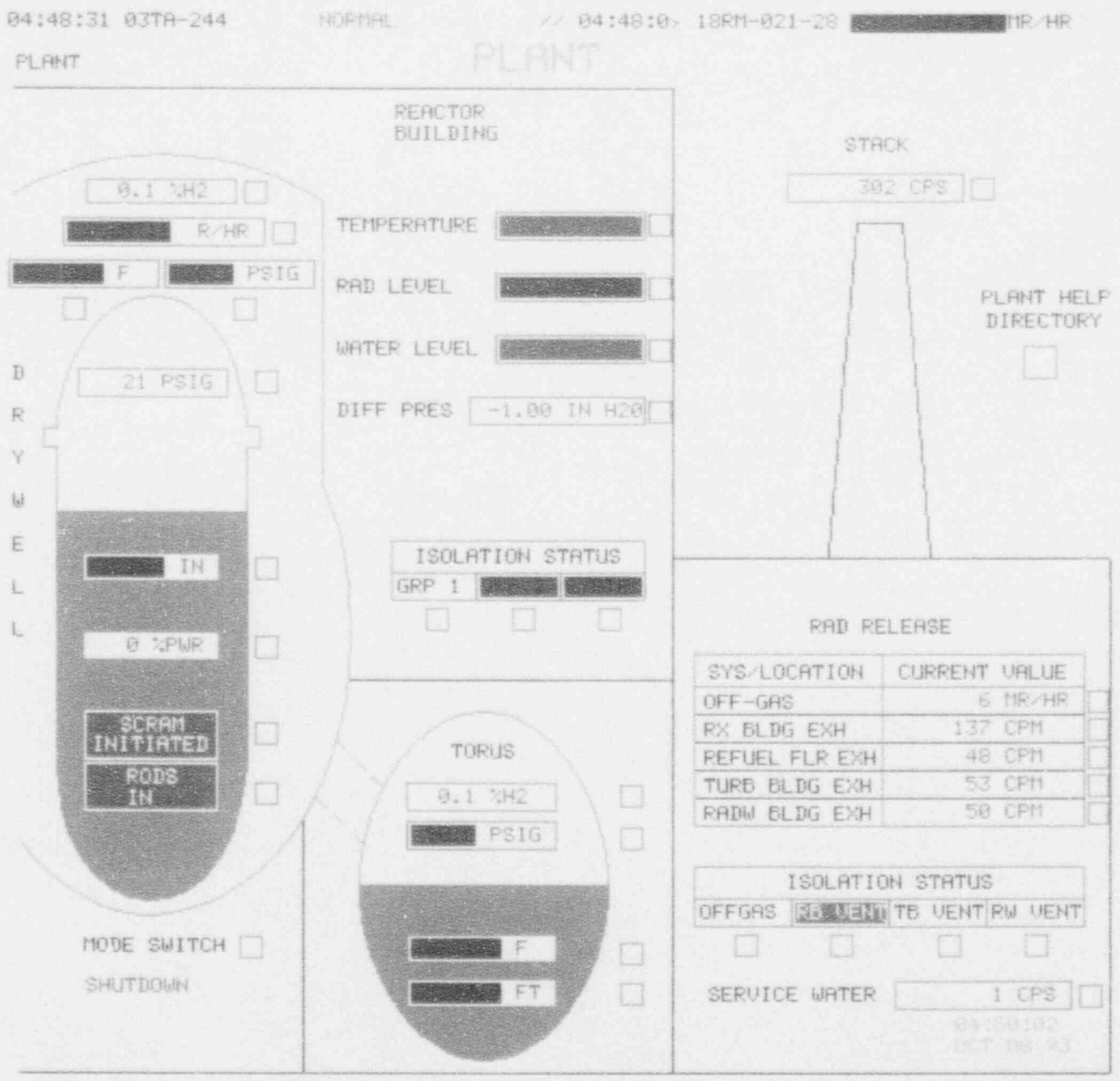
Sequence No. _____

APRM REACTOR POWER	0.00	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	98378.75	CPS
RX WATER LEVEL	169.34	Inch TAF
FEEDWATER FLOW	0.70	MLB/HR
RCIC FLOW	397.98	GPM
REACTOR PRESSURE	469.32	PSIG
HPCI FLOW	4272.22	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	0.00	GPM
"B" CORE SPRAY FLOW	[redacted]	GPM
DRYWELL SUMP LEVEL	20.87	Inch
STACK GAS RAD.	9.05	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	19.07	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.38	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	6.00	mR/Hr
DRYWELL RAD.	[redacted]	R/Hr
HIGHEST MSL RAD MON	16.91	mR/Hr
DRYWELL PRESSURE	2.42	PSIG
DRYWELL TEMPERATURE	116.45	Deg F
TORUS WATER AVG TMP	[redacted]	Deg F
TORUS WATER LEVEL	[redacted]	FT
DRYWELL H2 CONC	0.09	%
DRYWELL O2 CONC	2.41	%
CST LEVEL	[redacted]	Inch

Emergency Director Approval: _____ TIME: _____

PLANT OPERATING PARAMETERS

at ≈1000 in the Scenario


04:48:31 03TA-244
NORMAL
// 04:48:0> 18RM-021-28
MR/HR
PLANT
PLANT
REACTOR BUILDING
0.1 %H2
R/HR
F
PSIG
21 PSIG
DRYWELL
IN
0 %PWR
SCRAM INITIATED
RODS IN
MODE SWITCH
SHUTDOWN
TEMPERATURE
RAD LEVEL
WATER LEVEL
DIFF PRES
-1.00 IN H20
ISOLATION STATUS
GRP 1
TORUS
0.1 %H2
PSIG
F
FT
STACK
382 CPS
PLANT HELP DIRECTORY
RAD RELEASE
SYS/LOCATION
CURRENT VALUE
OFF-GAS
6 MR/HR
RX BLDG EXH
137 CPM
REFUEL FLR EXH
48 CPM
TURB BLDG EXH
53 CPM
RADW BLDG EXH
50 CPM
ISOLATION STATUS
OFFGAS
RB VENT
TB VENT
RW VENT
SERVICE WATER
1 CPS

04:53:09 18RIA-023-29 // 04:53:09 18RIA-023-27

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN					H2 %				
0.0	19.2	206.3					0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-1.00 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS P INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
6 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL		HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	6000
OFF-GAS	0
STACK	11724
RX BLDG EXH	0
TURB BLDG EXH	
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	1005 CPS	CF	904.0884
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	48 CPM	CF	19.0744
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = CI/SEC		
STACK	0 MR/HR	CF	0.4840
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

04:50:19 71BUS-10600F [redacted] VOLT // 04:50:18 71BKR-106500 ON

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	19.2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	[redacted]	[redacted]	913
RX BLDG ELEV 272	[redacted]	[redacted]	862
TIP CUBICLE	114.8	10	885
EAST HCU AREA	[redacted]	[redacted]	960
WEST HCU AREA	[redacted]	[redacted]	964
EAST CRESC AREA	42.1	68	958
CRD REMOVAL HATCH	[redacted]	[redacted]	972
WEST CRESC AREA	45.3	55	955
WEST REFUEL FLOOR	200.0	800	199800

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	48	952	269952
BELOW REFUEL FLOOR EXH	137	863	269863

04:53:14 18RM-021-29 [redacted] MR/HR // 04:53:09 18RIA-023-29 [redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1707.3	DW PRS	[redacted]
CTPAVG-P6	-0.0	DW/TRS DP	[redacted]
CORE MWT	0.0	A %O2 MON	[redacted]
CORE %CTP	0.0	B %O2 MON	0.00
CORE % WT	10.0	A %H2 MON	[redacted]
RX LVL	192.5	B %H2 MON	0.00
RX PRS	19.2	DW T	[redacted]
GEN MWE	0.0		
GEN MVAR	0	TRS PRS	[redacted]
GEN H2PRS	55.0	TRS LVL	[redacted]
600 VOLTS	0	TRS WTR T	[redacted]
PLANT EFF	0.0	TRS AIR T	169.0
CST LVL	[redacted]	N2 PRS	120.0
CND VAC	0.01		
CND DT	0.0	RWCU IN T	298.1
CND LVL	[redacted]	CUFD IN T	79.6
LAKE T	50.0	RX DRN T	406.9
		RX FLG T	416.6
RBCL T	79.7		
TBCL T	75.7	BAROM PRS	29.94

04:50:19 71BUS-10600F [redacted] VOLT // 04:50:18 71BKR-106500 ON

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

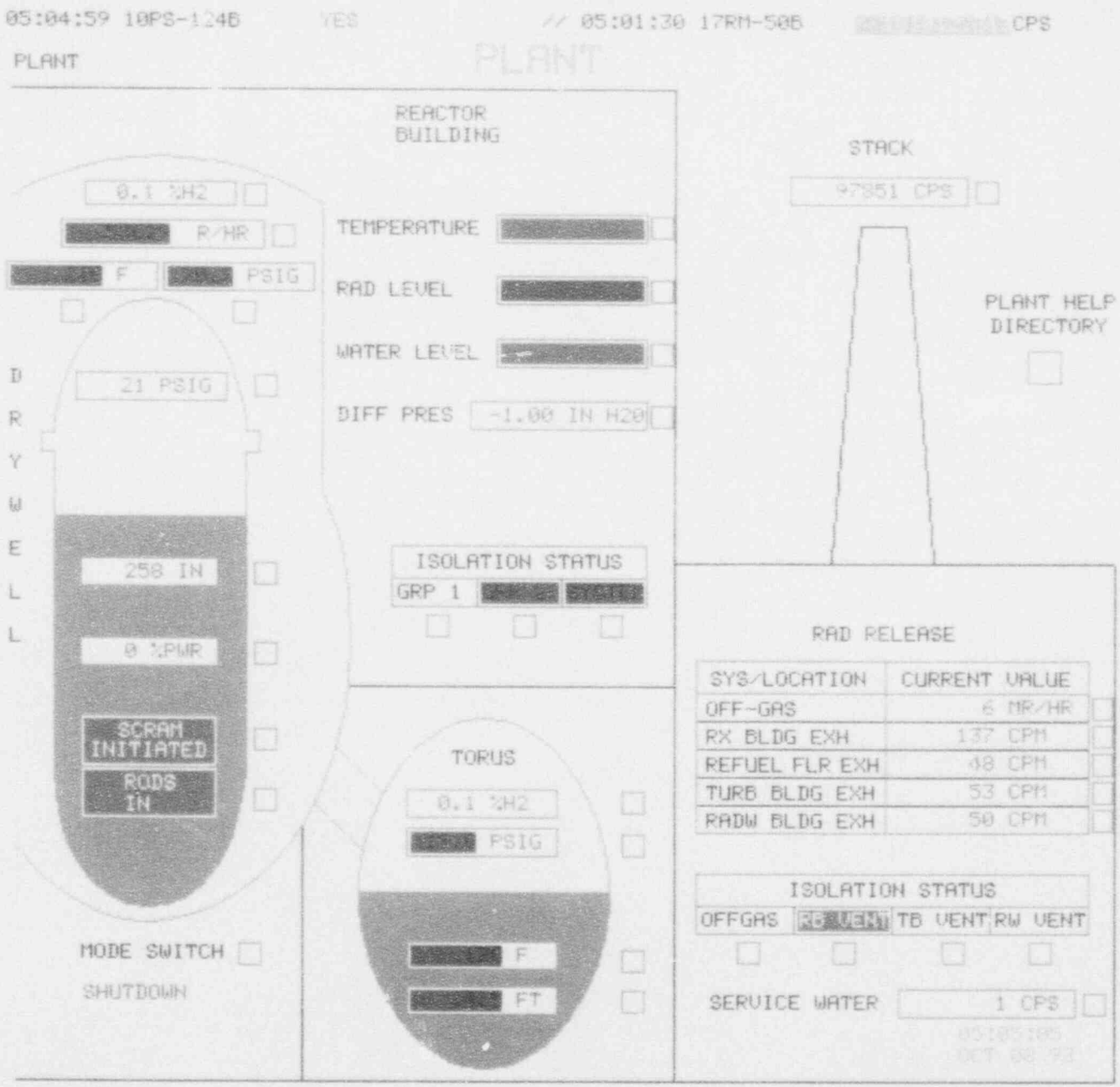
Sequence No. _____

APRM REACTOR POWER	0.00	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	56.50	CPS
RX WATER LEVEL	[redacted]	Inch TAF
FEEDWATER FLOW	1.31	MLB/HR
RCIC FLOW	0.00	GPM
REACTOR PRESSURE	19.49	PSIG
HPCI FLOW	0.00	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	49.15	GPM
"A" CORE SPRAY FLOW	5466.54	GPM
"B" CORE SPRAY FLOW	[redacted]	GPM
DRYWELL SUMP LEVEL	[redacted]	Inch
STACK GAS RAD.	408.25	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	19.07	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.48	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	6.00	mR/Hr
DRYWELL RAD.	[redacted]	R/Hr
HIGHEST MSL RAD MON	8.73	mR/Hr
DRYWELL PRESSURE	[redacted]	PSIG
DRYWELL TEMPERATURE	[redacted]	Deg F
TORUS WATER AVG TMP	[redacted]	Deg F
TORUS WATER LEVEL	[redacted]	FT
DRYWELL H2 CONC	0.09	%
DRYWELL O2 CONC	2.41	%
CST LEVEL	[redacted]	Inch

Emergency Director Approval: _____ TIME: _____

PLANT OPERATING PARAMETERS

at ≈1015 in the Scenario


05:04:59 10PS-124B
YES
// 05:01:30 17RM-508
CPS
PLANT
PLANT
REACTOR BUILDING
0.1 %H2
R/HR
F
PSIG
TEMPERATURE
RAD LEVEL
WATER LEVEL
DIFF PRES
-1.00 IN H20
DRYWELL
21 PSIG
258 IN
0 %PWR
SCRAM INITIATED
RODS IN
ISOLATION STATUS
GRP 1
MODE SWITCH
SHUTDOWN
TORUS
0.1 %H2
PSIG
F
FT
STACK
97851 CPS
PLANT HELP DIRECTORY
RAD RELEASE
SYS/LOCATION
CURRENT VALUE
OFF-GAS
6 MR/HR
RX BLDG EXH
137 CPM
REFUEL FLR EXH
48 CPM
TURB BLDG EXH
53 CPM
RADW BLDG EXH
50 CPM
ISOLATION STATUS
OFFGAS
RB VENT
TB VENT
RW VENT
SERVICE WATER
1 CPS

05:07:?6 10LS-102 [redacted] // 05:06:30 06PT-52C [redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	[redacted]	[redacted]	TEMP F	[redacted]	H2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	3.5	227.4	[redacted]	[redacted]	75.8	[redacted]	0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-1.00 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
[redacted]	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS Δ P INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
6 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	[redacted]	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	6000
OFF-GAS	0
STACK	11724
RX BLDG EXH	[redacted]
TURB BLDG EXH	[redacted]
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	[redacted] CPS	CF	296713.0000
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	48 CPM	CF	19.0744
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X	CF	= CI/SEC
STACK	0 MR/HR	CF	0.7671
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

05:06:30 06PT-52C [redacted] // 05:06:30 06PT-52B [redacted]

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	[redacted]	[redacted]	[redacted]	[redacted]	#2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	21.1	264.2	[redacted]	[redacted]	[redacted]	[redacted]	0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	[redacted]	[redacted]	475
RX BLDG ELEV 272	[redacted]	[redacted]	425
TIP CUBICLE	[redacted]	[redacted]	475
EAST HCU AREA	[redacted]	[redacted]	503
WEST HCU AREA	[redacted]	[redacted]	499
EAST CRESC AREA	[redacted]	[redacted]	583
CRD REMOVAL HATCH	[redacted]	[redacted]	450
WEST CRESC AREA	[redacted]	[redacted]	602
WEST REFUEL FLOOR	200.0	800	199800

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	48	952	269952
BELOW REFUEL FLOOR EXH	137	863	269863

05:07:26 10LS-102 [redacted] // 05:06:30 06PT-520 [redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1645.1	DW PRS	[redacted]
CTPAVG-P6	-0.0	DW/TRS DP	[redacted]
CORE MWT	0.0	A %O2 MON	[redacted]
CORE %CTP	0.0	B %O2 MON	0.00
CORE % WT	10.0	A %H2 MON	[redacted]
RX LVL	247.9	B %H2 MON	0.00
RX PRS	3.7	DW T	75.5
GEN MWE	0.0		
GEN MVAR	0	TRS PRS	2.991
GEN H2PRS	55.0	TRS LVL	[redacted]
600 VOLTS	0	TRS WTR T	[redacted]
PLANT EFF	0.0	TRS AIR T	169.3
CST LVL	[redacted]	N2 PRS	120.0
CND VAC	0.00		
CND DT	0.0	RWCU IN T	285.0
CND LVL	[redacted]	CUFD IN T	76.8
LAKE T	50.0	RX DRN T	366.4
		RX FLG T	385.5
RBCL T	76.3		
TBCL T	74.3	BAROM PRS	29.94

05:04:59 10PS-124B YES // 05:01:30 17RM-50B [redacted] CPS

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

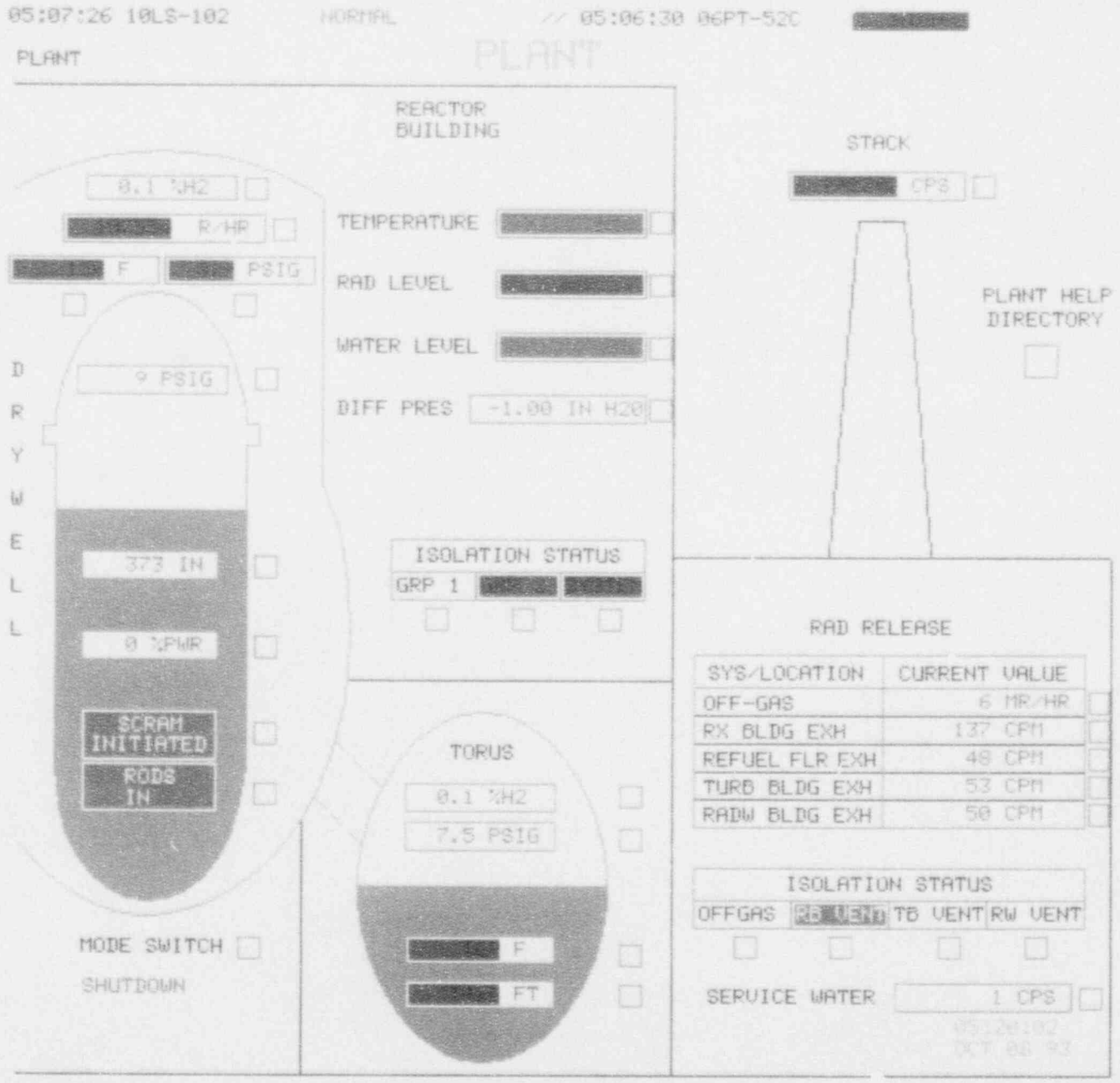
Sequence No. _____

APRM REACTOR POWER	0.00	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	54.84	CPS
RX WATER LEVEL	219.22	Inch TAF
FEEDWATER FLOW	0.00	MLB/HR
RCIC FLOW	0.00	GPM
REACTOR PRESSURE	21.01	PSIG
HPCI FLOW	0.00	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	1868.43	GPM
"A" CORE SPRAY FLOW	5444.67	GPM
"B" CORE SPRAY FLOW	[redacted]	GPM
DRYWELL SUMP LEVEL	[redacted]	Inch
STACK GAS RAD.	133996.87	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	19.07	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	0.64	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	6.00	mR/Hr
DRYWELL RAD.	[redacted]	R/Hr
HIGHEST MSL RAD MON	7.53	mR/Hr
DRYWELL PRESSURE	[redacted]	PSIG
DRYWELL TEMPERATURE	[redacted]	Deg F
TORUS WATER AVG TMP	[redacted]	Deg F
TORUS WATER LEVEL	[redacted]	FT
DRYWELL H2 CONC	0.09	%
DRYWELL O2 CONC	2.41	%
CST LEVEL	[redacted]	Inch

Emergency Director Approval: _____ TIME: _____

PLANT OPERATING PARAMETERS

at ≈1045 in the Scenario


05:07:26 10LS-102
NORMAL
// 05:06:30 06PT-52C
PLANT
PLANT
REACTOR BUILDING
0.1 %H2
R/HR
F
PSIG
TEMPERATURE
RAD LEVEL
WATER LEVEL
DIFF PRES
-1.00 IN H20
9 PSIG
DRYWELL
373 IN
0 %PWR
SCRAM INITIATED
RODS IN
MODE SWITCH
SHUTDOWN
ISOLATION STATUS
GRP 1
TORUS
0.1 %H2
7.5 PSIG
F
FT
STACK
CPS
PLANT HELP DIRECTORY
RAD RELEASE
SYS/LOCATION
CURRENT VALUE
OFF-GAS
6 MR/HR
RX BLDG EXH
137 CPM
REFUEL FLR EXH
48 CPM
TURB BLDG EXH
53 CPM
RADW BLDG EXH
50 CPM
ISOLATION STATUS
OFFGAS
RB VENT
TB VENT
RW VENT
SERVICE WATER
1 CPS

05:07:26 10LS-102 NORMAL // 05:36:30 06PT-52C [redacted]

RADIOACTIVITY RELEASE CONTROL (RRC)

RRC

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	[redacted]		[redacted]		H2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	10.3	395.0	[redacted]		[redacted]		0.1	TEMP	RAD	WL	RAD

GROUP 1 ISOLATION VALVE STATUS			
MSIVS	MSL DRAINS	RECIRC SAMPLE	HOGGER

RX BLDG ΔP
-1.00 IN H20

SRVs OPEN	0

GROUP 2 ISOLATION VALVE STATUS				
[redacted]	DW PURGE	CAD N2 SUPPLY	DW FLOOR & EQUIP DRNS	RX BLDG VENT
DW/TORUS ΔP INSTR	TORUS PURGE	RHR SAMPLE & DRAINS	TIP	

OFF-GAS RAD
6 MR/HR

SYSTEM ISOLATION VALVE STATUS		
RWCU ISOL	[redacted]	HPCI
RCIC	TURB BLDG VENT	RADW BLDG VENT
OFF-GAS	LIQ RAD WASTE	

EXH SYS FLOW RATES	
SYSTEM	FLOW (CFM)
SBGT	6000
OFF-GAS	0
STACK	11724
RX BLDG EXH	[redacted]
TURB BLDG EXH	[redacted]
RADW BLDG EXH	32359

LOW RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X CF = uCI/SEC(ml)		
STACK	[redacted] CPS	CF	899362.6875
RX BLDG EXH	137 CPM	CF	95.9000
REFUEL FLR EXH	48 CPM	CF	19.0744
TURB BLDG EXH	53 CPM	CF	40.2785
RADW BLDG EXH	50 CPM	CF	8.0482
SW EFF (ml)	1 CPS	CF	0.0000

HIGH RANGE CONTINUOUS OFFSITE REL RATES			
LOCATION	RATES X	CF	= CI/SEC
STACK	1 MR/HR	CF	1.5757
TURB BLDG EXH	0 MR/HR	CF	5.0213
RADW BLDG EXH	0 MR/HR	CF	1.0275

05:07:26 10LS-102 NORMAL // 05:06:30 06PT-52C [redacted]

SECONDARY CONTAINMENT RAD CONTROL (SCR)

SCR

RX	RPV		TORUS		DRYWELL		PC	RX BLDG			OFFSITE
PWR %	PRES PSIG	WL IN	[redacted]		[redacted]		H2 %	[redacted]	[redacted]	[redacted]	[redacted]
0.0	9.9	389.3	[redacted]		[redacted]		0.1	TEMP	RAD	WL	RAD

AREA	CURRENT VALUE (MR/HR)	MARGIN TO MAX NORM (MR/HR)	MARGIN TO MAX SAFE (MR/HR)
SPENT FUEL POOL	[redacted]	[redacted]	[redacted]
RX BLDG ELEV 344	[redacted]	[redacted]	[redacted]
NEW FUEL VAULT	[redacted]	[redacted]	[redacted]
RWCU PRECOAT AREA	[redacted]	[redacted]	[redacted]
RWCU HX ROOM	[redacted]	[redacted]	[redacted]
FUEL POOL PUMP ROOM	[redacted]	[redacted]	[redacted]
CONTAMIN EQUIP STRG	[redacted]	[redacted]	[redacted]
RWCU PUMP AREA	[redacted]	[redacted]	[redacted]
RX BLDG SAMPLE AREA	[redacted]	[redacted]	[redacted]
RBCLC HX AREA	[redacted]	[redacted]	0
RX BLDG ELEV 272	[redacted]	[redacted]	0
TIP CUBICLE	[redacted]	[redacted]	0
EAST HCU AREA	[redacted]	[redacted]	0
WEST HCU AREA	[redacted]	[redacted]	0
EAST CRESC AREA	[redacted]	[redacted]	0
CRD REMOVAL HATCH	[redacted]	[redacted]	0
WEST CRESC AREA	[redacted]	[redacted]	0
WEST REFUEL FLOOR	200.0	800	199800

EXHAUST	(CPM)	(CPM)	(CPM)
REFUEL FLOOR EXH DUCT	48	952	269952
BELOW REFUEL FLOOR EXH	137	863	269863

05:07:26 10LS-102 NORMAL // 05:06:30 06PT-52C [redacted]

LOG1

PLANT PARAMETERS LOG

CTPAVG-8H	1614.0	DW PRS	[redacted]
CTPAVG-P6	-0.0	DW/TRS DP	[redacted]
CORE MWT	0.0	A %O2 MON	[redacted]
CORE %CTP	0.0	B %O2 MON	0.00
CORE % WT	10.0	A %H2 MON	[redacted]
RX LVL	401.6	B %H2 MON	0.00
RX PRS	10.5	DW T	[redacted]
GEN MWE	0.0		
GEN MVAR	0	TRS PRS	8.836
GEN H2PRS	55.0	TRS LVL	[redacted]
600 VOLTS	0	TRS WTR T	[redacted]
PLANT EFF	0.0	TRS AIR T	163.3
CST LVL	[redacted]	N2 PRS	120.0
CND VAC	0.00		
CND DT	0.0	RWCU IN T	278.7
CND LVL	[redacted]	CUFD IN T	74.3
LAKE T	50.0	RX DRN T	331.6
RBCL T	74.3	RX FLG T	358.7
TBCL T	73.8	3AROM PRS	29.94

OCT 08 93 05:24:38

05:07:26 10LS-102 NORMAL // 05:06:30 06PT-520 [redacted]

Form EAP-1.1.3
James A. Fitzpatrick Nuclear Power Plant
PART III - Plant Parameters

Sequence No. _____

APRM REACTOR POWER	0.00	%
IRM REACTOR POWER	0.00	%
SRM REACTOR POWER	54.75	CPS
RX WATER LEVEL	379.67	Inch TAF
FEEDWATER FLOW	0.00	MLB/HR
RCIC FLOW	0.00	GPM
REACTOR PRESSURE	9.75	PSIG
HPCI FLOW	0.00	GPM
LPCI A FLOW	0.00	GPM
LPCI B FLOW	0.00	GPM
"A" CORE SPRAY FLOW	5454.95	GPM
"B" CORE SPRAY FLOW	[redacted]	GPM
DRYWELL SUMP LEVEL	[redacted]	Inch
STACK GAS RAD.	899362.69	UCI/sec
RX BLDG VENT RAD.	95.90	UCI/sec
RFUEL FLR EXH RAD.	19.07	UCI/sec
TB BLDG VENT RAD.	40.28	UCI/sec
RW BLDG VENT RAD.	8.05	UCI/sec
SERVICE WATER RAD.	0.00	UCI/ml
STACK HI RANGE RAD.	1.47	CI/sec
TB BLD HI RANGE RAD.	5.02	CI/sec
RW BLD HI RANGE RAD.	1.03	CI/sec
OFFGAS RAD.	6.00	mR/Hr
DRYWELL RAD.	[redacted]	R/Hr
HIGHEST MSL RAD MON	7.50	mR/Hr
DRYWELL PRESSURE	[redacted]	PSIG
DRYWELL TEMPERATURE	[redacted]	Deg F
TORUS WATER AVG TMP	[redacted]	Deg F
TORUS WATER LEVEL	[redacted]	FT
DRYWELL H2 CONC	0.09	%
DRYWELL O2 CONC	2.41	%
CST LEVEL	[redacted]	Inch

Emergency Director Approval: _____ TIME: _____

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

DATA

I. Assumptions

II. Meteorological Information

III. Plant Release Data

IV. Onsite Dose Rate Data and Maps

V. Offsite Dose Rate Data and Maps

VI. In-Plant Dose Rate Data and Maps

VII. Area Radiation Monitors

VIII. In-Plant Air Sample Data

IX. PASS Data

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

I. ASSUMPTIONS

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Assumptions

A. The plant has been running with failed fuel indicative of levels associated with Action Level 2 of the Failed Fuel Action Plan.

B. The leaks out of the drywell occur as steam leaks pressurize it to approximately 10-40 psig. The drywell leak rate is approximately 2.5 cfm (1.5% per day).

C. A power spike causes approximately 10% to 20% fuel damage.

D. High Range Containment Radiation Monitor readings correspond to between 1% and 10% fuel failure.

E. Area Radiation Monitor readings and Reactor Building general area immersion dose rates were calculated using the ARTEMIS computer code. ARTEMIS is a compartmental transport model for radioactive materials. Uniform mixing is assumed.

F. All dose rates have been decay corrected.

G. Direct radiation readings in the Reactor Building from the drywell are minimal due to a dose reduction factor of 1×10^{6} from the five foot thick drywell. Dose rates on contact with the wall near penetrations may show an increase as indicated on in-plant maps.

H. The release is a filtered, elevated release from the plant stack.

I. The release consists of primarily noble gases.

J. Maximum dose rates will be approximately 5-10 mrem/hr at 1 mile down wind.

K. Predetermined meteorology and forecast meteorology will be used during this exercise.

L. Post Accident samples will indicate approximately 20% of clad damage occurred as a result of the power spike.

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

II. METEOROLOGICAL INFORMATION

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Meteorological Summary

The following conditions exist for the environmental release portions of the drill:

TIME	WIND DIRECTION (DEGREES FROM)	WIND SPEED	STABILITY CLASS
0700 - 0850	270	3	E
0851 - 0930	275	4	D
0931 - End	280	5	C

Sky Cover: Sunny (0%)

Precipitation: None

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Forecast

The Lake Ontario region continues to enjoy the chilly, early winter conditions experienced so far this December. Temperatures are expected to remain in the 30s during the day and upper 20s at night. Skies will be clear, and there is a light breeze from the west helping to keep temperatures mild. Winds are expected to remain out of the west except on the Lake Ontario shoreline where winds may swing out of northwest very late in the day as rare winter-time gentle lake breezes begin.

The likelihood of rain or snow is 0% today and tonight, 25% tomorrow, and a 10% chance of snow showers on Thursday and Friday.

A weak low pressure area is stalled over Wisconsin and expected to bring cooler temperatures and snow into the area by Saturday.

dlr-Syracuse National Weather Service

Note: This forecast should be handed to players if a weather forecast is requested.

THIS IS A DRILL

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

III. PLANT RELEASE DATA

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Plant Release Data

(Note - Times are approximate)

Summary:

0915 Power spike causes fuel damage
HRCRM, MSL and Offgas readings begin to increase

0925 MSL Isolation setpoint reached. When operators try scram reactor ATWAS occurs.

HRCRM continues to increase indicating fuel damage.

0945 ARMs begin to increase as leak out of drywell into the Reactor Building begins.

0955 Continuing to End
Elevated release from stack begins and continues until end of drill.

Stack flow will remain constant at 6000 cfm.

The release rate will increase linearly to approximately 6 Ci/s at 1200.

The following pages provide data tables and graphical representations of the above data.

Time	7:00-9:15	9:20	9:27	9:30	9:31	9:32	9:33
HRCRM	9.00	60.00	225.00	434.40	1371.00	2277.00	3150.00
Time	9:34	9:35	9:36	9:37	9:38	9:39	9:40
HRCRM	4001.00	4821.00	5615.00	6385.00	7109.00	7809.00	10890.00
Time	9:41	9:42	9:43	9:44	9:45	9:46	9:47
HRCRM	11720.00	12550.00	13380.00	14210.00	14635.33	15060.67	15486.00
Time	9:48	9:49	9:50	9:51	9:52	9:53	9:54
HRCRM	15911.33	16336.67	16762.00	17187.33	17612.67	18038.00	18463.33
Time	9:55	9:56	9:57	9:58	9:59	10:00	10:01
HRCRM	18888.67	19314.00	19739.33	20164.67	20590.00	21362.00	22134.00
Time	10:02	10:03	10:04	10:05	10:06	10:07	10:08
HRCRM	22906.00	23678.00	24450.00	25222.00	25994.00	26766.00	27538.00
Time	10:09	10:10	10:11	10:12	10:13	10:14	10:15
HRCRM	28310.00	29082.00	29854.00	30626.00	31398.00	32170.00	33640.67
Time	10:16	10:17	10:18	10:19	10:20	10:21	10:22
HRCRM	35111.33	36582.00	38052.67	39523.33	40994.00	42464.67	43935.33
Time	10:23	10:24	10:25	10:26	10:27	10:28	10:29
HRCRM	45406.00	46876.67	48347.33	49818.00	51288.67	52759.33	54230.00
Time	10:30	10:31	10:32	10:33	10:34	10:35	10:36
HRCRM	55493.33	56756.67	58020.00	59283.33	60546.67	61810.00	63073.33
Time	10:37	10:38	10:39	10:40	10:41	10:42	10:43
HRCRM	64336.67	65600.00	66863.33	68126.67	69390.00	70653.33	71916.67
Time	10:44	10:45	10:46	10:47	10:48	10:49	10:50
HRCRM	74265.33	75350.67	76436.00	77521.33	78606.67	79692.00	80777.33
Time	10:51	10:52	10:53	10:54	10:55	10:56	10:57
HRCRM	81862.67	82948.00	84033.33	85118.67	86204.00	87289.33	88374.67
Time	10:58	10:59	11:00	11:01	11:02	11:03	11:04
HRCRM	89460.00	90429.33	91398.67	92368.00	93337.33	94306.67	95276.00
Time	11:05	11:06	11:07	11:08	11:09	11:10	11:11
HRCRM	96245.33	97214.67	98184.00	99153.33	100122.67	101092.00	102061.33
Time	11:12	11:13	11:14	11:15	11:16	11:17	11:18
HRCRM	103030.67	104000.00	104860.00	105720.00	106580.00	107440.00	108300.00
Time	11:19	11:20	11:21	11:22	11:23	11:24	11:25
HRCRM	109160.00	110020.00	110880.00	111740.00	112600.00	113460.00	114320.00
Time	11:26	11:27	11:28	11:29	11:30	11:31	11:32
HRCRM	115180.00	116040.00	116900.00	117493.33	118086.67	118680.00	119273.33

Main Steam Line Rad Monitor

Time	7:00-9:15 AM	9:16	9:17	9:18	9:19	9:20	9:21
MSL RM	958.00	1071.00	1180.00	1405.00	1571.00	1819.00	1963.00
Time	9:22	9:23	9:24	9:25	9:26	9:27	9:28
MSL RM	2112.00	2642.00	3105.00	3600.00	3700.00	3700.00	3700.00

SJAE Rad Monitors

Time	7:00-9:15 AM	9:16	9:17	9:18	9:19	9:20	9:21
SJAE	644.00	665.00	686.00	706.00	727.00	747.00	768.00
Time	9:22	9:23	9:24	9:25	9:26	9:27	9:28
SJAE	789.00	809.00	830.00	850.00	870.00	889.00	889.00

Low Range in CPM
High Range in Mr/hr

JAF Exercise
December 14, 1993
SECTION 7
Stack Monitors

Time	7:00 to 9:09	9:10	9:11	9:12	9:13	9:14	9:15	9:16	9:17	9:18	9:19	9:20	9:21	9:22	9:23
Release Rate Ci/sec	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LO Range Effluent Monitors															
Stack CPS	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
High Range Effluent Monitors															
Stack mR/hr(1tm+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time	9:24	9:25	9:26	9:27	9:28	9:29	9:30	9:31	9:32	9:33	9:34	9:35	9:36	9:37	9:38
Release Rate Ci/sec	0	0	0	0	0	0	0	0	0	0	0.02	0.06	0.08	0.11	0.15
LO Range Effluent Monitors															
Stack CPS	15	15	15	15	15	15	15	15	15	15	15	15	15	15	53042
High Range Effluent Monitors															
Stack mR/hr(1tm+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time	9:39	9:40	9:41	9:42	9:43	9:44	9:45	9:46	9:47	9:48	9:49	9:50	9:51	9:52	9:53
Release Rate Ci/sec	0.18	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.29	0.32	0.34	0.37	0.39	0.41
LO Range Effluent Monitors															
Stack CPS	106068	159095	212121	225556	234276	242997	251717	260438	269158	294586	320013	345441	370869	396296	416229
High Range Effluent Monitors															
Stack mR/hr(1tm+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time	9:54	9:55	9:56	9:57	9:58	9:59	10:00	10:01	10:02	10:03	10:04	10:05	10:06	10:07	10:08
Release Rate Ci/sec	0.43	0.45	0.47	0.49	0.51	0.53	0.55	0.57	0.60	0.61	0.63	0.65	0.67	0.69	0.71
LO Range Effluent Monitors															
Stack CPS	436162	456094	476027	495960	517037	538114	559192	580269	601347	620097	638848	657598	676349	695099	713850
High Range Effluent Monitors															
Stack mR/hr(1tm+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Low Range In CPM
High Range In Mr/hr

JAF Exercise
December 14, 1993
SECTION 7
Stack Monitors

Time	10:09	10:10	10:11	10:12	10:13	10:14	10:15	10:16	10:17	10:18	10:19	10:20	10:21	10:22	10:23
Release Rate Ci/sec	0.73	0.74	0.76	0.78	0.80	0.82	0.84	0.86	0.87	0.92	0.96	1.00	1.05	1.09	1.13
LO Range Effluent Monitors															
Stack CPS	732600	751351	770101	788851	807602	826352	845103	863853	882604	925896	969188	1012480	1055773	1099065	1142357
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time	10:24	10:25	10:26	10:27	10:28	10:29	10:30	10:31	10:32	10:33	10:34	10:35	10:36	10:37	10:38
Release Rate Ci/sec	1.17	1.22	1.26	1.30	1.35	1.39	1.43	1.47	1.52	1.57	1.63	1.68	1.73	1.79	1.84
LO Range Effluent Monitors															
Stack CPS	1185649	1228941	1272233	1315526	1358818	1402110	1445402	1488694	1331986	1586906	1641826	1696745	1751665	1806584	1861504
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time	10:39	10:40	10:41	10:42	10:43	10:44	10:45	10:46	10:47	10:48	10:49	10:50	10:51	10:52	10:53
Release Rate Ci/sec	1.90	1.95	2.01	2.06	2.11	2.17	2.22	2.28	2.33	2.38	2.43	2.48	2.52	2.57	2.62
LO Range Effluent Monitors															
Stack CPS	1916423	1971343	2026262	2081182	2136102	2191021	2245941	2300860	2355780	2404040	2452301	2500561	2548821	2597082	2645342
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Time	10:54	10:55	10:56	10:57	10:58	10:59	11:00	11:01	11:02	11:03	11:04	11:05	11:06	11:07	11:08
Release Rate Ci/sec	2.67	2.71	2.76	2.81	2.86	2.91	2.95	3.00	3.05	3.09	3.14	3.18	3.23	3.27	3.32
LO Range Effluent Monitors															
Stack CPS	2693603	2741863	2790123	2838384	2886644	2934905	2983165	3031425	3079686	3125253	3170819	3216386	3261953	3307520	3353086
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Low Range in CPM
High Range in Mr/hr

JAF Exercise
December 14, 1993
SECTION 7
Stack Monitors

Time	11:09	11:10	11:11	11:12	11:13	11:14	11:15	11:16	11:17	11:18	11:19	11:20	11:21	11:22	11:23
Release Rate CI/sec	3.36	3.41	3.45	3.50	3.55	3.59	3.64	3.68	3.73	3.78	3.83	3.89	3.94	4.00	4.05
LO Range Effluent Monitors															
Stack CPS	3398653	3444220	3489787	3535354	3580920	3626487	3672054	3717621	3763187	3817913	3872638	3927363	3982088	4036813	4091538
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Time	11:24	11:25	11:26	11:27	11:28	11:29	11:30	11:31	11:32	11:33	11:34	11:35	11:36	11:37	11:38
Release Rate CI/sec	4.10	4.16	4.21	4.27	4.32	4.38	4.43	4.48	4.54	4.59	4.65	4.70	4.75	4.81	4.86
LO Range Effluent Monitors															
Stack CPS	4146263	4200988	4255713	4310438	4365163	4419888	4474613	4529338	4584063	4638788	4693513	4748238	4802963	4857688	4912413
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Time	11:39	11:40	11:41	11:42	11:43	11:44	11:45	11:46	11:47	11:48	11:49	11:50	11:51	11:52	11:53
Release Rate CI/sec	4.92	4.97	5.03	5.08	5.13	5.19	5.24	5.30	5.35	5.41	5.46	5.51	5.57	5.62	5.68
LO Range Effluent Monitors															
Stack CPS	4967138	5021863	5076588	5131313	5186038	5240763	5295488	5350213	5404938	5459663	5514388	5569113	5623838	5678563	5733288
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Time	11:54	11:55	11:56	11:57	11:58	11:59	12:00	12:01	12:02	12:03	12:04	12:05	12:06	12:07	12:08
Release Rate CI/sec	5.73	5.78	5.84	5.89	5.95	6.00	6.06	6.11	6.16	6.22	6.27	6.33	6.38	6.43	6.49
LO Range Effluent Monitors															
Stack CPS	5788013	5842739	5897464	5952189	6006914	6061639	6116364	6171089	6225814	6280539	6335264	6389989	6444714	6499439	6554164
High Range Effluent Monitors															
Stack mR/hr(1trn+1fan)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

IV. ONSITE DOSE RATE DATA AND MAPS

SECTION 7

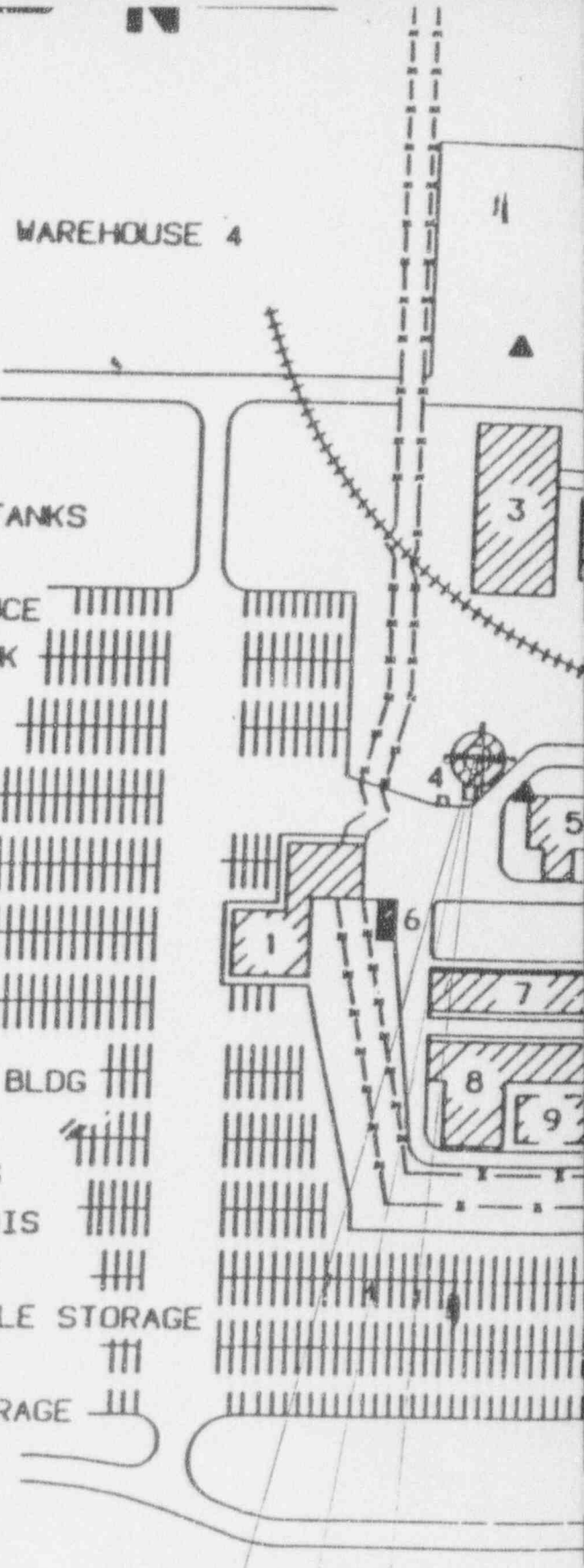
James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Onsite Dose Rate Data and Maps

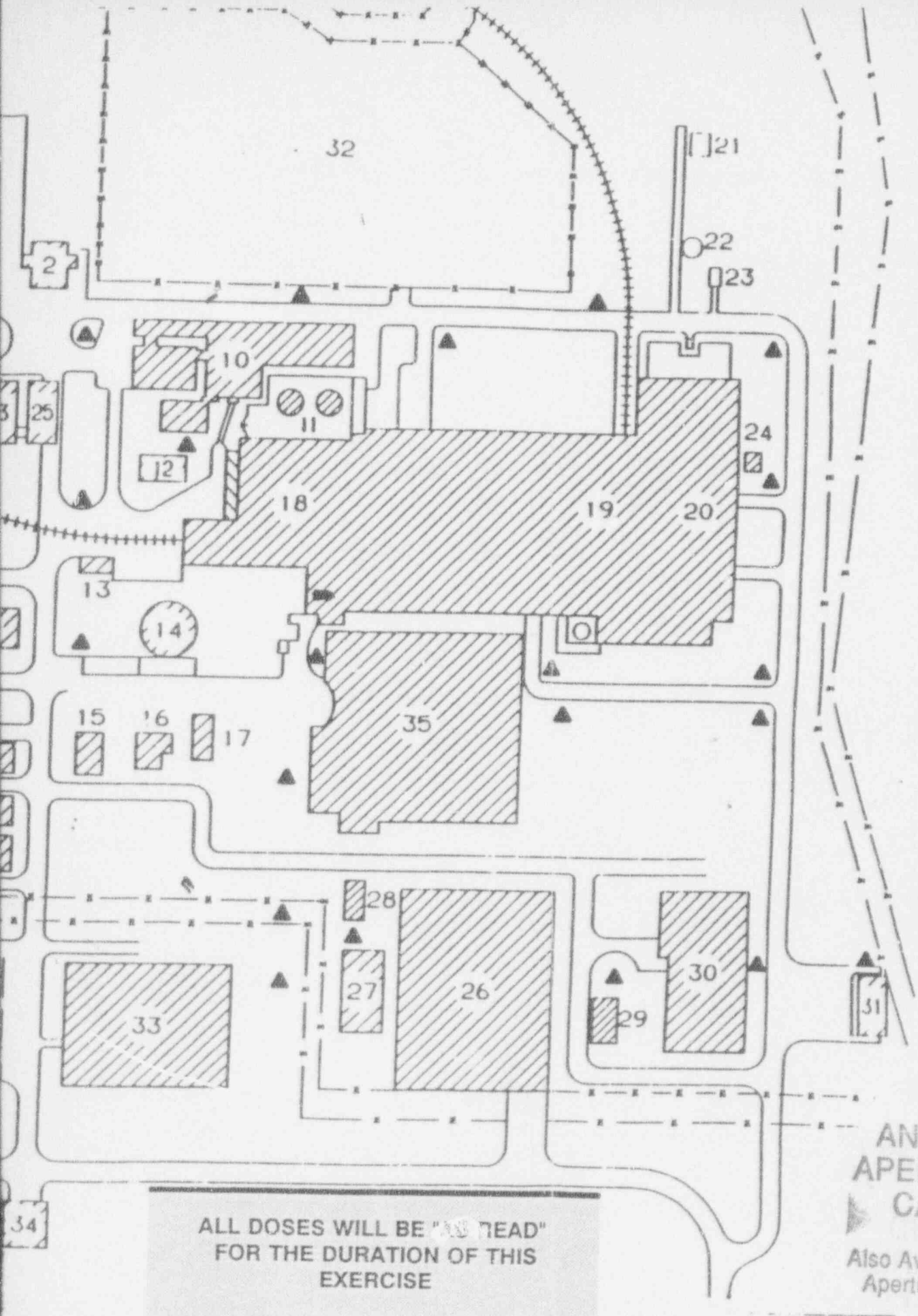
There will be no dose rates measurable onsite as a result of the passing plume because we will be simulating a low level elevated release. There will be no dose rates measurable on contact with any building due to attenuation from the building structures.

1. MAIN SECURITY
2. SECURITY
3. BUILDING & GROUNDS
4. STACK / SAMPLE SHED
5. CONTRACT SERVICES / WAREHOUSE 4
6. DOSIMETRY
7. RMS, MEL, NRC
8. CONTRACT SERVICES
9. FAB SHOP
10. ADMIN BLDG ANNEX
11. CONDENSATE STORAGE TANKS
12. ARCHIVAL STORAGE
13. RESPIRATOR MAINTENANCE
14. FUEL OIL STORAGE TANK
15. DRAFTING
16. I & C
17. SITE ENG DEPT ANNEX
18. REACTOR BLDG
19. TURBINE BLDG
20. SCREENWELL
21. HYDROGEN STORAGE
22. OXYGEN STORAGE
23. FILTER BED TREATMENT BLDG
24. STORAGE BLDG
25. CENTRAL PLANNING BLDG
26. WAREHOUSE 1, ACCTG, MIS
27. WAREHOUSE 2, UNHEATED
28. WAREHOUSE 3, GAS BOTTLE STORAGE
29. PAINT SHOP
30. INTERIM RAD WASTE STORAGE
31. SEWAGE TREATMENT BLDG
32. SWITCH YARD
33. TRAINING / SIMULATOR
34. PROJECT SERVICES OFFICE
35. ADMINISTRATION BUILDING



▲ FIRE HYDRANT

105°
100°
95°



ALL DOSES WILL BE "[illegible] HEAD" FOR THE DURATION OF THIS EXERCISE

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SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

V. OFFSITE DOSE RATE DATA AND MAPS

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Offsite Dose Rate Data and Maps

Offsite dose rates will be detected no closer than 1 mile east of the plant beginning at approximately 1015-1030. The dose rates will increase to approximately 5 mR/hr by 1215. The release is primarily noble gas and a very small amount iodine.

The following pages are samples of expected MMRAS and IDAC displays, and tabular dose rate information.

All readings Closed Window Open window 2 times Closed Window All readings mR/hr

		WIND DIRECTION TO										
T=10:00-10:15		95	96	97	98	99	100	101	102	103	104	105
D	1.00	0	0	0	0	0	0	0	0	0	0	0
I	1.50	0	0	0	0	0	0	0	0	0	0	0
S	2.00	0	0	0	0	0	0	0	0	0	0	0
T	2.50	0	0	0	0	0	0	0	0	0	0	0
A	3.00	0	0	0	0	0	0	0	0	0	0	0
N	3.50	0	0	0	0	0	0	0	0	0	0	0
C	4.00	0	0	0	0	0	0	0	0	0	0	0
E	4.50	0	0	0	0	0	0	0	0	0	0	0
	5.00	0	0	0	0	0	0	0	0	0	0	0
D	5.50	0	0	0	0	0	0	0	0	0	0	0
O	6.00	0	0	0	0	0	0	0	0	0	0	0
W	6.50	0	0	0	0	0	0	0	0	0	0	0
N	7.00	0	0	0	0	0	0	0	0	0	0	0
W	7.50	0	0	0	0	0	0	0	0	0	0	0
I	8.00	0	0	0	0	0	0	0	0	0	0	0
N	8.50	0	0	0	0	0	0	0	0	0	0	0
D	9.00	0	0	0	0	0	0	0	0	0	0	0
	9.50	0	0	0	0	0	0	0	0	0	0	0
	10.00	0	0	0	0	0	0	0	0	0	0	0

		WIND DIRECTION TO										
T=10:15-10:30		95	96	97	98	99	100	101	102	103	104	105
D	1.00	0	0	0	0	0	0	0	0	0	0	0
I	1.50	0	0	0	0	0	0	0	0	0	0	0
S	2.00	0	0	0	0	0	0	0	0	0	0	0
T	2.50	0	0	0	0	0	0	0	0	0	0	0
A	3.00	0	0	0	0	0	0	0	0	0	0	0
N	3.50	0	0	0	0	0	0	0	0	0	0	0
C	4.00	0	0	0	0	0	0	0	0	0	0	0
E	4.50	0	0	0	0	0	0	0	0	0	0	0
	5.00	0	0	0	0	0	0	0	0	0	0	0
D	5.50	0	0	0	0	0	0	0	0	0	0	0
O	6.00	0	0	0	0	0	0	0	0	0	0	0
W	6.50	0	0	0	0	0	0	0	0	0	0	0
N	7.00	0	0	0	0	0	0	0	0	0	0	0
W	7.50	0	0	0	0	0	0	0	0	0	0	0
I	8.00	0	0	0	0	0	0	0	0	0	0	0
N	8.50	0	0	0	0	0	0	0	0	0	0	0
D	9.00	0	0	0	0	0	0	0	0	0	0	0
	9.50	0	0	0	0	0	0	0	0	0	0	0
	10.00	0	0	0	0	0	0	0	0	0	0	0

All readings Closed Window Open window 2 times Closed Window All readings mR/hr

		WIND DIRECTION TO										
T=10:30-10:45		95	96	97	98	99	100	101	102	103	104	105
D	1.00	0	0	0	0	1	1	1	0	0	0	0
I	1.50	0	0	0	0	1	1	1	0	0	0	0
S	2.00	0	0	0	0	1	1	1	0	0	0	0
T	2.50	0	0	0	0	1	1	1	0	0	0	0
A	3.00	0	0	0	0	1	1	1	0	0	0	0
N	3.50	0	0	0	0	0	0	0	0	0	0	0
C	4.00	0	0	0	0	0	0	0	0	0	0	0
E	4.50	0	0	0	0	0	0	0	0	0	0	0
	5.00	0	0	0	0	0	0	0	0	0	0	0
D	5.50	0	0	0	0	0	0	0	0	0	0	0
O	6.00	0	0	0	0	0	0	0	0	0	0	0
W	6.50	0	0	0	0	0	0	0	0	0	0	0
N	7.00	0	0	0	0	0	0	0	0	0	0	0
W	7.50	0	0	0	0	0	0	0	0	0	0	0
I	8.00	0	0	0	0	0	0	0	0	0	0	0
N	8.50	0	0	0	0	0	0	0	0	0	0	0
D	9.00	0	0	0	0	0	0	0	0	0	0	0
	9.50	0	0	0	0	0	0	0	0	0	0	0
	10.00	0	0	0	0	0	0	0	0	0	0	0

		WIND DIRECTION TO										
T=10:45-11:00		95	96	97	98	99	100	101	102	103	104	105
D	1.00	0	0	0	0	1	1	1	0	0	0	0
I	1.50	0	0	0	0	1	1	1	0	0	0	0
S	2.00	0	0	0	0	1	1	1	0	0	0	0
T	2.50	0	0	0	0	1	1	1	0	0	0	0
A	3.00	0	0	0	0	1	1	1	0	0	0	0
N	3.50	0	0	0	0	1	1	1	0	0	0	0
C	4.00	0	0	0	0	1	1	1	0	0	0	0
E	4.50	0	0	0	0	1	1	1	0	0	0	0
	5.00	0	0	0	0	0	0	0	0	0	0	0
D	5.50	0	0	0	0	0	0	0	0	0	0	0
O	6.00	0	0	0	0	0	0	0	0	0	0	0
W	6.50	0	0	0	0	0	0	0	0	0	0	0
N	7.00	0	0	0	0	0	0	0	0	0	0	0
W	7.50	0	0	0	0	0	0	0	0	0	0	0
I	8.00	0	0	0	0	0	0	0	0	0	0	0
N	8.50	0	0	0	0	0	0	0	0	0	0	0
D	9.00	0	0	0	0	0	0	0	0	0	0	0
	9.50	0	0	0	0	0	0	0	0	0	0	0
	10.00	0	0	0	0	0	0	0	0	0	0	0

All readings Closed Window Open window 2 times Closed Window All readings mR/hr

		WIND DIRECTION TO										
T=11:00 - 11:15		95	96	97	98	99	100	101	102	103	104	105
D	1.00	0	0	1	1	1	2	1	1	1	0	0
I	1.50	0	0	1	1	1	2	1	1	1	0	0
S	2.00	0	0	1	1	1	2	1	1	1	0	0
T	2.50	0	0	1	1	1	2	1	1	1	0	0
A	3.00	0	0	0	0	1	1	1	0	0	0	0
N	3.50	0	0	0	0	1	1	1	0	0	0	0
C	4.00	0	0	0	0	1	1	1	0	0	0	0
E	4.50	0	0	0	0	1	1	1	0	0	0	0
	5.00	0	0	0	0	1	1	1	0	0	0	0
D	5.50	0	0	0	0	1	1	1	0	0	0	0
O	6.00	0	0	0	0	1	1	1	0	0	0	0
W	6.50	0	0	0	0	0	0	0	0	0	0	0
N	7.00	0	0	0	0	0	0	0	0	0	0	0
W	7.50	0	0	0	0	0	0	0	0	0	0	0
I	8.00	0	0	0	0	0	0	0	0	0	0	0
N	8.50	0	0	0	0	0	0	0	0	0	0	0
D	9.00	0	0	0	0	0	0	0	0	0	0	0
	9.50	0	0	0	0	0	0	0	0	0	0	0
	10.00	0	0	0	0	0	0	0	0	0	0	0

		WIND DIRECTION TO										
T=11:15 -11:30		95	96	97	98	99	100	101	102	103	104	105
D	1.00	1	1	1	1	2	3	2	1	1	1	1
I	1.50	1	1	1	1	2	3	2	1	1	1	1
S	2.00	1	1	1	1	2	3	2	1	1	1	1
T	2.50	0	0	1	1	1	2	1	1	1	0	0
A	3.00	0	0	1	1	1	2	1	1	1	0	0
N	3.50	0	0	1	1	1	2	1	1	1	0	0
C	4.00	0	0	1	1	1	2	1	1	1	0	0
E	4.50	0	0	0	0	1	1	1	0	0	0	0
	5.00	0	0	0	0	1	1	1	0	0	0	0
D	5.50	0	0	0	0	1	1	1	0	0	0	0
O	6.00	0	0	0	0	1	1	1	0	0	0	0
W	6.50	0	0	0	0	1	1	1	0	0	0	0
N	7.00	0	0	0	0	0	0	0	0	0	0	0
W	7.50	0	0	0	0	0	0	0	0	0	0	0
I	8.00	0	0	0	0	0	0	0	0	0	0	0
N	8.50	0	0	0	0	0	0	0	0	0	0	0
D	9.00	0	0	0	0	0	0	0	0	0	0	0
	9.50	0	0	0	0	0	0	0	0	0	0	0
	10.00	0	0	0	0	0	0	0	0	0	0	0

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

**********INPUT INFORMATION**********
****

YOUR NAME: Drill Player

TODAY'S DATE: 12-14-1993

CURRENT TIME: 09:30:19

REACTOR NAME: FITZPATRICK

NET ELECTRICAL OUTPUT: 821

CONTAINMENT TYPE: BWR-EITHER A TYPE I OR II

EFFECTIVE STACK HEIGHT(M): 117.3

ELEVATED LEVEL WIND SPEED (M/SEC): 3.1

ELEVATED LEVEL WIND DIRECTION (TO): 74

STABILITY CLASS: C

INPUTS FOR GROSS RELEASE RATE:

GROSS RELEASE RATE (CI/SEC): 7.00E+00

IODINE, NOBLE GAS, AND FILTER EFFICIENCY INPUTS:

PERCENTAGE IODINE: 0.00

PERCENTAGE NOBLE GAS: 100.00

IODINE TO NOBLE GAS RATIO: 0.00E+00

PERCENTAGE OF IODINE REMOVED BY FILTRATION: 100.00

TIME INTERVAL FROM REACTOR SHUTDOWN
TO INITIATION OF RELEASE (HR): 0.50

TIME ESTIMATE FOR TOTAL DURATION
OF RELEASE (HR): 8.00

AGE OF RELEASED MATERIAL: <1 DAY

****
* ELEVATED PLUME HAS TOUCHED DOWN *
BETWEEN 500.0 AND 968.0 METERS.
* SEE SUMMARY OUTPUT LISTED BELOW. *
****

****
**********PLUME INFORMATION**********
****

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

```
*******************************************
* REVIEW THE FOLLOWING INPUT INFORMATION.*
*******************************************

YOUR NAME:      Drill Player
TODAY'S DATE:   12-14-1993
CURRENT TIME:   09:30:19
REACTOR NAME:   FITZPATRICK
NET ELECTRICAL OUTPUT:    821
CONTAINMENT TYPE:    BWR-EITHER A TYPE I OR II
EFFECTIVE STACK HEIGHT(M):     117.3
ELEVATED LEVEL WIND SPEED (M/SEC):       3.1
ELEVATED LEVEL WIND DIRECTION (TO):      74
STABILITY CLASS:     C
INPUTS FOR GROSS RELEASE RATE:
     GROSS RELEASE RATE (CI/SEC):  7.00E+00
IODINE, NOBLE GAS, AND FILTER EFFICIENCY INPUTS:
     PERCENTAGE IODINE:  0.00
     PERCENTAGE NOBLE GAS:     100.00
     IODINE TO NOBLE GAS RATIO:     0.00E+00
     PERCENTAGE OF IODINE REMOVED BY FILTRATION:  100.00
TIME INTERVAL FROM REACTOR SHUTDOWN
TO INITIATION OF RELEASE (HR):      0.50

TIME ESTIMATE FOR TOTAL DURATION
OF RELEASE (HR):     8.00

AGE OF RELEASED MATERIAL:      <1 DAY

*************************
* TEAR OFF AND REVIEW. *
*************************
                        ******************
```

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

DISTANCE (METERS)	DISTANCE (MILES)	PLUME TRAVEL TIME (HOURS:MINUTES)	CHI/Q VALUE
500.0	0.3	0 : 2.7	1.41E-07
968.0	0.6	0 : 5.2	2.79E-06
2016.0	1.2	0 : 10.7	2.66E-06
3225.0	2.0	0 : 17.2	1.68E-06
8064.0	5.0	0 : 42.9	3.77E-07
16129.0	10.0	1 : 25.9	8.90E-08

****
********** SUMMARY **********
****

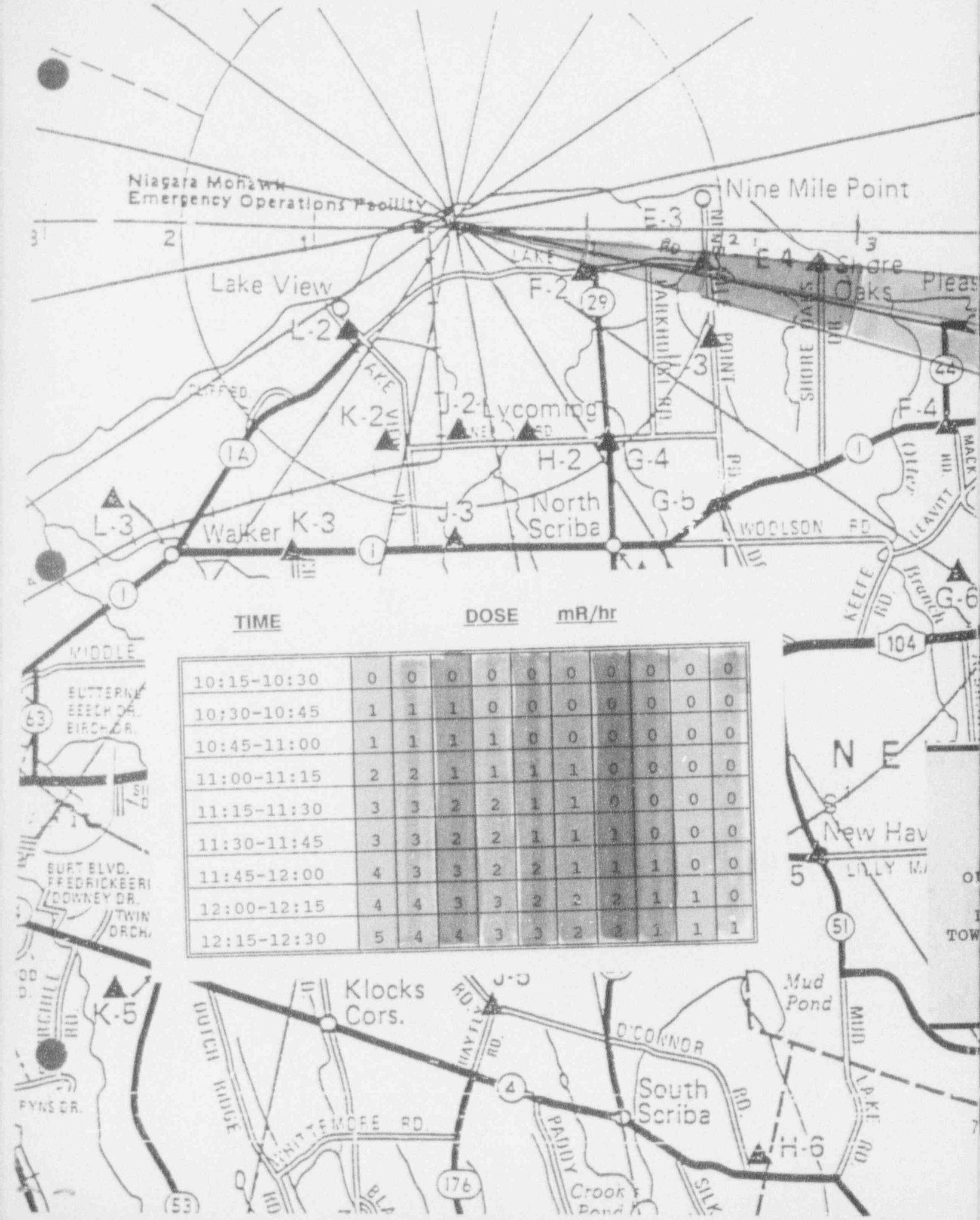
CALCULATED DOSE RATES (REM/HR)
****

DISTANCE (METERS)	DISTANCE (MILES)	WHOLE BODY (REM/HR)	INFANT THYROID
500.0	0.3	8.55E-03	0.00E+00
968.0	0.6	6.86E-03	0.00E+00
2016.0	1.2	6.53E-03	0.00E+00
3225.0	2.0	4.13E-03	0.00E+00
8064.0	5.0	9.27E-04	0.00E+00
16129.0	10.0	2.19E-04	0.00E+00

CALCULATED DOSE RATES (REMS)
****

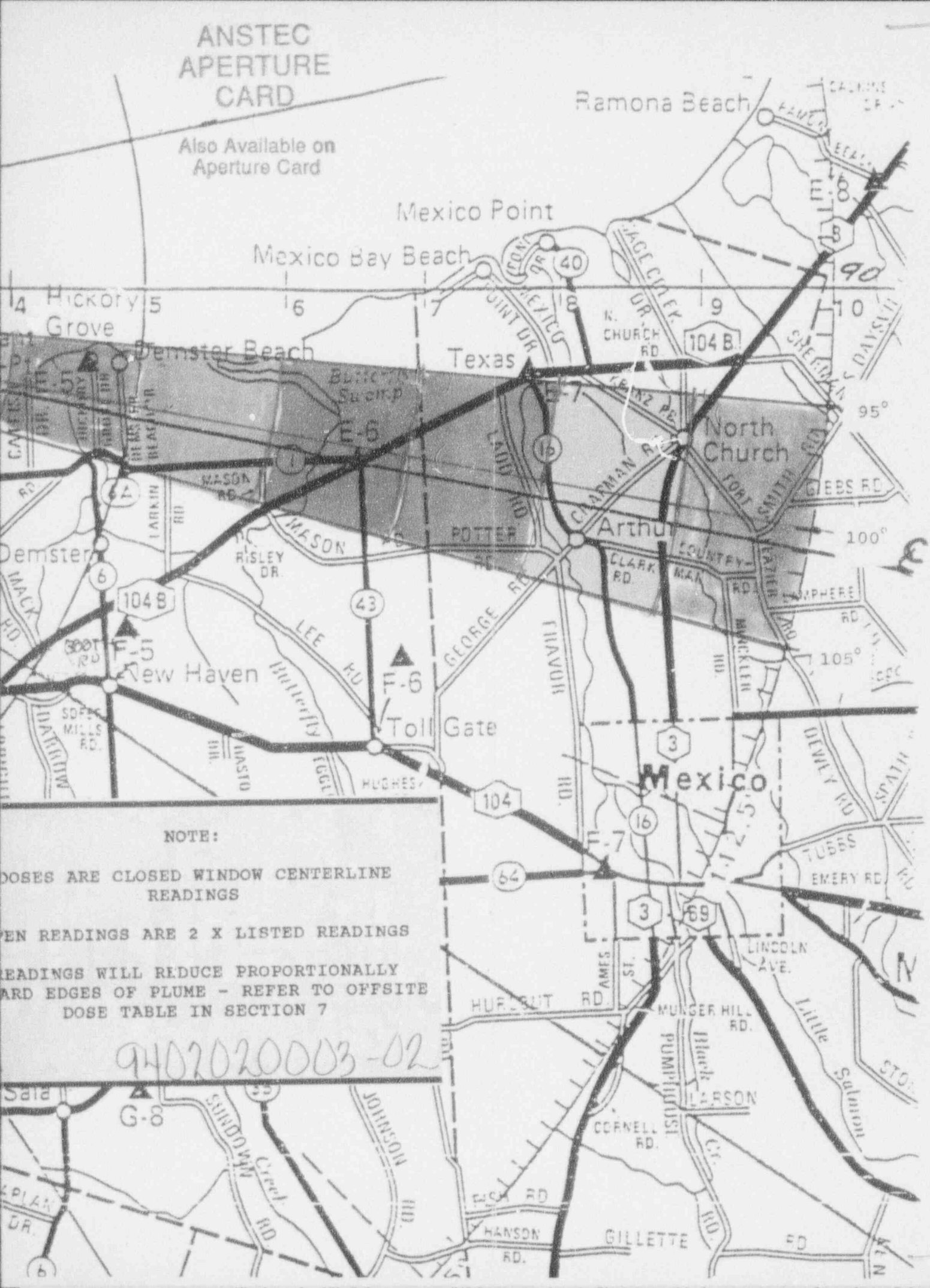
DISTANCE (METERS)	DISTANCE (MILES)	WHOLE BODY (REM/HR)	INFANT THYROID
500.0	0.3	6.84E-02	0.00E+00
968.0	0.6	5.48E-02	0.00E+00
2016.0	1.2	5.22E-02	0.00E+00
3225.0	2.0	3.30E-02	0.00E+00
8064.0	5.0	7.41E-03	0.00E+00
16129.0	10.0	1.75E-03	0.00E+00

****
********** CALCULATIONS COMPLETED **********
****



TIME **DOSE mR/hr**

10:15-10:30	0	0	0	0	0	0	0	0	0	0
10;30-10:45	1	1	1	0	0	0	0	0	0	0
10:45-11:00	1	1	1	1	0	0	0	0	0	0
11:00-11:15	2	2	1	1	1	1	0	0	0	0
11:15-11:30	3	3	2	2	1	1	0	0	0	0
11:30-11:45	3	3	2	2	1	1	1	0	0	0
11:45-12:00	4	3	3	2	2	1	1	1	0	0
12:00-12:15	4	4	3	3	2	2	2	1	1	0
12:15-12:30	5	4	4	3	3	2	2	1	1	1



NOTE:

DOSES ARE CLOSED WINDOW CENTERLINE READINGS

EN READINGS ARE 2 X LISTED READINGS

EADINGS WILL REDUCE PROPORTIONALLY
ARD EDGES OF PLUME - REFER TO OFFSITE
DOSE TABLE IN SECTION 7

9402020003-02

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

VI. IN-PLANT DOSE RATE DATA AND MAPS

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

In-Plant Dose Rate Data and Maps

In-plant dose rates will increase in the Reactor Building beginning at approximately 0945 and continue increasing until the exercise is terminated. The primary cause of the dose rates in the Reactor Building is immersion doses from drywell leakage.

The drywell structure provides 1 $x10^{6}$ gamma attenuation (5 feet concrete) with some streaming near penetrations.

RES SURVEY LOG SHEET

FORM NO SSL-1

☐ RWP NO. _____
☐ RPOP-5 _____
☐ _____

BUILDING / ELEVATION RB 272-1 EAST (DETAILED)

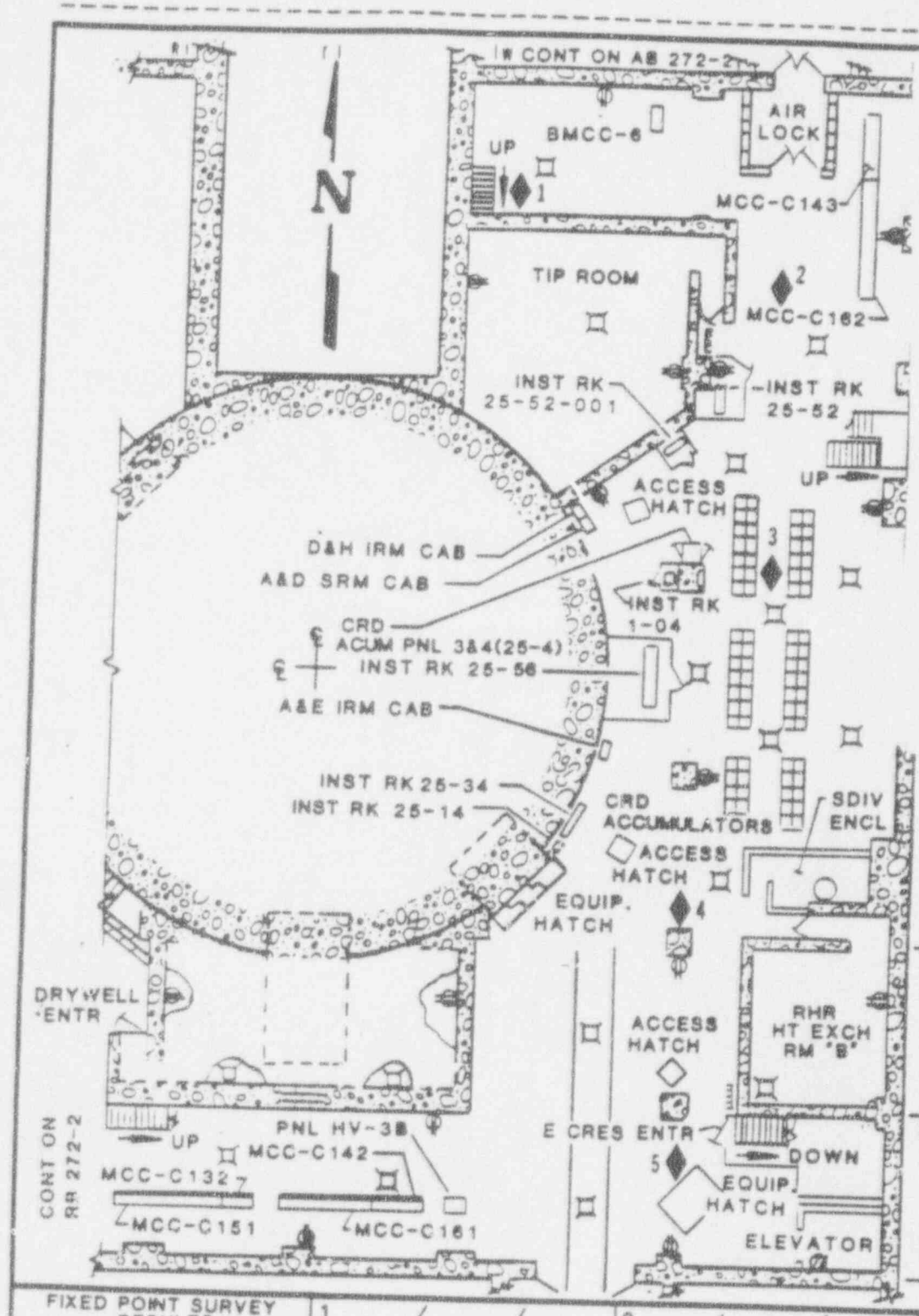
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 19

TIME _____



RB 272-1 East

Dose mr/hr	Time
As read	7:00-9:20
3	9:20
173	9:45
835	10:05
1712	10:25
2843	10:45
4146	11:05
5631	11:25
7127	11:45
8854	12:05

7							
8							
9							
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16							
17							
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21							
22							
23							
24							
25							

FIXED POINT SURVEY RESULTS	1	2	3
4	5	6	7
8	9	10	11

HES SURVEY LOG SHEET

FORM NO SSL-1

☐ RWP NO. _____
☐ RPOP-5 _____
☐ _____

BUILDING / ELEVATION RB 272-2 WEST (DETAILED)

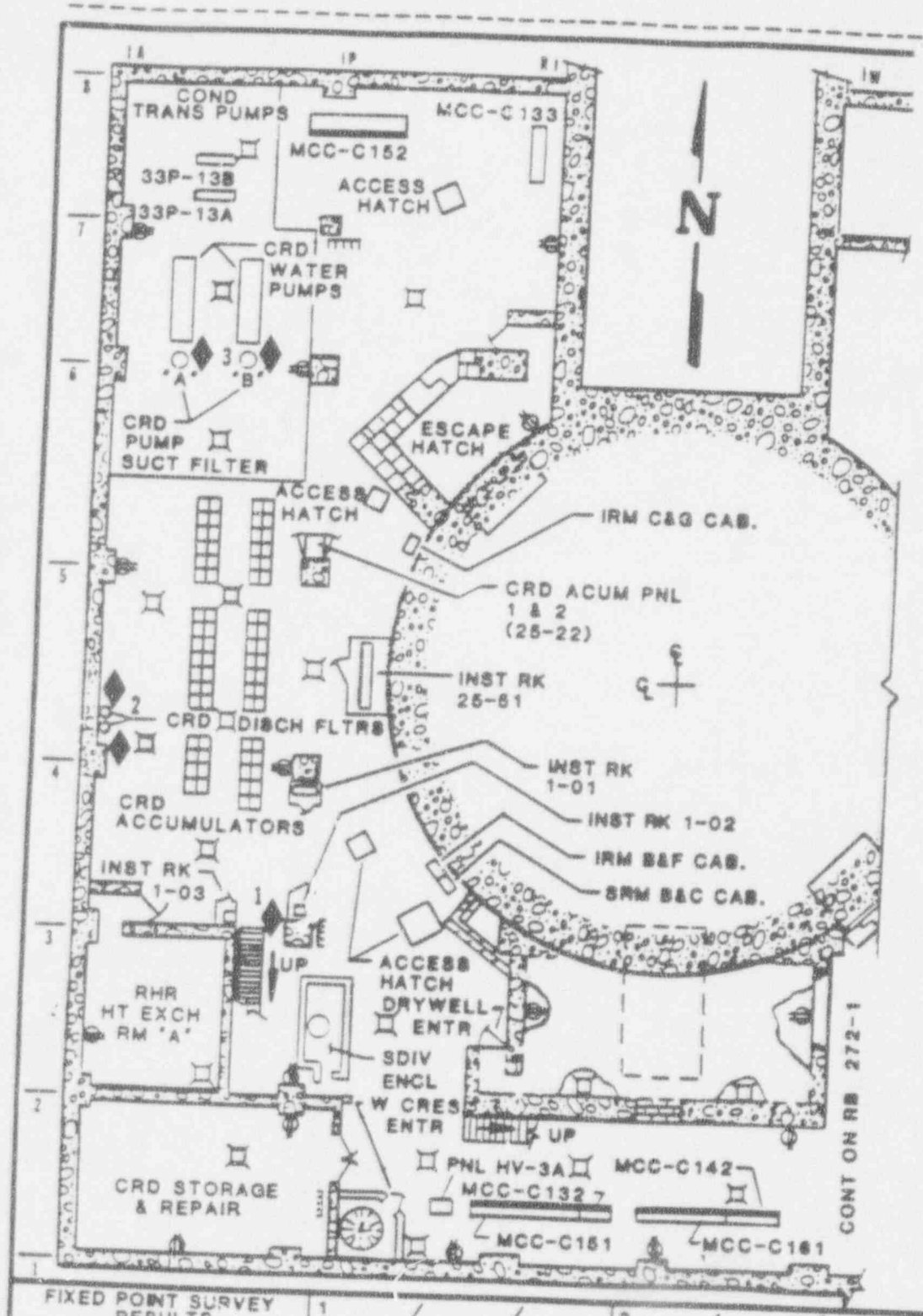
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 199

TIME _____



RB 272-2 West

Dose mr/hr	Time
As read	7:00-9:20
3	9:20
133	9:45
835	10:05
1712	10:25
2843	10:45
4146	11:05
5631	11:25
7127	11:45
8854	12:05

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25	

FIXED POINT SURVEY RESULTS					
1	/ /	2	/ /	3	/ /
4	/ /	5	/ /	6	/ /
7	/ /	8	/ /	9	/ /
10	/ /	11	/ /	12	/ /

RES SURVEY LOG SHEET

FORM NO SSL-1

☐ HWP NO. _____

☐ RPOP-5 _____

☐ _____

BUILDING / ELEVATION RB 272-3 DRYWELL ENTRANCE

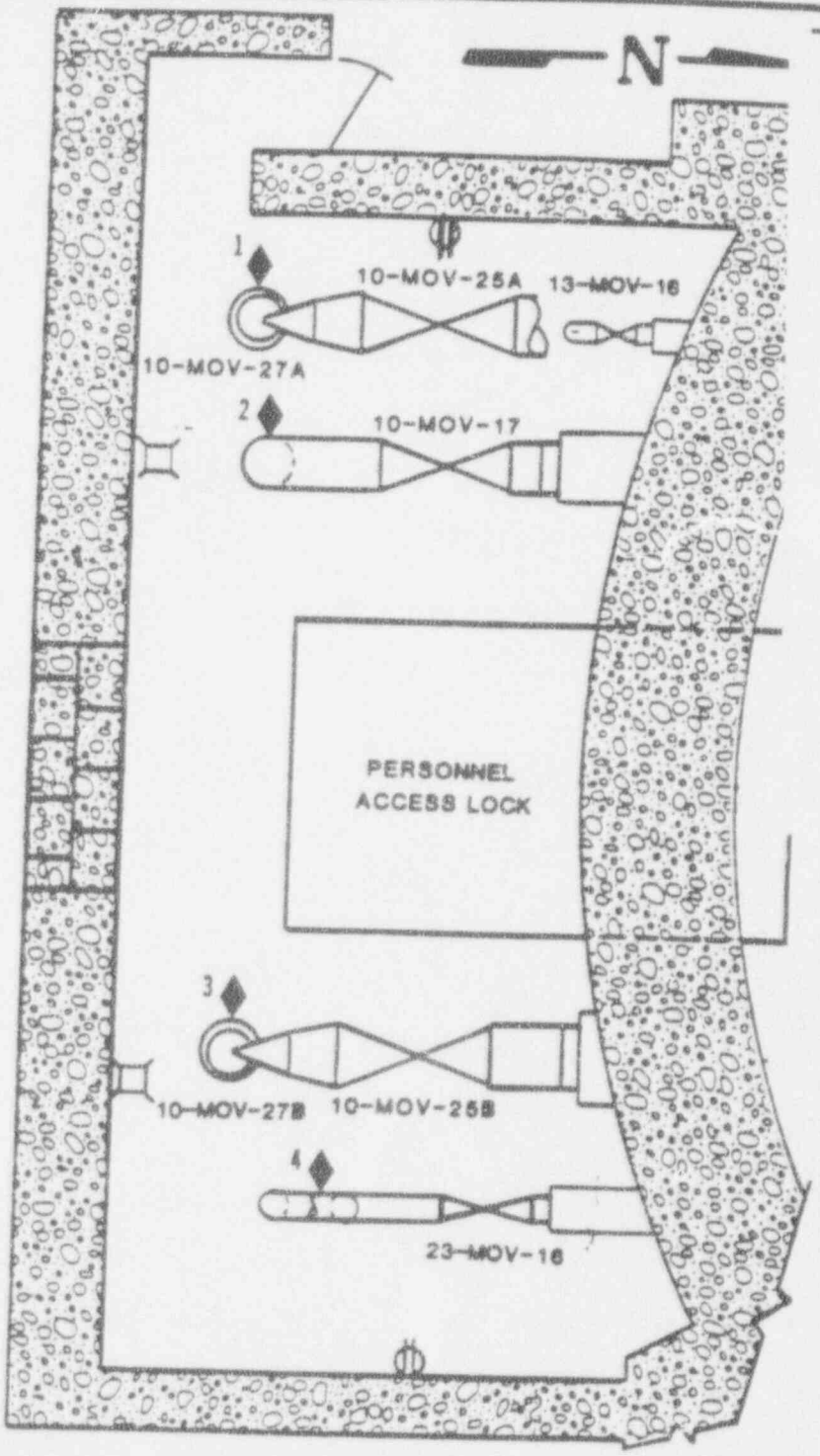
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 199:

TIME _____



RB 272-3 Drywell Entrance

Dose mr/hr	Time
As read	7:00-9:20
3	9:20
133	9:45
835	10:05
1712	10:25
2843	10:45
4146	11:05
5631	11:25
7127	11:45
8854	12:05

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23		
24		
25		

FIXED POINT SURVEY RESULTS	1 / /	2 / /	3 / /
4 / /	5 / /	6 / /	7 / /
8 / /	9 / /	10 / /	11 / /
12 / /			

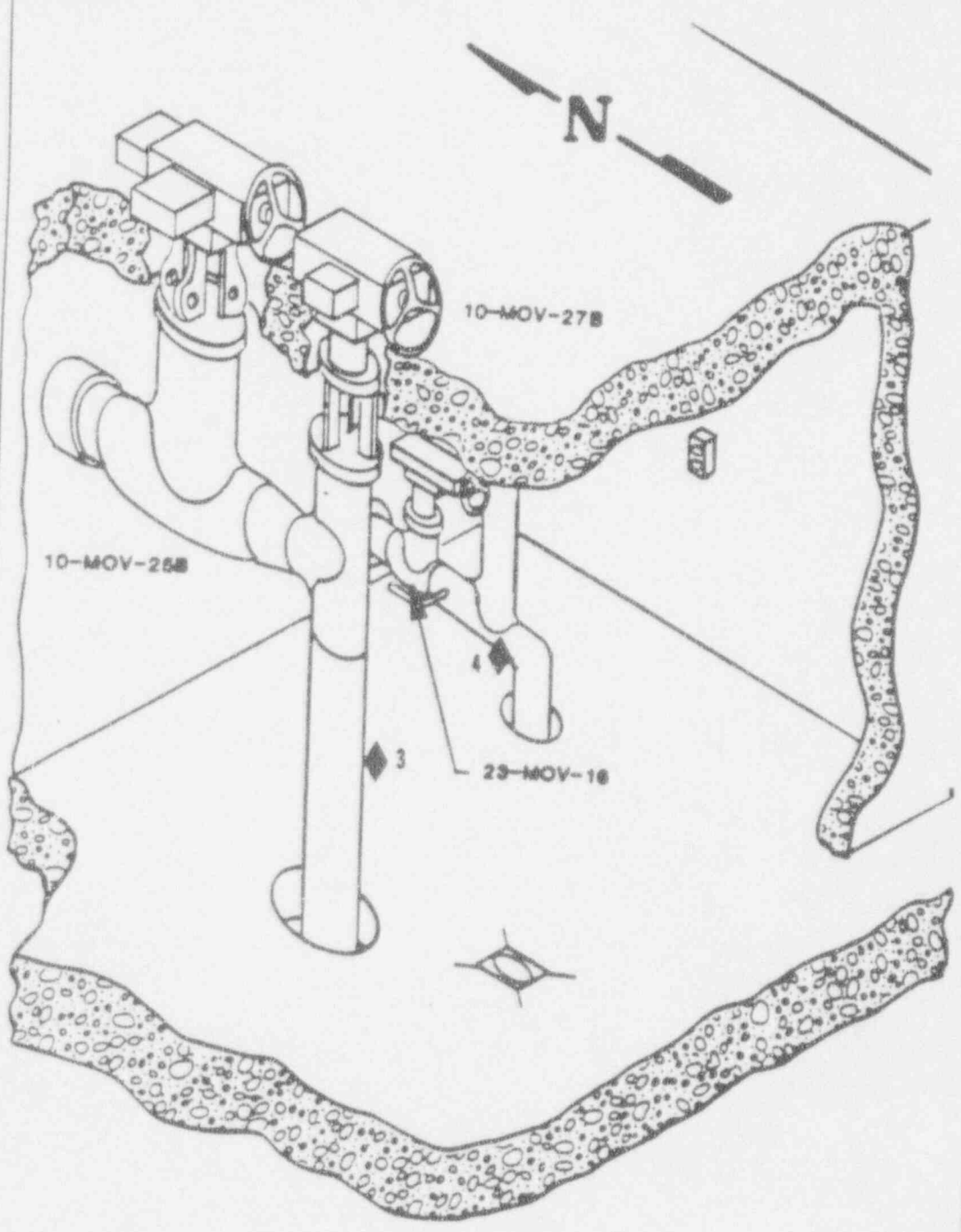
RES SURVEY LOG SHEET ☐ RWP NO. _____
FORM NO. SSL-1 ☐ RPP-5 _____
RB 272-4 ☐ _____
BUILDING / ELEVATION **DRYWELL ENTRANCE-EAST SIDE**
SYSTEM & COMPONENT ID/ ELEVATION(S) _____
DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 1993

TIME _____

RADIATION



RB 272-4 Drywell
East Side

Dose mr/hr	Time
As read	7:00-9:20
3	9:20
133	9:45
835	10:05
1712	10:25
2843	10:45
4146	11:05
5631	11:25
7127	11:45
8854	12:05

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19		
20		

FIXED POINT SURVEY RESULTS								
1 / /	2 / /	3 / /	4 / /	5 / /	6 / /	7 / /	8 / /	9 / /	10 / /	11 / /

FORM NO SSL-1

☐ RPOP-5

☐

BUILDING / ELEVATION RB 272-12 SBGT ROOM

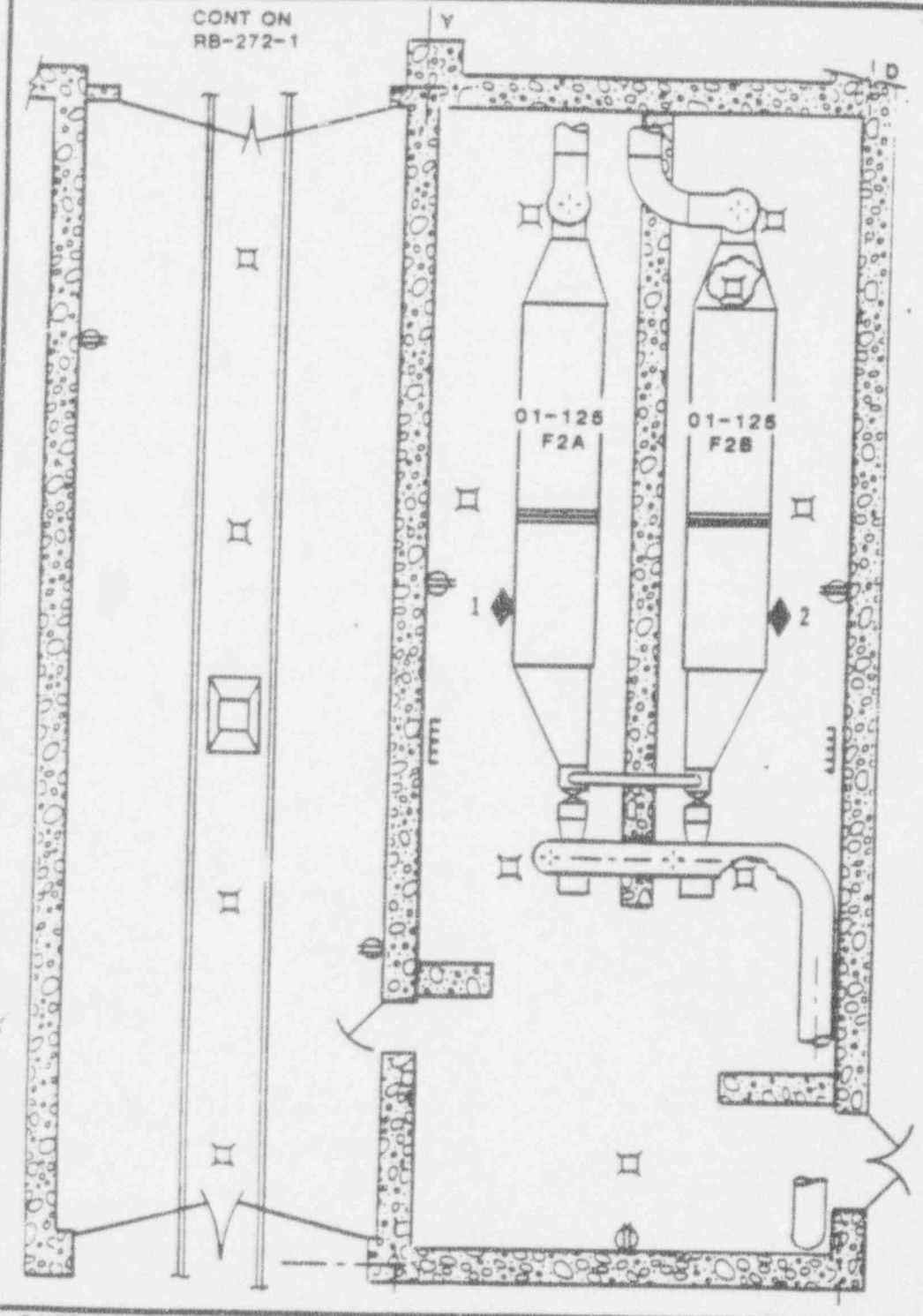
SYSTEM & COMPONENT I D / ELEVATION

DESCRIPTION / COMMENT

SURVEY NO.

DATE DEC. 1993

TIME



RB 272-12
SBGT Room

Dose mr/hr	Time
As read	7:00-9:20
30	9:20
266	9:45
1635	10:05
3512	10:25
5643	10:45
8246	11:05
10231	11:25
14127	11:45
19054	12:05

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24	
25	

FIXED POINT SURVEY RESULTS			
1 / /	2 / /	3 / /	4 / /
5 / /	6 / /	7 / /	8 / /
9 / /	10 / /	11 / /	12 / /
13 / /	14 / /	15 / /	

RES SURVEY LOG SHEET

FORM NO SSL-1

☐ HWP NO. _____

☐ RPOP-5 _____

☐ _____

BUILDING / ELEVATION RB 300-1 GENERAL (DETAILED)

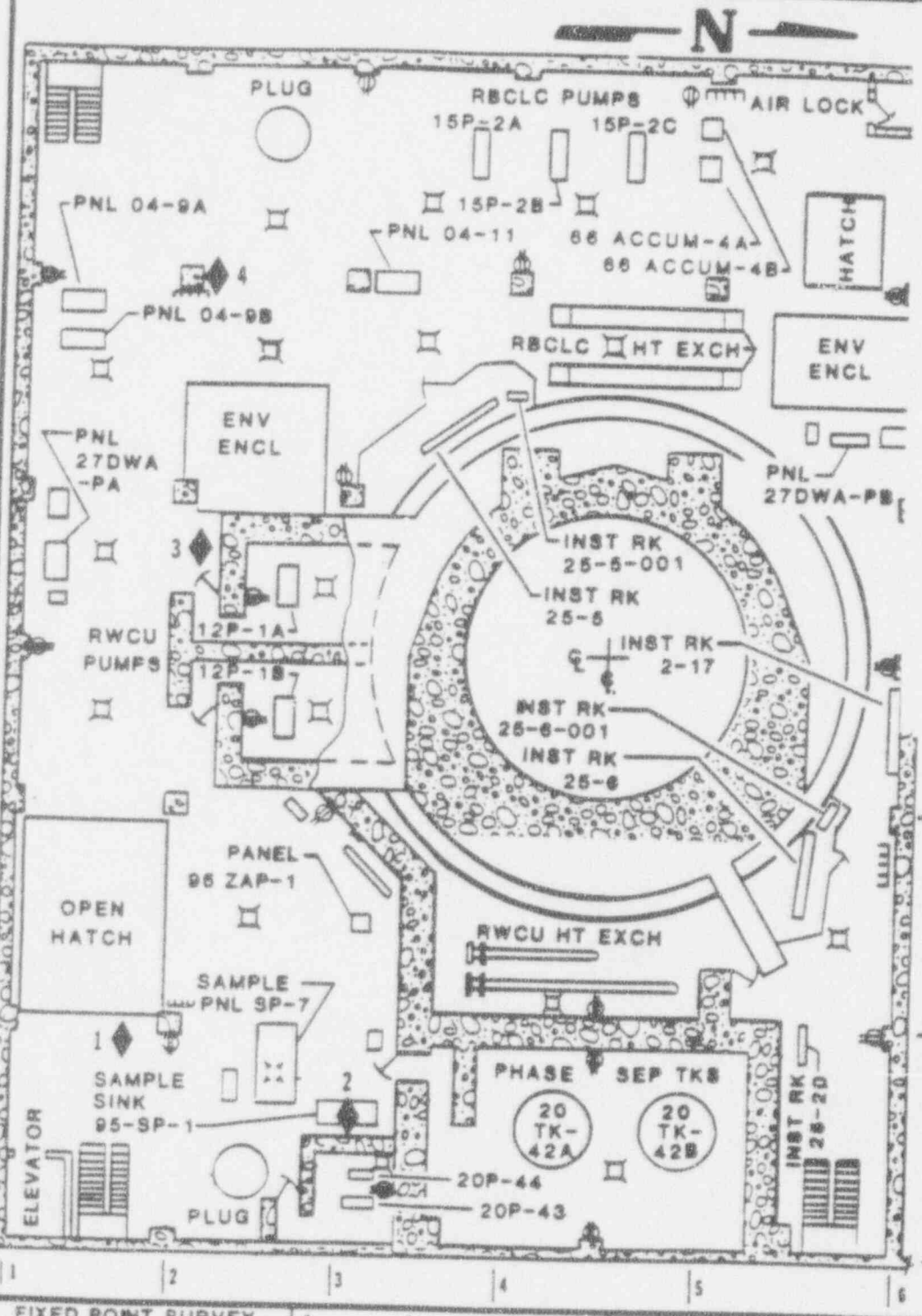
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 19

TIME _____



RB 300-1 General (See chart for Detailed Areas)

Dose mr/hr	Time
As Read	7:00-9:20
3	9:20
135	9:45
820	10:05
1752	10:25
2910	10:45
4244	11:05
5764	11:25
7379	11:45
9939	12:05

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23							
24							
25							

FIXED POINT SURVEY RESULTS							
1	/ /	2	/ /	3	/ /	4	/ /
5	/ /	6	/ /	7	/ /	8	/ /
9	/ /	10	/ /	11	/ /	12	/ /
13	/ /	14	/ /	15	/ /		

REG SURVEY LOG SHEET

FORM NO SSL-1

☐ RWP NO. _____

☐ RPOP-5 _____

☐ _____

BUILDING / ELEVATION RB 300-9 MG SET ROOM

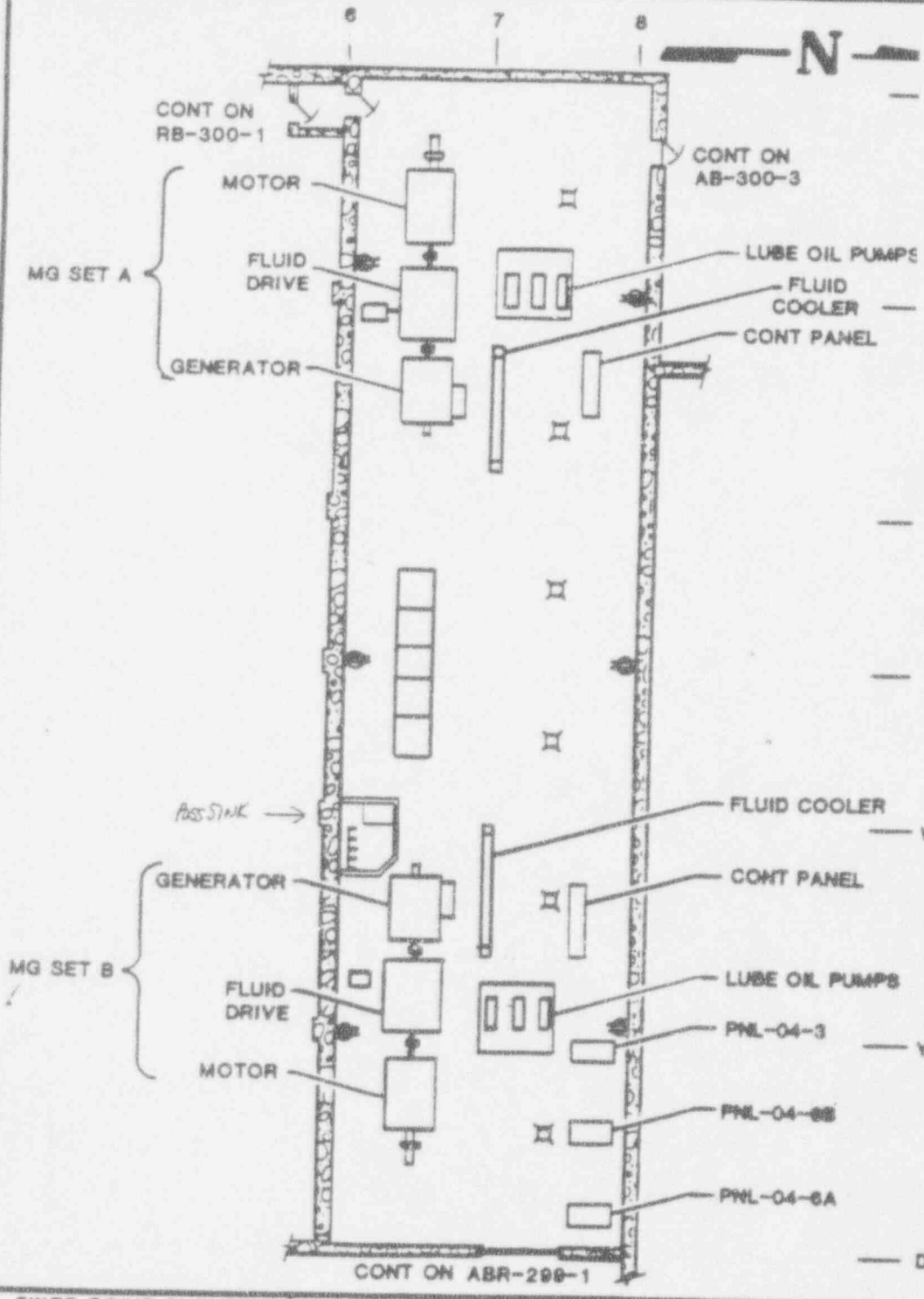
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 1993

TIME _____



RB 300-9 MG Set Room

Dose mr/hr	Time
As read	7:00-9:20
1	9:20
13	9:45
35	10:05
51	10:25
84	10:45
101	11:05
123	11:25
234	11:45
319	12:05

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23			
24			
25			

FIXED POINT SURVEY RESULTS			
1 / /	2 / /	3 / /	
4 / /	5 / /	6 / /	7 / /
8 / /	9 / /	10 / /	11 / /
12 / /			

RES SURVEY LOG SHEET

FORM NO SSL-1

☐ RWP NO. _____
☐ RPOP-5 _____
☐ _____

BUILDING / ELEVATION RB 326-1 GENERAL (DETAILED)

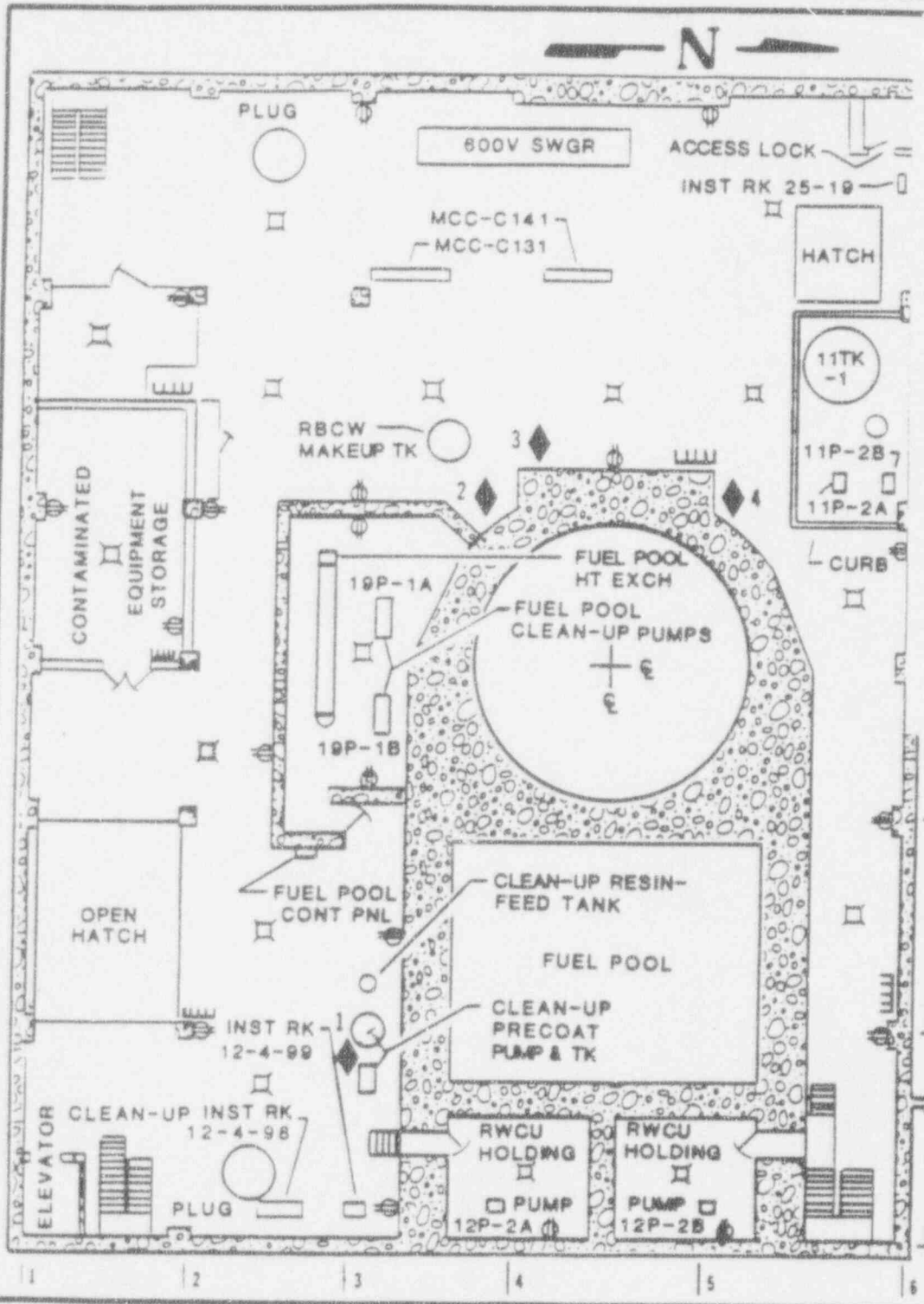
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 1993

TIME _____



RB 326-1 General
See ARM Chart For Detail

	Dose mr/hr	Time
As Read		7:00-9:20
1		9:20
120		9:45
754		10:05
1545		10:25
2565		10:45
3741		11:05
5081		11:25
6505		11:45
8761		12:05

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20		
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23		
24		
25		

FIXED POINT SURVEY RESULTS			
1 / /	2 / /	3 / /	
4 / /	5 / /	6 / /	7 / /
8 / /	9 / /	10 / /	11 / /

FES SURVEY LOG SHEET

FORM NO. SSL-

BUILDING / ELEVATION RB 344-1 GENERAL (DETAILED)

SYSTEM & COMPONENT ID/ ELEVATION(S)

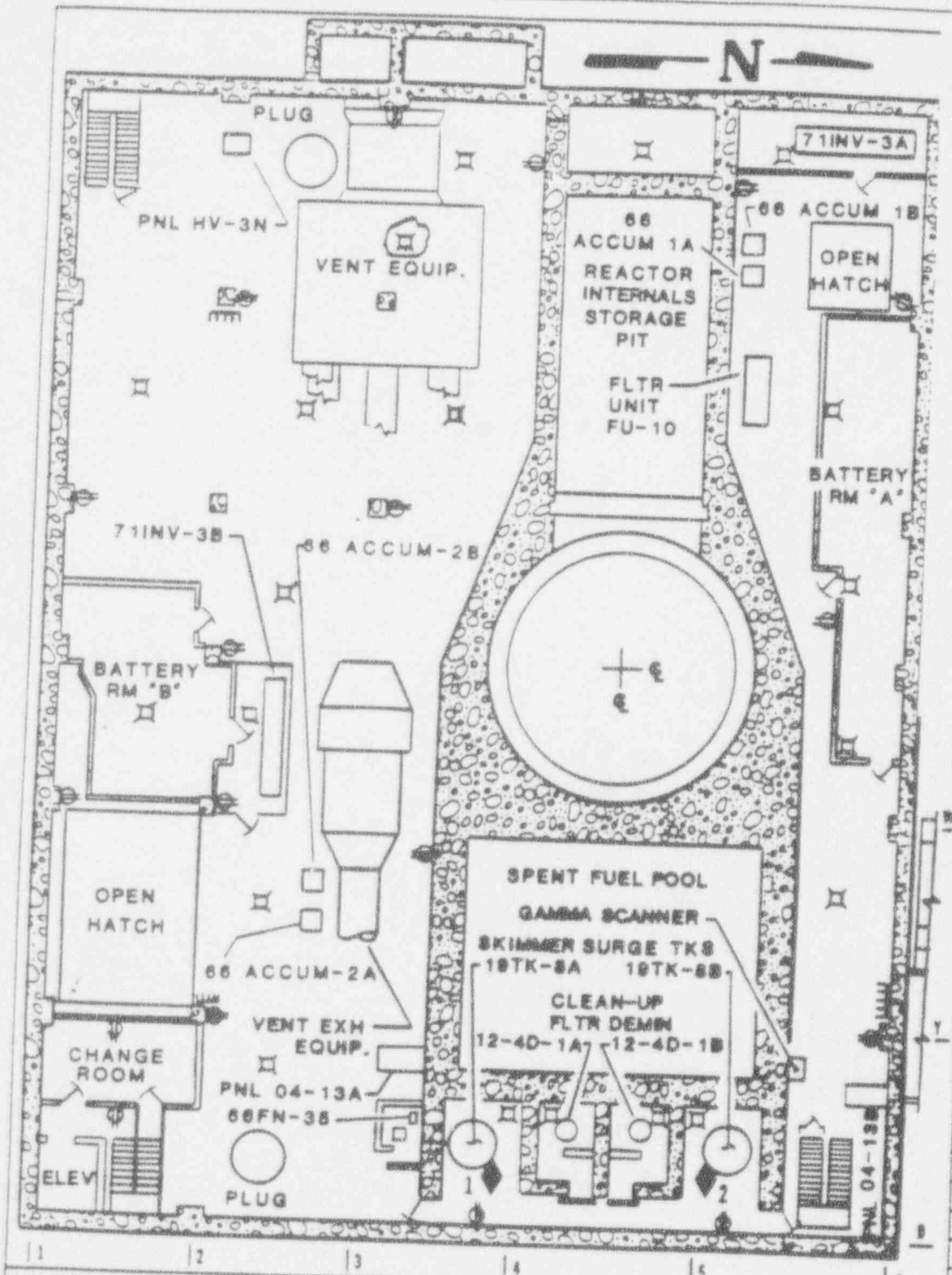
DESCRIPTION / COMMENT

RAP NO. RBD-5

SURVEY NO.

DATE DEC. 1993

TIME



RB 344-1 General

Dose mr/hr	Time
As read	7:00-9:20
As read	9:20
92	9:45
580	10:05
1189	10:25
1974	10:45
2879	11:05
3910	11:25
5005	11:45
6741	12:05

FIXED POINT SURVEY RESULTS

RES SURVEY LOG SHEET

FORM NO SSL-1

☐ RWP NO. _____

☐ RPOP-5 _____

☐ _____

BUILDING / ELEVATION RB 369-1 GENERAL

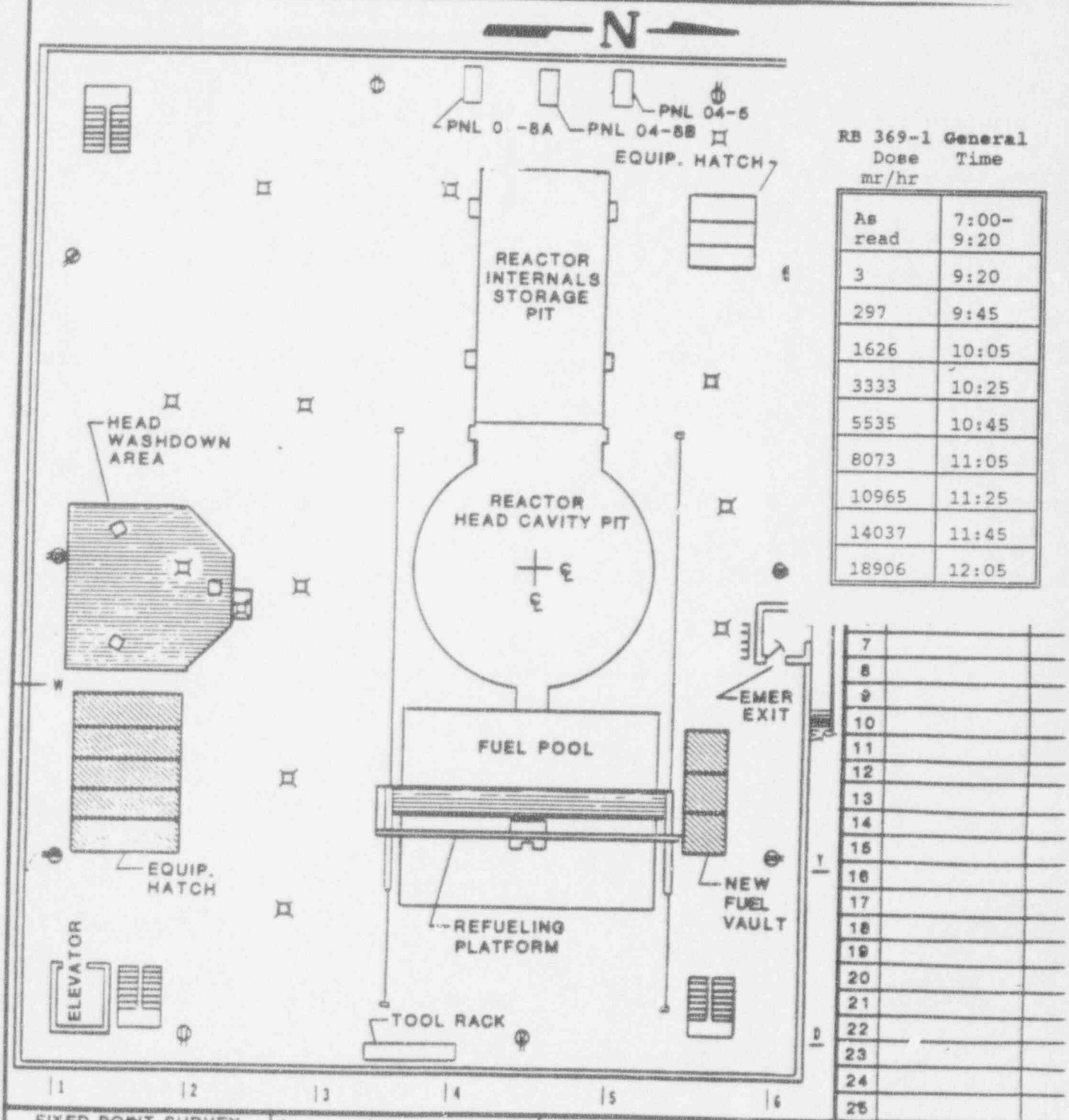
SYSTEM & COMPONENT I D / ELEVATION _____

DESCRIPTION / COMMENT _____

SURVEY NO.

DATE DEC. 199:

TIME _____



RB 369-1 General

Dose mr/hr	Time
As read	7:00-9:20
3	9:20
297	9:45
1626	10:05
3333	10:25
5535	10:45
8073	11:05
10965	11:25
14037	11:45
18906	12:05

FIXED POINT SURVEY RESULTS			
1 / /	2 / /	3 / /	
4 / /	5 / /	6 / /	7 / /
8 / /	9 / /	10 / /	11 / /
12 / /			

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

VII. AREA RADIATION MONITORS

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Area Radiation Monitors

Tabular dose rates are provided for those areas near ARMs and in contact with the drywell. Controllers should increase doses slightly if near many penetrations. No significantly larger individual dose rates should be indicated on contact with or near the drywell that could be misinterpreted as a singular source of the drywell leak. The leak is non-specific from many small spots as opposed to one large crack or opening. This is necessary to prevent premature termination of the environmental release.

All ARMs (except #12 Spent Fuel Area 369 East) will go offscale at 1045 mR/hr shortly after the drywell leak starts. General area dose rates are provided for those areas with offscale ARM values. Offscale ARM values are indicated in **BOLD** type on the chart on the next page.

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*																	
Time	#	07:00-09:30	9:30	9:34	9:35	9:36	9:37	9:38	9:39	9:40	9:41	9:42	9:43	9:44	9:45	9:46	9:47
Release Rate Ci/sec		0.00	0.00	0.02	0.06	0.08	0.11	0.15	0.18	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27
Rx BLDG Gross Reading mr/hr		as read	0	2	4	8	20	32	44	56	69	81	93	105	117	129	141
Rx Bldg 344 south	13	as read	0	1	1	2	5	9	12	15	18	22	25	28	31	35	38
Cleanup Precoat Tank Area 326	15	as read	0	1	1	3	7	11	15	20	24	28	32	37	41	45	49
Fuel Pool Pumps 326	17	as read	0	1	1	3	7	11	15	20	24	28	32	37	41	45	49
Contam Equip Storage Room	18	as read	0	0	1	1	3	6	8	10	12	14	16	18	20	22	24
Cleanup HX Ex Entrance 300	16	as read	0	1	2	3	8	13	18	22	27	32	37	41	46	51	56
Rx Cleanup Pump Area 300	19	as read	0	0	0	1	2	3	4	5	6	7	8	10	11	12	13
Rx H2O Sample Area 300	20	as read	0	1	2	3	8	13	18	22	27	32	37	41	46	51	56
RBCLC Hx 300	21	as read	0	1	2	3	8	13	18	22	27	32	37	41	46	51	56
Rx Bldg Access 272	23	as read	0	1	2	3	8	12	17	22	26	31	36	40	45	50	54
Rx Bldg TIP Machine	24	as read	0	0	0	1	2	3	5	6	7	8	10	11	12	13	15
East CRD HYD Control 272	25	as read	0	1	2	3	8	12	17	22	26	31	36	40	45	50	54
West CRD HYD Control 272	26	as read	0	1	2	3	8	12	17	22	26	31	36	40	45	50	54
Rx CRD Removal Hatch 272	28	as read	0	1	2	3	8	12	17	22	26	31	36	40	45	50	54
Equip Dr Sump 227 East Cresent	27	as read	0	1	1	2	5	9	12	15	18	22	25	28	31	35	38
Fl Dr Sump 227 West Cresent	29	as read	0	1	1	2	5	9	12	15	18	22	25	28	31	35	38
Rx Bldg 369 West refuel Floor Failed downscale	30	as read	0	2	3	6	15	24	33	42	52	61	70	79	88	97	106
New Fuel Vault 369 North	14	as read	0	2	3	6	15	24	33	42	52	61	70	79	88	97	106
Spent Fuel Area 369 East	12	as read	0	2	3	6	15	24	33	42	52	61	70	79	88	97	106

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*																
Time	#	9:48	9:49	9:50	9:51	9:52	9:53	9:54	9:55	9:56	9:57	9:58	9:59	10:00	10:01	10:02	10:03
Release Rate Ci/sec		0.29	0.32	0.34	0.37	0.39	0.41	0.43	0.45	0.47	0.49	0.51	0.53	0.55	0.57	0.60	0.61
Rx BLDG Gross Reading mr/hr		85	137	189	240	292	344	395	447	499	550	831	922	**1013**	**1104**	**1195**	**1286**
Rx Bldg 344 south	13	23	37	51	64	78	92	106	120	134	148	223	247	272	296	320	345
Cleanup Precoat Tank Area 326	15	30	48	66	84	102	120	138	156	174	192	290	321	353	385	417	448
Fuel Pool Pumps 326	17	30	48	66	84	102	120	138	156	174	192	290	321	353	385	417	448
Contam Equip Storage Room	18	15	24	33	42	51	59	68	77	86	95	144	160	175	191	207	223
Cleanup HX Ex Entrance 300	16	34	54	75	95	115	136	156	177	197	217	329	365	401	436	472	508
Rx Cleanup Pump Area 300	19	8	13	17	22	27	31	36	41	46	50	76	85	93	101	110	118
Rx H2O Sample Area 300	20	34	54	75	95	115	136	156	177	197	217	329	365	401	436	472	508
RBCLC Hx 300	21	34	54	75	95	115	136	156	177	197	217	329	365	401	436	472	508
Rx Bldg Access 272	23	33	53	73	93	113	133	153	173	192	212	321	356	391	426	462	497
Rx Bldg TIP Machine	24	9	14	20	25	30	36	41	46	52	57	86	95	105	114	124	133
East CRD HYD Control 272	25	33	53	73	93	113	133	153	173	192	212	321	356	391	426	462	497
West CRD HYD Control 272	26	33	53	73	93	113	133	153	173	192	212	321	356	391	426	462	497
Rx CRD Removal Hatch 272	28	33	53	73	93	113	133	153	173	192	212	321	356	391	426	462	497
Equip Dr Sump 227 East Cresent	27	23	37	51	64	78	92	106	120	134	148	223	247	272	296	320	345
Fl Dr Sump 227 West Cresent	29	23	37	51	64	78	92	106	120	134	148	223	247	272	296	320	345
Rx Bldg 369 West refuel Floor Failed downscale	30	64	103	142	181	219	258	297	336	375	414	625	693	762	830	899	967
New Fuel Vault 369 North	14	64	103	142	181	219	258	297	336	375	414	625	693	762	830	899	967
Spent Fuel Area 369 East	12	64	103	142	181	219	258	297	336	375	414	625	693	762	830	899	967

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*													
Time	#	10:04	10:05	10:06	10:07	10:08	10:09	10:10	10:11	10:12	10:13	10:14	10:15	10:16
Release Rate CI/sec		0.63	0.65	0.67	0.69	0.71	0.73	0.74	0.76	0.78	0.80	0.82	0.84	0.86
Rx BLDG Gross Reading mr/hr		**1377**	**1468**	**1559**	**1651**	**1742**	**1833**	**1924**	**2015**	**2106**	**2163**	**2272**	**2381**	**2490**
Rx Bldg 344 south	13	369	394	418	442	467	491	516	540	565	580	609	638	668
Cleanup Precoat Tank Area 326	15	480	512	543	575	607	639	670	702	734	754	792	830	868
Fuel Pool Pumps 326	17	480	512	543	575	607	639	670	702	734	754	792	830	868
Contam Equip Storage Room	18	238	254	270	286	301	317	333	349	364	374	393	412	431
Cleanup HX Ex Entrance 300	16	544	580	616	652	688	724	760	796	832	855	898	941	984
Rx Cleanup Pump Area 300	19	126	135	143	151	160	168	176	185	193	198	208	218	228
Rx H2O Sample Area 300	20	544	580	616	652	688	724	760	796	832	855	898	941	984
RBCLC Hx 300	21	544	580	616	652	688	724	760	796	832	855	898	941	984
Rx Bldg Access 272	23	532	567	602	637	672	708	743	778	813	835	877	919	961
Rx Bldg TIP Machine	24	143	152	161	171	180	190	199	209	218	224	235	246	258
East CRD HYD Control 272	25	532	567	602	637	672	708	743	778	813	835	877	919	961
West CRD HYD Control 272	26	532	567	602	637	672	708	743	778	813	835	877	919	961
Rx CRD Removal Hatch 272	28	532	567	602	637	672	708	743	778	813	835	877	919	961
Equip Dr Sump 227 East Cresent	27	369	394	418	442	467	491	516	540	565	580	609	638	668
Fl Dr Sump 227 West Cresent	29	369	394	418	442	467	491	516	540	565	580	609	638	668
Rx Bldg 369 West refuel Floor Failed downscale	30	**1036**	**1104**	**1173**	**1241**	**1309**	**1378**	**1446**	**1515**	**1583**	**1626**	**1708**	**1790**	**1872**
New Fuel Vault 369 North	14	**1036**	**1104**	**1173**	**1241**	**1309**	**1378**	**1446**	**1515**	**1583**	**1626**	**1708**	**1790**	**1872**
Spent Fuel Area 369 East	12	1036	1104	1173	1241	1309	1378	1446	1515	1583	1626	1708	1790	1872

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*													
Time	#	10:17	10:18	10:19	10:20	10:21	10:22	10:23	10:24	10:25	10:26	10:27	10:28	10:29
Release Rate Ci/sec		0.87	0.92	0.96	1.00	1.05	1.09	1.13	1.17	1.22	1.26	1.30	1.35	1.39
Rx BLDG Gross Reading mr/hr		**2599**	**2708**	**2817**	**2926**	**3035**	**3144**	**3253**	**3362**	**3471**	**3580**	**3689**	**3743**	**3881**
Rx Bldg 344 south	13	697	726	755	784	814	843	872	901	930	960	989	**1003**	**1040**
Cleanup Precoat Tank Area 326	15	906	943	981	**1019**	**1057**	**1095**	**1133**	**1171**	**1209**	**1247**	**1285**	**1304**	**1352**
Fuel Pool Pumps 326	17	906	943	981	**1019**	**1057**	**1095**	**1133**	**1171**	**1209**	**1247**	**1285**	**1304**	**1352**
Contam Equip Storage Room	18	450	468	487	506	525	544	563	582	600	619	638	648	671
Cleanup HX Ex Entrance 300	16	**1027**	**1070**	**1113**	**1156**	**1199**	**1243**	**1286**	**1329**	**1372**	**1415**	**1458**	**1479**	**1534**
Rx Cleanup Pump Area 300	19	238	248	258	268	278	288	298	308	318	328	338	343	356
Rx H2O Sample Area 300	20	**1027**	**1070**	**1113**	**1156**	**1199**	**1243**	**1286**	**1329**	**1372**	**1415**	**1458**	**1479**	**1534**
RBCLC Hx 300	21	**1027**	**1070**	**1113**	**1156**	**1199**	**1243**	**1286**	**1329**	**1372**	**1415**	**1458**	**1479**	**1534**
Rx Bldg Access 272	23	**1003**	**1045**	**1088**	**1130**	**1172**	**1214**	**1256**	**1298**	**1340**	**1382**	**1424**	**1445**	**1498**
Rx Bldg TIP Machine	24	269	280	292	303	314	325	337	348	359	371	382	387	402
East CRD HYD Control 272	25	**1003**	**1045**	**1088**	**1130**	**1172**	**1214**	**1256**	**1298**	**1340**	**1382**	**1424**	**1445**	**1498**
West CRD HYD Control 272	26	**1003**	**1045**	**1088**	**1130**	**1172**	**1214**	**1256**	**1298**	**1340**	**1382**	**1424**	**1445**	**1498**
Rx CRD Removal Hatch 272	28	**1003**	**1045**	**1088**	**1130**	**1172**	**1214**	**1256**	**1298**	**1340**	**1382**	**1424**	**1445**	**1498**
Equip Dr Sump 227 East Cresent	27	697	726	755	784	814	843	872	901	930	960	989	**1003**	**1040**
Fl Dr Sump 227 West Cresent	29	697	726	755	784	814	843	872	901	930	960	989	**1003**	**1040**
Rx Bldg 369 West refuel Floor Failed downscale	30	**1954**	**2036**	**2118**	**2200**	**2282**	**2364**	**2446**	**2528**	**2609**	**2691**	**2773**	**2814**	**2918**
New Fuel Vault 369 North	14	**1954**	**2036**	**2118**	**2200**	**2282**	**2364**	**2446**	**2528**	**2609**	**2691**	**2773**	**2814**	**2918**
Spent Fuel Area 369 East	12	1954	2036	2118	2200	2282	2364	2446	2528	2609	2691	2773	2814	2918

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*													
Time	#	10:30	10:31	10:32	10:33	10:34	10:35	10:36	10:37	10:38	10:39	10:40	10:41	10:42
Release Rate CI/sec		1.43	1.47	1.52	1.57	1.63	1.68	1.73	1.79	1.84	1.90	1.95	2.01	2.06
Rx BLDG Gross Reading mr/hr		**4019**	**4157**	**4295**	**4433**	**4572**	**4710**	**4848**	**4986**	**5124**	**5262**	**5401**	**5539**	**5677**
Rx Bldg 344 south	13	**1077**	**1115**	**1152**	**1189**	**1226**	**1263**	**1300**	**1337**	**1374**	**1411**	**1448**	**1485**	**1522**
Cleanup Precoat Tank Area 326	15	**1400**	**1448**	**1497**	**1545**	**1593**	**1641**	**1689**	**1737**	**1785**	**1834**	**1882**	**1930**	**1978**
Fuel Pool Pumps 326	17	**1400**	**1448**	**1497**	**1545**	**1593**	**1641**	**1689**	**1737**	**1785**	**1834**	**1882**	**1930**	**1978**
Contam Equip Storage Room	18	695	719	743	767	791	815	839	863	887	910	934	958	982
Cleanup HX Ex Entrance 300	16	**1589**	**1643**	**1698**	**1752**	**1807**	**1862**	**1916**	**1971**	**2025**	**2080**	**2135**	**2189**	**2244**
Rx Cleanup Pump Area 300	19	368	381	394	406	419	432	444	457	470	482	495	508	520
Rx H2O Sample Area 300	20	**1589**	**1643**	**1698**	**1752**	**1807**	**1862**	**1916**	**1971**	**2025**	**2080**	**2135**	**2189**	**2244**
RBCLC Hx 300	21	**1589**	**1643**	**1698**	**1752**	**1807**	**1862**	1916	**1971**	**2025**	**2080**	**2135**	**2189**	**2244**
Rx Bldg Access 272	23	**1552**	**1605**	**1658**	**1712**	**1765**	**1818**	**1872**	**1925**	**1978**	**2032**	**2085**	**2139**	**2192**
Rx Bldg TIP Machine	24	416	430	445	459	473	488	502	516	530	545	559	573	588
East CRD HYD Control 272	25	**1552**	**1605**	**1658**	**1712**	**1765**	**1818**	**1872**	**1925**	**1978**	**2032**	**2085**	**2139**	**2192**
West CRD HYD Control 272	26	**1552**	**1605**	**1658**	**1712**	**1765**	**1818**	**1872**	**1925**	**1978**	**2032**	**2085**	**2139**	**2192**
Rx CRD Removal Hatch 272	28	**1552**	**1605**	**1658**	**1712**	**1765**	**1818**	**1872**	**1925**	**1978**	**2032**	**2085**	**2139**	**2192**
Equip Dr Sump 227 East Cresent	27	**1077**	**1115**	**1152**	**1189**	**1226**	**1263**	**1300**	**1337**	**1374**	**1411**	**1448**	**1485**	**1522**
Fl Dr Sump 227 West Cresent	29	**1077**	**1115**	**1152**	**1189**	**1226**	**1263**	**1300**	**1337**	**1374**	**1411**	**1448**	**1485**	**1522**
Rx Bldg 369 West refuel Floor Failed downscale	30	**3022**	**3126**	**3230**	**3333**	**3437**	**3541**	**3645**	**3749**	**3853**	**3957**	**4061**	**4165**	**4268**
New Fuel Vault 369 North	14	**3022**	**3126**	**3230**	**3333**	**3437**	**3541**	**3645**	**3749**	**3853**	**3957**	**4061**	**4165**	**4268**
Spent Fuel Area 369 East	12	3022	3126	3230	3333	3437	3541	3645	3749	3853	3957	4061	4165	4268

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*													
Time	#	10:43	10:44	10:45	10:46	10:47	10:48	10:49	10:50	10:51	10:52	10:53	10:54	10:55
Release Rate Ci/sec		2.11	2.17	2.22	2.28	2.33	2.38	2.43	2.48	2.52	2.57	2.62	2.67	2.71
Rx BLDG Gross Reading mr/hr		**5777**	**5935**	**6094**	**6252**	**6411**	**6569**	**6728**	**6887**	**7045**	**7204**	**7362**	**7521**	**7679**
Rx Bldg 344 south	13	**1549**	**1591**	**1634**	**1676**	**1719**	**1761**	**1804**	**1846**	**1889**	**1931**	**1974**	**2016**	**2059**
Cleanup Precoat Tank Area 326	15	**2013**	**2068**	**2123**	**2179**	**2234**	**2289**	**2344**	**2400**	**2455**	**2510**	**2565**	**2620**	**2676**
Fuel Pool Pumps 326	17	**2013**	**2068**	**2123**	**2179**	**2234**	**2289**	**2344**	**2400**	**2455**	**2510**	**2565**	**2620**	**2676**
Contam Equip Storage Room	18	999	**1027**	**1054**	**1082**	**1109**	**1137**	**1164**	**1191**	**1219**	**1246**	**1274**	**1301**	**1329**
Cleanup HX Ex Entrance 300	16	**2283**	**2346**	**2409**	**2471**	**2534**	**2597**	**2659**	**2722**	**2785**	**2847**	**2910**	**2973**	**3035**
Rx Cleanup Pump Area 300	19	529	544	559	573	588	602	617	631	646	660	675	689	704
Rx H2O Sample Area 300	20	**2283**	**2346**	**2409**	**2471**	**2534**	**2597**	**2659**	**2722**	**2785**	**2847**	**2910**	**2973**	**3035**
RBCLC Hx 300	21	**2283**	**2346**	**2409**	**2471**	**2534**	**2597**	**2659**	**2722**	**2785**	**2847**	**2910**	**2973**	**3035**
Rx Bldg Access 272	23	**2230**	**2292**	**2353**	**2414**	**2475**	**2536**	**2598**	**2659**	**2720**	**2781**	**2843**	**2904**	**2965**
Rx Bldg TIP Machine	24	598	614	631	647	664	680	696	713	729	746	762	778	795
East CRD HYD Control 272	25	**2230**	**2292**	**2353**	**2414**	**2475**	**2536**	**2598**	**2659**	**2720**	**2781**	**2843**	**2904**	**2965**
West CRD HYD Control 272	26	**2230**	**2292**	**2353**	**2414**	**2475**	**2536**	**2598**	**2659**	**2720**	**2781**	**2843**	**2904**	**2965**
Rx CRD Removal Hatch 272	28	**2230**	**2292**	**2353**	**2414**	**2475**	**2536**	**2598**	**2659**	**2720**	**2781**	**2843**	**2904**	**2965**
Equip Dr Sump 227 East Cresent	27	**1549**	**1591**	**1634**	**1676**	**1719**	**1761**	**1804**	**1846**	**1889**	**1931**	**1974**	**2016**	**2059**
Fl Dr Sump 227 West Cresent	29	**1549**	**1591**	**1634**	**1676**	**1719**	**1761**	**1804**	**1846**	**1889**	**1931**	**1974**	**2016**	**2059**
Rx Bldg 369 West refuel Floor Failed downscale	30	**4343**	**4463**	**4582**	**4701**	**4820**	**4939**	**5059**	**5178**	**5297**	**5416**	**5535**	**5655**	**5774**
New Fuel Vault 369 North	14	**4343**	**4463**	**4582**	**4701**	**4820**	**4939**	**5059**	**5178**	**5297**	**5416**	**5535**	**5655**	**5774**
Spent Fuel Area 369 East	12	4343	4463	4582	4701	4820	4939	5059	5178	5297	5416	5535	5655	5774

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*													
Time	#	10:56	10:57	10:58	10:59	11:00	11:01	11:02	11:03	11:04	11:05	11:06	11:07	11:08
Release Rate Ci/sec		2.76	2.81	2.86	2.91	2.95	3.00	3.05	3.09	3.14	3.18	3.23	3.27	3.32
Rx BLDG Gross Reading mr/hr		**7838**	**7996**	**8122**	**8298**	**8474**	**8650**	**8826**	**9003**	**9179**	**9355**	**9531**	**9707**	**9884**
Rx Bldg 344 south	13	**2101**	**2144**	**2177**	**2225**	**2272**	**2319**	**2366**	**2414**	**2461**	**2508**	**2555**	**2603**	**2650**
Cleanup Precoat Tank Area 326	15	**2731**	**2786**	**2830**	**2891**	**2953**	**3014**	**3075**	**3137**	**3198**	**3260**	**3321**	**3382**	**3444**
Fuel Pool Pumps 326	17	**2731**	**2786**	**2830**	**2891**	**2953**	**3014**	**3075**	**3137**	**3198**	**3260**	**3321**	**3382**	**3444**
Contam Equip Storage Room	18	**1356**	**1383**	**1405**	**1436**	**1466**	**1497**	**1527**	**1558**	**1588**	**1619**	**1649**	**1679**	**1710**
Cleanup HX Ex Entrance 300	16	**3098**	**3161**	**3210**	**3280**	**3349**	**3419**	**3489**	**3558**	**3628**	**3698**	**3767**	**3837**	**3907**
Rx Cleanup Pump Area 300	19	718	733	744	761	777	793	809	825	841	857	874	890	906
Rx H2O Sample Area 300	20	**3098**	**3161**	**3210**	**3280**	**3349**	**3419**	**3489**	**3558**	**3628**	**3698**	**3767**	**3837**	**3907**
RBCLC Hx 300	21	**3098**	**3161**	**3210**	**3280**	**3349**	**3419**	**3489**	**3558**	**3628**	**3698**	**3767**	**3837**	**3907**
Rx Bldg Access 272	23	**3026**	**3087**	**3136**	**3204**	**3272**	**3340**	**3408**	**3476**	**3544**	**3612**	**3680**	**3748**	**3816**
Rx Bldg TIP Machine	24	811	828	841	859	877	895	914	932	950	968	987	**1005**	**1023**
East CRD HYD Control 272	25	**3026**	**3087**	**3136**	**3204**	**3272**	**3340**	**3408**	**3476**	**3544**	**3612**	**3680**	**3748**	**3816**
West CRD HYD Control 272	26	**3026**	**3087**	**3136**	**3204**	**3272**	**3340**	**3408**	**3476**	**3544**	**3612**	**3680**	**3748**	**3816**
Rx CRD Removal Hatch 272	28	**3026**	**3087**	**3136**	**3204**	**3272**	**3340**	**3408**	**3476**	**3544**	**3612**	**3680**	**3748**	**3816**
Equip Dr Sump 227 East Cresent	27	**2101**	**2144**	**2177**	**2225**	**2272**	**2319**	**2366**	**2414**	**2461**	**2508**	**2555**	**2603**	**2650**
Fl Dr Sump 227 West Cresent	29	**2101**	**2144**	**2177**	**2225**	**2272**	**2319**	**2366**	**2414**	**2461**	**2508**	**2555**	**2603**	**2650**
Rx Bldg 369 West refuel Floor Failed downscale	30	**5893**	**6012**	**6106**	**6239**	**6371**	**6504**	**6636**	**6769**	**6901**	**7034**	**7166**	**7299**	**7431**
New Fuel Vault 369 North	14	**5893**	**6012**	**6106**	**6239**	**6371**	**6504**	**6636**	**6769**	**6901**	**7034**	**7166**	**7299**	**7431**
Spent Fuel Area 369 East	12	5893	6012	6106	6239	6371	6504	6636	6769	6901	7034	7166	7299	7431

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*											
Time	#	11:09	11:10	11:11	11:12	11:13	11:14	11:15	11:16	11:17	11:18	11:19
Release Rate CI/sec		3.36	3.41	3.45	3.50	3.55	3.59	3.64	3.68	3.73	3.78	3.83
Rx BLDG Gross Reading mr/hr		10060	10236	10412	10589	10737	10928	11119	11310	11500	11691	11882
Rx Bldg 344 south	13	2697	2744	2792	2839	2879	2930	2981	3032	3083	3134	3185
Cleanup Precoat Tank Area 326	15	3505	3567	3628	3689	3741	3808	3874	3941	4007	4074	4140
Fuel Pool Pumps 326	17	3505	3567	3628	3689	3741	3808	3874	3941	4007	4074	4140
Contam Equip Storage Room	18	1740	1771	1801	1832	1858	1891	1924	1957	1990	2023	2056
Cleanup HX Ex Entrance 300	16	3976	4046	4116	4185	4244	4319	4395	4470	4546	4621	4696
Rx Cleanup Pump Area 300	19	922	938	954	971	984	1002	1019	1037	1054	1072	1089
Rx H2O Sample Area 300	20	3976	4046	4116	4185	4244	4319	4395	4470	4546	4621	4696
RBCLC Hx 300	21	3976	4046	4116	4185	4244	4319	4395	4470	4546	4621	4696
Rx Bldg Access 272	23	3884	3952	4020	4088	4146	4219	4293	4367	4440	4514	4588
Rx Bldg TIP Machine	24	1041	1060	1078	1096	1111	1131	1151	1171	1190	1210	1230
East CRD HYD Control 272	25	3884	3952	4020	4088	4146	4219	4293	4367	4440	4514	4588
West CRD HYD Control 272	26	3884	3952	4020	4088	4146	4219	4293	4367	4440	4514	4588
Rx CRD Removal Hatch 272	28	3884	3952	4020	4088	4146	4219	4293	4367	4440	4514	4588
Equip Dr Sump 227 East Cresent	27	2697	2744	2792	2839	2879	2930	2981	3032	3083	3134	3185
Fl Dr Sump 227 West Cresent	29	2697	2744	2792	2839	2879	2930	2981	3032	3083	3134	3185
Rx Bldg 369 West refuel Floor Failed downscale	30	7564	7696	7829	7961	8073	8217	8360	8503	8647	8790	8934
New Fuel Vault 369 North	14	7564	7696	7829	7961	8073	8217	8360	8503	8647	8790	8934
Spent Fuel Area 369 East	12	7564	7696	7829	7961	8073	8217	8360	8503	8647	8790	8934

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

ARM and General Area
Dose Rate Summary

RX Building Dose Rates (ARMs)	*ARM*											
Time	#	11:20	11:21	11:22	11:23	11:24	11:25	11:26	11:27	11:28	11:29	11:30
Release Rate CI/sec		3.89	3.94	4.00	4.05	4.10	4.16	4.21	4.27	4.32	4.38	4.43
Rx BLDG Gross Reading mr/hr		12073	12263	12454	12645	12836	13026	13217	13408	13580	13780	13981
Rx Bldg 344 south	13	3237	3288	3339	3390	3441	3492	3543	3595	3641	3694	3748
Cleanup Precoat Tank Area 326	15	4206	4273	4339	4406	4472	4539	4605	4672	4732	4802	4871
Fuel Pool Pumps 326	17	4206	4273	4339	4406	4472	4539	4605	4672	4732	4802	4871
Contam Equip Storage Room	18	2089	2122	2155	2188	2221	2254	2287	2320	2349	2384	2419
Cleanup HX Ex Entrance 300	16	4772	4847	4923	4998	5073	5149	5224	5300	5367	5447	5526
Rx Cleanup Pump Area 300	19	1107	1124	1142	1159	1176	1194	1211	1229	1245	1263	1281
Rx H2O Sample Area 300	20	4772	4847	4923	4998	5073	5149	5224	5300	5367	5447	5526
RBCLC Hx 300	21	4772	4847	4923	4998	5073	5149	5224	5300	5367	5447	5526
Rx Bldg Access 272	23	4661	4735	4809	4882	4956	5029	5103	5177	5243	5321	5398
Rx Bldg TIP Machine	24	1250	1269	1289	1309	1329	1348	1368	1388	1406	1426	1447
East CRD HYD Control 272	25	4661	4735	4809	4882	4956	5029	5103	5177	5243	5321	5398
West CRD HYD Control 272	26	4661	4735	4809	4882	4956	5029	5103	5177	5243	5321	5398
Rx CRD Removal Hatch 272	28	4661	4735	4809	4882	4956	5029	5103	5177	5243	5321	5398
Equip Dr Sump 227 East Cresent	27	3237	3288	3339	3390	3441	3492	3543	3595	3641	3694	3748
Fl Dr Sump 227 West Cresent	29	3237	3288	3339	3390	3441	3492	3543	3595	3641	3694	3748
Rx Bldg 369 West refuel Floor Failed downscale	30	9077	9221	9364	9507	9651	9794	9938	10081	10210	10361	10512
New Fuel Vault 369 North	14	9077	9221	9364	9507	9651	9794	9938	10081	10210	10361	10512
Spent Fuel Area 369 East	12	9077	9221	9364	9507	9651	9794	9938	10081	10210	10361	10512

Note: Values Greater than 1000 will indicate Offscale on ARMs (Except #12) and print **BOLD** in this table

All Values in **mR/hr**

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

VIII. IN-PLANT AIR SAMPLE DATA

(Representative air sample data is provided for approximately 1045)

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

****

12/14/93 EXERCISE DATA Page 1

****

GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

****

All air samples taken everywhere **EXCEPT the REACTOR BUILDING** are normal. All air samples taken in or around the Reactor Building after 10:00 will read as follows:

12/14/93 10:00 EXERCISE DATA Page 1

GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

Air Sample Test Spectrum Reported by: CHEMISTRY
File ID: EXERCISE December 14, 1993

Library File: . . . . . .PLALIB.LIB (IN PLANT Air Sample Library)
MPC/LLD File: . . . . . .PLALLD.MPC (IN PLANT Air Sample MPC/LLD's)

Detector #: 4
Efficiency File: . . . ASPCS1D04.EFF (Glass Fiber Filt./F&J Charcoal Cart.)

Eff.=1/(3.54E-02*En^-2.34E+00 + 1.57E+02*En^ 1.02E+00) 05/17/92 08:37
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/cc)		Less-Than Level Conc	Peaks Found	LLD REQUIRED	LLD MET?
ZN-65		1115.16	< 7.16E-10	MDA	6.25E-11	0 of 1	0.0E+00	Yes
CE-144		133.54	< 2.46E-10	MDA	9.26E-11	0 of 1	5.0E-11	NO
TC-99M		140.51	< 3.02E-11	MDA	1.18E-11	0 of 1	0.0E+00	Yes
CE-141		145.44	< 4.21E-11	MDA	1.66E-11	0 of 1	5.0E-11	Yes
CR-51		320.08	< 4.40E-10	MDA	1.59E-10	0 of 1	5.0E-11	NO
BR-84		880.00	< 4.79E-10	MDA	1.23E-11	0 of 4	6.0E-11	Yes
I-130		418.00	< 1.24E-11	MDA	2.20E-10	0 of 5	5.1E-10	NO
I-131		364.48	9.01E-5	+-6.23E-06	--	4 of 4	-------	---
HF-181		482.30	< 8.45E-11	MDA	3.00E-11	0 of 2	0.0E+00	Yes
I-132		772.60	2.12E-7	+-1.23E-08	--	5 of 6	0.0E+00	Yes
I-133		529.87	3.08E-8	+-1.65E-9	--	4 of 4	0.0E+00	Yes
I-134		884.12	6.05E-7	+-2.75E-8	--	11 of 11	5.2E-11	yes
BA-140		537.32	< 1.76E-10	MDA	5.55E-11	0 of 5	0.0E+00	Yes
SB-124		602.71	< 6.35E-11	MDA	5.91E-11	0 of 5	0.0E+00	Yes
CS-137		661.65	< 6.02E-11	MDA	5.46E-11	0 of 1	1.0E-11	NO
MO-99		739.58	< 5.29E-10	MDA	1.25E-10	0 of 4	5.0E-11	NO
ZR-95		756.72	< 1.24E-10	MDA	1.01E-10	0 of 1	0.0E+00	Yes
NB-95		765.79	< 2.32E-11	MDA	7.43E-11	0 of 1	0.0E+00	Yes
CS-134		795.85	< 1.08E-10	MDA	2.82E-11	0 of 7	1.0E-11	NO
CO-58		810.76	< 1.10E-10	MDA	3.70E-11	0 of 3	1.0E-11	NO
MN-54		834.83	< 1.49E-10	MDA	5.35E-11	0 of 1	1.0E-11	NO
FE-59		1099.22	< 5.93E-11	MDA	5.79E-11	0 of 4	1.0E-11	NO
I-135		1260.41	9.12E-8	+-3.01E-9	--	6 of 6	1.0E-11	NO
CO-60		1332.49	< 1.46E-10	MDA	1.58E-10	0 of 2	1.0E-11	NO
LA-140		1596.49	< 5.23E-11	MDA	5.10E-11	0 of 9	0.0E+00	Yes

TOTAL MEAS. ACT. : 8.46E-04 +- 2.33E-06 uCi/cc

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

12/14/93 10:00 EXERCISE DATA **Page 2**

****

M P C C H E C K
MPC FILE: PLALLD.MPC

****

Nuclide	uCi/cc	MPC	% MPC
I-131	9.01E-09	1.00E-10	9.01E+03
TOTAL:	9.48E-7		4.30E+04

MPCS for AIR SAMPLES
AIR SAMP #:EXERCISE DATA
LOCATION:Reactor Building
RWP #: 93-XXXX

Sampling On: 12/14/93
Sampling Off: 12/14/93

Protection Factors: Particulates: 1.000 Iodines: 1.000
Respirator: None

% MPC IODINES	% MPC OTHERS	% MPC TOTAL	Eff. % MPC IODINES	Eff. % MPC OTHERS	Eff. % MPC TOTAL
4.30E+04	.000	4.30E+04	4.30E+04	.000	4.30E+04

% MPC TOTAL: 4.30E+04

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

12/14/93 1030-END EXERCISE DATA Page 1

GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

Mock In-Plant Gas Analysis Reported by: CHEMISTRY
File ID: EXERCISE 1993

Library File: . . . . . .GASLIB.LIB (Noble Gases Library)
MPC/LLD File: . . . . . .IPGLLD.MPC (In Plant Noble Gases)

Detector #: 3
Efficiency File: . . . 4LGMS0D03.EFF (4 L Gas Marinelli (Foam Filled))

Eff.=1/(3.17E-02*En^-2.97E+00 + 3.89E+02*En^ 9.69E-01) 03/29/92 14:14
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/cc)	Less-Than Level Conc	Peaks Found	LLD REQUIRED	LLD MET?
XE-133		80.97	5.51E-02 +- 3.25E-06	----	1 of 1	-------	---
XE-137		455.00	< 2.25E-06 MDA	2.65E-10	0 of 4	0.0E+00	Yes
XE-131M		165.75	3.75E-03 MDA	3.00E-11	0 of 2	0.0E+00	Yes
KR-85		514.10	3.84E-02 +- 6.05E-07	----	1 of 1	-------	---
KR-88		196.32	< 6.32E-05 MDA	3.25E-11	0 of 1	3.2E-11	No
XE-133M		233.21	1.07E-05 +- 7.22E-06	----	1 of 1	-------	---
XE-135		249.79	< 1.87E-04 MDA	-----	1 of 1	-------	---
XE-138		258.31	< 5.31E-04 MDA	-----	1 of 5	-------	---
KR-87		402.58	< 2.70E-04 MDA	-----	1 of 4	-------	---
XE-135M		526.56	< 1.94E-04 MDA	-----	1 of 1	-------	---
KR-85M		149.50	< 3.57E-04 +- 5.03E-07	-----	1 of 1	-------	---
		305.00	I.D.Only				

TOTAL MEAS. ACT. : 9.73E-02 +- 1.09E-05 uCi/cc

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

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12/14/93 1030 EXERCISE DATA Page 2

****

M P C C H E C K
MPC FILE: IPGLLD.MPC

****

Nuclide	uCi/cc	MPC	% MPC
XE-133	5.51E-02	1.E-05	5.51E+05
XE-131M	3.75E-03	2.E-05	1.88E+04
KR-85	3.84E-02	1.E-05	3.84E+05
XE-133M	1.07E-05	1.E-05	1.07E+04
TOTAL:	9.73E-02		9.65E+05

MPCS for AIR SAMPLES
AIR SAMP #:EXERCISE DATA
LOCATION:Reactor Building
RWP #: 93-XXXX

Sampling On: 12/14/93
Sampling Off: 12/14/93

Protection Factors: Particulates: 1.000 Iodines: 1.000
Respirator: None

% MPC IODINES	% MPC OTHERS	% MPC TOTAL	Eff. % MPC IODINES	Eff. % MPC OTHERS	Eff. % MPC TOTAL
.000	964500.000	964500.000	.000	964500.000	964500.000

% MPC TOTAL: 964500.000

12/14/93 1030 EXERCISE DATA Page 1

GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

Air Sample Test Spectrum Reported by: CHEMISTRY
File ID: December 14, 1993

Library File: . . . . . .PLALIB.LIB (IN PLANT Air Sample Library)
MPC/LLD File: . . . . . .PLALLD.MPC (IN PLANT Air Sample MPC/LLD's)

Detector #: 4
Efficiency File: . . . ASPCS1D04.EFF (Glass Fiber Filt./F&J Charcoal Cart.)

Eff.=1/(3.54E-02*En^-2.34E+00 + 1.57E+02*En^ 1.02E+00) 05/17/92 08:37
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/cc)		Less-Than Level Conc	Peaks Found	LLD REQUIRED	LLD MET?
ZN-65		1115.16	< 7.16E-10	MDA	6.25E-11	0 of 1	0.0E+00	Yes
CE-144		133.54	< 2.46E-10	MDA	9.26E-11	0 of 1	5.0E-11	NO
TC-99M		140.51	< 3.02E-11	MDA	1.18E-11	0 of 1	0.0E+00	Yes
CE-141		145.44	< 4.21E-11	MDA	1.66E-11	0 of 1	5.0E-11	Yes
CR-51		320.08	< 4.40E-10	MDA	1.59E-10	0 of 1	5.0E-11	NO
BR-84		880.00	< 4.79E-10	MDA	1.23E-11	0 of 4	6.0E-11	Yes
I-130		418.00	< 1.24E-11	MDA	2.20E-10	0 of 5	5.1E-10	NO
I-131		364.48	8.33E-04	+-6.05E-06	-----	4 of 4	-------	---
HF-181		482.30	< 8.45E-11	MDA	3.00E-11	0 of 2	0.0E+00	Yes
I-132		772.60	< 4.28E-10	MDA	3.26E-10	0 of 6	0.0E+00	Yes
I-133		529.87	< 6.54E-10	MDA	6.23E-11	0 of 4	0.0E+00	Yes
I-134		884.12	< 5.96E-11	MDA	2.12E-11	0 of 11	5.2E-11	NO
BA-140		537.32	< 1.76E-10	MDA	5.55E-11	0 of 5	0.0E+00	Yes
SB-124		602.71	< 6.35E-11	MDA	5.91E-11	0 of 5	0.0E+00	Yes
CS-137		661.65	< 6.02E-11	MDA	5.46E-11	0 of 1	1.0E-11	NO
MO-99		739.58	< 5.29E-10	MDA	1.25E-10	0 of 4	5.0E-11	NO
ZR-95		756.72	< 1.24E-10	MDA	1.01E-10	0 of 1	0.0E+00	Yes
NB-95		765.79	< 2.32E-11	MDA	7.43E-11	0 of 1	0.0E+00	Yes
CS-134		795.85	< 1.08E-10	MDA	2.82E-11	0 of 7	1.0E-11	NO
CO-58		810.76	< 1.10E-10	MDA	3.70E-11	0 of 3	1.0E-11	NO
MN-54		834.83	< 1.49E-10	MDA	5.35E-11	0 of 1	1.0E-11	NO
FE-59		1099.22	< 5.93E-11	MDA	5.79E-11	0 of 4	1.0E-11	NO
I-135		1260.41	< 6.07E-06	MDA	6.23E-11	0 of 6	1.0E-11	NO
CO-60		1332.49	< 1.46E-10	MDA	1.58E-10	0 of 2	1.0E-11	NO
LA-140		1596.49	< 5.23E-11	MDA	5.10E-11	0 of 9	0.0E+00	Yes

TOTAL MEAS. ACT. : 8.33E-04 +- 6.05E-06 uCi/cc

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

12/14/93 1030 - End EXERCISE DATA **Page 2**

****

M P C C H E C K
MPC FILE: PLALLD.MPC

****

Nuclide	uCi/cc	MPC	% MPC
I-131	8.33E-04	9.E-09	9.26E+06
TOTAL:	8.33E-04		9.26E+06

MPCS for AIR SAMPLES
AIR SAMP #:EXERCISE DATA
LOCATION:Reactor Building
RWP #: 93-XXXX

Sampling On: 12/14/93
Sampling Off: 12/14/93

Protection Factors: Particulates: 1.000 Iodines: 1.000
Respirator: None

% MPC IODINES	% MPC OTHERS	% MPC TOTAL	Eff. % MPC IODINES	Eff. % MPC OTHERS	Eff. % MPC TOTAL
9255555.556	.000	9255555.556	9255555.556	.000	9255555.556

% MPC TOTAL: 9255555.556

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

12/14/93 1030-END EXERCISE DATA Page 1

GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

Mock In-Plant Gas Analysis Reported by: CHEMISTRY
File ID: EXERCISE December 1993

Library File: . . . . . .GASLIB.LIB (Noble Gases Library)
MPC/LLD File: . . . . . .IPGLLD.MPC (In Plant Noble Gases)

Detector #: 3
Efficiency File: . . . 4LGMS0D03.EFF (4 L Gas Marinelli (Foam Filled))

Eff.=1/(3.17E-02*En^-2.97E+00 + 3.89E+02*En^ 9.69E-01) 03/29/92 14:14
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/cc)	Less-Than Level Conc	Peaks Found	LLD REQUIRED	LLD MET?
XE-133		80.97	4.58E-02 +- 3.25E-07	----	1 of 1	-------	---
XE-137		455.00	< 2.25E-06 MDA	2.65E-10	0 of 4	0.0E+00	Yes
XE-131M		165.75	3.75E-03 MDA	3.00E-11	0 of 2	0.0E+00	Yes
KR-85		514.10	3.79E-02 +- 5.25E-06	----	1 of 1	-------	---
KR-88		196.32	< 6.32E-05 MDA	3.25E-11	0 of 1	3.2E-11	No
XE-133M		233.21	1.05E-05 +- 7.22E-06	----	1 of 1	-------	---
XE-135		249.79	< 1.87E-04 MDA	-----	1 of 1	-------	---
XE-138		258.31	< 5.31E-04 MDA	-----	1 of 5	-------	---
KR-87		402.58	< 2.70E-04 MDA	-----	1 of 4	-------	---
XE-135M		526.56	< 1.94E-04 MDA	-----	1 of 1	-------	---
KR-85M		149.50	< 3.57E-04 +- 5.03E-07	-----	1 of 1	-------	---
		305.00	I.D.Only				

TOTAL MEAS. ACT. : 8.74E-02 +- 5.40E-06 uCi/cc

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

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12/14/93 1100-END EXERCISE DATA **Page 2**

****

M P C C H E C K
MPC FILE: IPGLLD.MPC

****

Nuclide	uCi/cc	MPC	% MPC
XE-133	4.58E-02	1.E-05	4.58E+05
XE-131M	3.69E-03	2.E-05	1.84E+04
KR-85	3.79E-02	1.E-05	3.79E+05
XE-133M	1.05E-05	1.E-05	1.05E+02
TOTAL:	8.74E-02		8.56E+05

==========

MPCS for AIR SAMPLES
AIR SAMP #:EXERCISE DATA
LOCATION:Reactor Building
RWP #: 93-XXXX

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Sampling On: 12/14/93
Sampling Off: 12/14/93

Protection Factors: Particulates: 1.000 Iodines: 1.000
Respirator: None

% MPC IODINES	% MPC OTHERS	% MPC TOTAL	Eff. % MPC IODINES	Eff. % MPC OTHERS	Eff. % MPC TOTAL
.000	855505.000	855505.000	.000	855505.000	855505.000

% MPC TOTAL: 855505.000

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James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

IX. POST ACCIDENT SAMPLE SYSTEM (PASS) DATA

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Post Accident Sample System (PASS) Data

Due to the compressed time frame of the exercise, the PASS sample will be prompted at approximately 0930.

PASS data indicates approximately 20% of fuel clad damage.

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

Sample Dose Rates

A. Large Volume Sample

1.	Sampling	580 mR/hr
2.	Handling	385 mR/hr
3.	Transport	2 mR/hr

B. Small Volume Sample

1.	Sampling	480 mR/hr
2.	Handling	320 mR/hr (background)
		285 mR/hr (sample)
3.	Transport	2 mR/hr

C. Particulate and Iodine Sample - One Second Sample

1.	Sampling	480 mR/hr (background)
		550 mR/hr (sample)
2.	Transport	2 mR/hr (background)
		2 mR/hr (sample)

D. Gas Sample

1.	Sampling	460 mR/hr (background)
		700 mR/hr (sample)
2.	Handling	820 mR/hr (background)
		765 mR/hr (sample)
3.	Transport	4 mR/hr (background)
		4 mR/hr (sample)

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

I. Exposure Rates During Analysis

A. Chloride

3 mR/hr (background)
7 mR/hr [1 cm] (sample)
26 mR/hr [10 cm] (sample)
80 mR/hr [60 cm] (sample)

B. Boron

3 mR/hr (background)
60 mR/hr [1 cm] (sample)
5 mR/hr [10 cm] (sample)
10 mR/hr [60 cm] (sample)

C. Hydrogen/Oxygen Analysis

3 mR/hr (background)
60 mR/hr [1 cm] (sample)
5 mR/hr [10 cm] (sample)
1 mR/hr [60 cm] (sample)

D. Isotopic Analysis/Liquid

3 mR/hr (background)
1 mR/hr [1 cm] (sample)
1 mR/hr [10 cm] (sample)
1 mR/hr [60 cm] (sample)

E. Small Volume Liquid Dilution

3 mR/hr (background)
70 mR/hr [1 cm] (sample)
7 mR/hr [10 cm] (sample)
2 mR/hr [60 cm] (sample)

F. Gas Dilution

3 mR/hr (background)
18 mR/hr [1 cm] (sample)
2 mR/hr [10 cm] (sample)
0 mR/hr [60 cm] (sample)

G. pH Analysis

3 mR/hr (background)
7 mR/hr [1 cm] (sample)
1 mR/hr [10 cm] (sample)
0 mR/hr [60 cm] (sample)

H. Isotopic Analysis - Gas Final Dilution Factor

5 mR/hr (background)
8 mR/hr [1 cm] (sample)
1 mR/hr [10 cm] (sample)
1 mR/hr [60 cm] (sample)

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

I. Isotopic Analysis - Particulate

3 mR/hr (background)
14 mR/hr [1 cm] (sample)
1 mR/hr [10 cm] (sample)
1 mR/hr [60 cm] (sample)

II. Other Exposure Rates

A. Background Exposure in Chemistry Lab
0-1 mR/hr

B. Background Exposure in Count Room
0 mR/hr

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

December 93 EXERCISE PASS REACTOR COOLANT DATA
TAKEN BETWEEN 0930-End

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GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

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Reactor Water Example Spectrum Reported by: CHEMISTRY
File ID: EXERCISE December 1993

Library File: . . . . . .RXWLIB.LIB (Reactor Water Library)

Detector #: 1
Efficiency File: . . . . . 100BS1D01.EFF (100 ml Poly Bottle)

Eff.=1/(1.70E-01*En^-2.26E+00 + 5.47E+02*En^ 9.32E-01) 03/30/92 02:01
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/ml)		Less-Than Level Conc	Peaks Found
TH-XRAY		93.10	BKG.		-------	1 of 1
TC-99M		140.39	< 1.11E-06	MDA	1.73E-04	0 of 1
RA-223		154.99	< 6.97E-05	MDA	2.30E-05	1 of 1
XE-135		249.77	1.10E+02 +- 3.20E-04		-------	1 of 2
XE-135M		526.56	7.20E+01 +- 3.56E-05		-------	1 of 1
ANNIH		511.01	BKG.		-------	1 of 1
I-132		772.60	6.41E-01 +- 3.52E-06		-------	6 of 6
		522.85	I.D.Only			
		630.15	I.D.Only			
		667.81	I.D.Only			
		954.65	I.D.Only			
		1398.12	I.D.Only			
I-133		529.93	5.12E-01 +- 5.23E-05		-------	1 of 4
I-134		884.12	8.97E-01 +- 1.06E-05		-------	7 of 11
		541.04	I.D.Only			
		595.40	I.D.Only			
		621.51	I.D.Only			
		847.14	I.D.Only			
		857.65	I.D.Only			
		1072.91	I.D.Only			
AS-76		559.24	< 9.10E-05	MDA	6.34E-05	0 of 1
RU-105		677.45	I.D.Only		-------	1 of 4
CO-58		811.91	< 6.54E-10	MDA	5.20E-04	0 of 2
MN-54		835.84	< 3.34E-07	MDA	6.50E-06	0 of 1
XE-131M		163.93	< 6.31E-07	MDA	7.25E-05	0 of 1
XE-133		80.97	5.50E+02 +- 2.30E-06		-------	1 of 1
KR-85M		151.18	5.82E+03 +- 3.22E-06		-------	1 of 2
		304.87				
KR-87		402.58	1.62E+03 +- 2.26E-05		-------	1 of 3
		673.87				
KR-88		196.32	1.40E+03 +- 6.36E-05		-------	1 of 1

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

December 1993 EXERCISE PASS REACTOR COOLANT DATA
TAKEN BETWEEN 0930-End

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/ml)	Less-Than Level Conc	Peaks Found
XE-133M		233.21	2.20E+01 +- 2.10E-06	-------	1 of 2
ZN-65		1115.96	< 1.38E-10 MDA	3.25E-06	0 of 1
CO-60		1332.79	< 3.05E-10 MDA	6.52E-07	0 of 2
		1172.76	I.D.Only		
XE-138		258.31	2.40E+00 +- 6.02E-06	-------	1 of 1
I-135		1260.49	7.25E-01 +- 4.09E-05	-------	1 of 12
NA-24		1368.85	< 1.68E-06 MDA	7.85E-07	0 of 1
CE-144		133.54	< 3.86E-04 MDA	1.73E-04	0 of 2
CE-141		145.44	< 2.09E-04 MDA	7.68E-05	0 of 1
CR-51		320.08	< 2.54E-04 MDA	2.03E-04	0 of 1
I-131		364.48	3.88E+00 +- 5.12E-06	-------	1 of 1
CS-137		661.65	3.02E+02 +- 6.02E-06	-------	1 of 1
MO-99		739.58	< 1.86E-04 MDA	1.99E-04	0 of 3
CS-134		795.85	< 2.81E-05 MDA	1.64E-05	0 of 6
FE-59		1099.22	< 6.44E-05 MDA	2.86E-05	0 of 2
KR-85		514.10	3.30E+02 +- 5.23E-05	-------	1 of 1

TOTAL MEAS. ACT. : 1.02E+04 +- 4.27E-04 uCi/ml

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

December 93 EXERCISE PASS REACTOR COOLANT DATA
TAKEN BETWEEN 0930-End

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D O S E E Q U I V A L E N T I O D I N E

# Nuclide	Activity	Dose Eq. Factor	Dose Equivalent Activity
1. I-131	3.88E+00	1.00E+00	-
2. I-132	6.41E-01	3.60E-02	2.31E+00 uCi/ml
3. I-133	5.12E-01	2.70E-01	1.38E-01 uCi/ml
4. I-134	8.97E-01	1.70E-02	1.53E-02 uCi/ml
5. I-135	7.25E-01	8.40E-02	6.09E-02 uCi/ml
TOTAL:	6.66E+00		2.52E+00 uCi/ml

****

****

Cross Gamma = 6.72E+06 CPM / ml

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James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

December 93 EXERCISE PASS PRIMARY CONTAINMENT ATMOSPHERE DATA
TAKEN BETWEEN 0930-End

****
GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant
****
Air Sample Test Spectrum Reported by: CHEMISTRY
File ID: EXERCISE 1993

Library File: . . . . . .PLALIB.LIB (IN PLANT Air Sample Library)
MPC/LLD File: . . . . . .PLALLD.MPC (IN PLANT Air Sample MPC/LLD's)

Detector #: 4
Efficiency File: . . . ASPCS1D04.EFF (SILVER ZEOLITE CARTRIDGE)

Eff.=1/(3.54E-02*En^-2.34E+00 + 1.57E+02*En^ 1.02E+00) 05/17/92 08:37
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/cc)		Less-Than Level Conc	Peaks Found	LLD REQUIRED	LLD MET?
ZN-65		1115.16	< 7.16E-10	MDA	6.25E-11	0 of 1	0.0E+00	Yes
CE-144		133.54	< 2.46E-10	MDA	9.26E-11	0 of 1	5.0E-11	NO
TC-99M		140.51	< 3.02E-11	MDA	1.18E-11	0 of 1	0.0E+00	Yes
CE-141		145.44	< 4.21E-11	MDA	1.66E-11	0 of 1	5.0E-11	Yes
CR-51		320.08	< 4.40E-10	MDA	1.59E-10	0 of 1	5.0E-11	NO
BR-84		880.00	4.79E-10	MDA	1.26E-11	0 of 4	6.2E-11	NO
I-130		418.00	1.24E-11	MDA	1.35E-10	0 of 5	6.3E-10	NO
I-131		364.48	6.08E-02 +- 4.32E-04	--------		4 of 4	-------	---
HF-181		482.30	< 8.45E-11	MDA	3.00E-11	0 of 2	0.0E+00	Yes
I-132		772.60	3.76E-02 +- 5.60E-05	--------		6 of 6	-------	---
		522.85		I.D.Only				
		630.15		I.D.Only				
		667.81		I.D.Only				
		954.65		I.D.Only				
		1398.12		I.D.Only				
I-133		529.87	1.20E-01 +- 5.02E-05	--------		1 of 4	-------	---
I-134		884.12	1.88E-02 +- 6.21E-05	--------		7 of 11	-------	---
		541.04		I.D.Only				
		595.40		I.D.Only				
		621.51		I.D.Only				
		847.14		I.D.Only				
		857.65		I.D.Only				
		1072.91		I.D.Only				
BA-140		537.32	< 1.76E-10	MDA	5.55E-11	0 of 5	0.0E+00	Yes
SB-124		602.71	< 6.35E-11	MDA	5.91E-11	0 of 5	0.0E+00	Yes
CS-137		661.65	< 6.02E-11	MDA	5.46E-11	0 of 1	1.0E-11	NO
MO-99		739.58	< 5.29E-10	MDA	1.25E-10	0 of 4	5.0E-11	NO
ZR-95		756.72	< 1.24E-10	MDA	1.01E-10	0 of 1	0.0E+00	Yes
NB-95		765.79	< 2.32E-11	MDA	7.43E-11	0 of 1	0.0E+00	Yes
CS-134		795.85	< 1.08E-10	MDA	2.82E-11	0 of 7	1.0E-11	NO
CO-58		810.76	< 1.10E-10	MDA	3.70E-11	0 of 3	1.0E-11	NO
MN-54		834.83	< 1.49E-10	MDA	5.35E-11	0 of 1	1.0E-11	NO
FE-59		1099.22	< 5.93E-11	MDA	5.79E-11	0 of 4	1.0E-11	NO
I-135		1260.41	1.16E-01 +- 2.02E-05	--------		1 of 6	-------	---
CO-60		1332.49	< 1.46E-10	MDA	1.58E-10	0 of 2	1.0E-11	NO
LA-140		1596.49	< 5.23E-11	MDA	5.10E-11	0 of 9	0.0E+00	Yes

TOTAL MEAS. ACT. : 3.53E-01 +- 1.33E-06 uCi/cc

December 93 EXERCISE PASS PRIMARY CONTAINMENT ATMOSPHERE DATA
TAKEN BETWEEN 0930-End

M P C C H E C K
MPC FILE: PLALLD.MPC

Nuclide	uCi/cc	MPC	% MPC
I-131	6.08E-02	9.E-09	6.76E+08
I-132	3.76E-02	2.E-07	1.88E+07
I-133	1.20E-01	3.E-08	4.00E+08
I-134	1.88E-02	5.E-07	3.76E+06
I-135	1.16E-01	1.E-07	1.16E+08
TOTAL:	3.53E-01		1.21E+09

MPCS for AIR SAMPLES
AIR SAMP #:1234
LOCATION:NONE
RWP #: 93-XXXX

Sampling On: 12/14/93
Sampling Off: 12/14/93

Protection Factors: Particulates: 1.000 Iodines: 1.000
Respirator: none

% MPC IODINES	% MPC OTHERS	% MPC TOTAL	Eff. % MPC IODINES	Eff. % MPC OTHERS	Eff. % MPC TOTAL
1214560000.00	.00	1214560000.00	1214560000.000	.000	1214560000.000

% MPC TOTAL:1214560000.000

SECTION 7

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

December 93 EXERCISE PASS PRIMARY CONTAINMENT ATMOSPHERE DATA
TAKEN BETWEEN 0930-End

****

GDR/HP N U C L I D E A N A L Y S I S S U M M A R Y Version 2.1

New York Power Authority
J. A. FitzPatrick Nuclear Plant

****

Mock In-Plant Gas Analysis Reported by: CHEMISTRY
File ID: EXERCISE 1993

Library File: . . . . . .GASLIB.LIB (Noble Gases Library)
MPC/LLD File: . . . . . .IPGLLD.MPC (In Plant Noble Gases)

Detector #: 3
Efficiency File: . . . . . 4LGMSOD03.EFF (NOBLE GAS VIAL SAMPLE)

Eff.=1/(3.17E-02*En^-2.97E+00 + 3.89E+02*En^ 9.69E-01) 03/29/92 14:14
(Where En = Energy in MeV)

Nuclide	Group	Energy (keV)	MEASURED or MDA CONCENTRATION Concentration (uCi/cc)	Less-Than Level Conc	Peaks Found	LLD REQUIRED	LLD MET?
XE-133		80.97	3.02E+02 +- 6.03E-07	-------	1 of 1	------	---
XE-131M		165.75	9.01E-01 +- 6.32E-06	-------	1 of 1	------	---
KR-85		514.10	2.00E+01 +- 8.72E-06	-------	1 of 1	------	---
KR-88		196.32	8.60E+01 +- 5.30E-07	-------	1 of 1	------	---
XE-133M		233.21	1.20E+01 +- 6.32E-06	-------	1 of 1	------	---
XE-135		249.79	5.81E+01 +- 6.23E-07	-------	1 of 1	------	---
XE-138		258.31	1.31E+00 +- 5.12E-07	-------	1 of 5	------	---
KR-87		402.58	1.00E+01 +- 5.30E-07	-------	1 of 4	------	---
XE-135M		526.56	3.94E+01 +- 6.02E-07	-------	1 of 1	------	---
KR-85M		149.50	3.49E+01 +- 5.03E-07	-------	1 of 1	------	---
		305.00	I.D.Only				

TOTAL MEAS. ACT. : 5.65E+02 +- 1.09E-05 uCi/cc

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

****
December 93 EXERCISE PASS PRIMARY CONTAINMENT ATMOSPHERE DATA
TAKEN BETWEEN 0930-End Page 2
****
M P C C H E C K
MPC FILE: IPGLLD.MPC
****

Nuclide	uCi/cc	MPC	% MPC
XE-133	3.02E+02	1.E-05	3.02E+09
XE-131M	9.01E-01	2.E-05	4.51E+06
KR-85	2.00E+01	1.E-05	2.00E+08
KR-88	8.60E+01	1.E-06	8.60E+09
XE-133M	1.20E+01	1.E-05	1.20E+08
XE-135	5.81E+01	4.E-06	1.45E+09
XE-138	1.31E+00	1.E-06	1.31E+08
KR-87	1.00E+01	1.E-06	1.00E+09
XE-135M	3.94E+01	1.E-06	3.94E+09
KR-85M	3.49E+01	6.E-06	5.82E+08
TOTAL:	5.65E+02		1.90E+10

MPCS for AIR SAMPLES
AIR SAMP #:DRILL
LOCATION:INPLANT
RWP #: 93-XXXX

Sampling On: 12/14/93
Sampling Off: 12/14/93

Protection Factors: Particulates: 1.000 Iodines: 1.000
Respirator: None

% MPC IODINES	% MPC OTHERS	% MPC TOTAL	Eff. % MPC IODINES	Eff. % MPC OTHERS	Eff. % MPC TOTAL
.000	1.90E+10	1.90E+10	.000	1.90E+10	1.90E+10

% MPC TOTAL: 1.90E+10

SECTION 8

James A. FitzPatrick Nuclear Power Plant
1993 Partial Participation Emergency Exercise

December 14, 1993

METHOD OF EVALUATION

I. SAP-6 "Drill/Exercise Conduct"

NEW YORK POWER AUTHORITY
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
EMERGENCY PLAN IMPLEMENTING PROCEDURE

EMERGENCY PLAN VOLUME 3

PROCEDURE NO.: SAP-6

****
* INFORMATIONAL USE *
****

TITLE: DRILL/EXERCISE CONDUCT*

PORC REVIEW NO.: Meeting No. 93-045 Date 3/31/93

APPROVED BY: _____
Resident Manager

APPROVED BY: _____
Emergency Planning Coordinator

PAGE NO.	1	2	3	4	5	6	7	8	9	10
REV. NO.	7	7	6	7	7	5	7	5	7	8
PAGE NO.	11	12	13	14	15	16	17	18	19	20
REV. NO.	0	5	5	5	5	5	5	5	5	5
PAGE NO.	21	22	23	24	25	26	27	28	29	30
REV. NO.	5	5	5	5	5	5	5	5	7	5
PAGE NO.	31	32	33	34	35	36	37	38	39	40
REV. NO.	5	5	5	5	5	5	5	5	5	5
PAGE NO.	41	42	43	44	45					
REV. NO.	5	5	5	5	5					

Rev. No. 8

EMERGENCY PLAN IMPLEMENTING PROCEDURE

SAP-6

DRILL/EXERCISE CONDUCT*

1.0 PURPOSE

To establish a procedure for the conduct and evaluation of all Emergency Plan Drills and Exercises at JAFNPP. This procedure also outlines the management controls used to ensure that corrective actions are implemented.

2.0 REFERENCES

2.1 NUREG-0654 - "Criteria for the Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."

2.2 JAFNPP Emergency Plan and Implementing Procedures, Volumes 1, 2 and 3.

2.3 SAP-1 MAINTAINING EMERGENCY PREPAREDNESS*.

2.4 Administrative Procedure-02.03 PROCEDURE FOR CONTROL & DISTRIBUTION OF THE EMERGENCY PLAN & IMPLEMENTING PROCEDURES*.

3.0 INITIATING EVENTS

Not Applicable.

4.0 PROCEDURE

4.1 Drill Conduct is discussed in Section 5 of this procedure. This section delineates the minimum acceptable activity for a drill at JAFNPP.

4.2 Exercise Conduct is discussed in Section 6 of this procedure. This section delineates the minimum acceptable activity for an exercise at JAFNPP.

4.3 Observer Conduct is discussed in Section 7 of this procedure. This section specifies the minimum acceptable, preparation, training and response required for an observer of a JAFNPP drill or exercise.

4.4 Critiques and Corrective Actions are discussed in Section 8 of this procedure. This section specifies the method in which problems with Emergency Preparedness at JAFNPP are handled.

5.0 DRILL CONDUCT

5.1 Drills shall be directed with the frequency established by SAP-1 - MAINTAINING EMERGENCY PREPAREDNESS.

5.2 Drills shall be directed by a Lead Controller who shall be responsible for conducting the drill in accordance with the drill scenario and the drill report.

5.2.1 The Lead Controller may conduct a briefing with drill participants. The intent of such a briefing would be to insure that drill participants understand their function and purpose in the drill. The Control Room briefing should be similar to a shift turnover briefing.

5.2.2 The Lead Controller may delegate controller responsibilities to other individuals. Controllers and observers can be used for this purpose. A controller shall be called such when that individuals sole responsibility is to assist in the conduct of a drill. An observer can function as a controller when assigned the task of providing information or instruction during a certain aspect of a drill.

5.2.3 The Lead Controller shall insure that plant safety is not compromised by a drill, and may stop a drill at any time if in his opinion plant safety may be affected.

5.2.4 The Lead Controller shall attempt to collect the signatures of as many participants as possible for training documentation. This responsibility can be delegated to other controllers, or observers.

5.2.5 The Lead Controller shall commence and end the Drill, upon approval from the JAFNPP Resident Manager.

5.2.6 The Lead Controller shall ensure that drill observers are stationed to properly observe the drill.

5.2.7 The lead controller should distribute a fact sheet to the Emergency Response Facilities describing plant conditions in effect approximately eight (8) hours prior to drill commencement.

5.3 During a drill, when (public address system) announcements are made, those announcements shall be prefaced or followed by the words "This is a Drill."

5.4 During a drill when contacting any offsite or non-NYPA institution, the individual shall insure that the organization fully realizes that no emergency exists onsite and that it is a test of the JAFNPP Emergency Plan.

5.5 Drills shall be conducted using the guidance established by Form SAP-6.1 "Drill Conduct Checklist."

5.6 The Emergency Planning Coordinator shall conduct an observer meeting prior to a drill. The meeting shall be to inform the observers of their specific tasks.

5.7 Radiological Emergency Medical Drills are limited in scope and participation by plant personnel. Therefore, only one lead controller is necessary in the Control Room, one observer/controller accompanying the victim and one controller at the destination hospital. Each observer/controller may be briefed individually. The Control Room controller must be a NYPA employee and the other controllers/observers may be medical consultant personnel. Drill documentation will be a combination of NYPA drill report and Control Room Observer Evaluation Form (SAP-6.2), supplemented by the medical consultant's evaluation of performance.

6.0 EXERCISE CONDUCT

An Exercise shall include all items specified for a drill with the following differences:

6.1 Exercises shall be conducted with the frequency established by SAP-1 - MAINTAINING EMERGENCY PREPAREDNESS.

6.2 A Lead Controller stationed in the Control Room shall be responsible for conducting the exercise in accordance with the written scenario. As a minimum, controllers shall also be present in the Technical Support Center, Operational Support Center, and the Emergency Operations Facility.

6.3 Every attempt should be made to include Federal, State and local input into the development of the exercise scenario.

6.3.1 The Exercise scenario shall be developed by a committee headed and organized by the Emergency Planning Coordinator at JAFNPP.

7.0 OBSERVER CONDUCT

7.1 Observers shall be used to record all significant events and the time at which they occur during a drill or exercise using Form SAP-6.2 "Evaluation Form." The

drill or exercise scenario shall state the objectives of the drill or exercise which will determine the major areas for the observers to concentrate their observation. Actions to be observed include: the ability to control the emergency, timely and proper notification, availability and use of equipment and personnel for control and recovery, assessment of consequences of the emergency actions taken by emergency personnel, and the necessity for off-shift notifications.

7.2 Observers shall be selected with the concurrence of the Resident Manager.

7.3 There shall be enough observers to match all points specified in the drill/exercise scenario or drill form (SAP-1.2). The degree of observation shall be made based on the extent of the drill or scenario. As a general rule, however, observers shall be stationed to observe all expected major actions of the drill expected and as listed in objectives statement of the drill or exercise scenario. At least two observers must be available for drills and at least eight observers for an exercise.

7.4 In plant observers shall be badged following normal plant badging procedures, and are required to participate during accountability drills.

7.5 Observers shall be visibly identified as observers, and they should take no part in the action of the drill or exercise except to:

7.5.1 Indicate simulated conditions to the exercise or drill participants, (e.g., survey meter readings, contamination levels, etc.), but only after instructions by the lead controller or individual acting on behalf of lead controller.

7.5.2 Observe poor communication techniques and procedures and note/correct such occurrences when they occur.

7.5.3 Prevent the communication of simulated emergency conditions as actual conditions outside of the exercise or drill area and to ensure that radio or telephone messages are periodically preceded and ended by the statement "This is a Drill."

7.5.4 Prevent actions which might create a hazard to personnel or equipment. In such cases, observers shall require personnel participating in the exercise or drill to indicate the action verbally.

7.6 Observers shall be briefed as to their duties prior to the commencement of the drill or exercise. Drill observers should be briefed within 24-hours of the commencement of a drill. Exercise observers should be briefed within 24 hours of the commencement of an exercise and written aids and procedures shall be provided for use by the observers. This 24-hour time frame may be adjusted to compensate for unannounced exercises.

7.7 Training shall be provided to observers by the JAFNPP Training Department and/or drill/exercise lead controllers. The training provided for observers will entail the briefing listed in Section 7.6. The briefing shall include a review of the drill or exercise scenario, the observer duties with regard to the assigned areas of observation, and the key points to be noted. The Emergency Planning Coordinator shall develop a list of observers to be trained. Exceptions to the qualified observer list may be made by the Emergency Planning Coordinator.

7.8 At the conclusion of the drill or exercise, the Emergency Planning Coordinator shall collect the completed "Observer Evaluation Forms" (SAP-6.2), compile a list of participants and conduct a critique with the observers.

7.9 Observers shall familiarize themselves with the duties and action requirements of the personnel they are monitoring. The Drill Report SAP-1.2 shall list Observers' Name, Organization, Area of Responsibility, and Reference Procedures. Observers shall review referenced procedures. Observers shall use the following as guidelines.

7.9.1 Control Room

The observer shall observe the action of personnel assigned to the Control Room and personnel who report to the Control Room for assignment. In addition, special attention will be given to the following.

- Notifications to onsite personnel and offsite agencies.
- Request for the call-in of off duty personnel.
- Operations handling of accident conditions.

- Instructions given to Search and Rescue, Repair and Corrective Action Teams and H.P. Tech's by the Shift Supervisor (SS), as applicable.

- Does the SS handle the emergency by directing people or by trying to do the work himself?

- Are the time frames of actions by the SS reasonable enough?

- Actions of personnel in the Control Room.

- Communications with the EOF.

- Communications with the TSC.

7.9.2 Control Point

It is to be noted that all normal practices such as sign out and use of frisker and the portal monitor are to be accomplished unless the H.P. Technician gives other directions because of radiological conditions. The observer will pay special attention to the above along with the following.

- No one is wearing radiological protection clothing when leaving.

- All alarms from monitoring equipment are acknowledged.

7.9.3 Assembly Area

Observe the following for assembly area personnel:

- They seek out their assembly area, generally stay together as a group and remain orderly.

- Time of assembly and completed accountability.

7.9.4 Emergency Operation Facility

This is the command post for the Emergency and it should seem so to the observer. Look for the following things:

- The Emergency Director is in command of the EOF.

- Any extra personnel, spectators and those awaiting orders, are quietly standing out of the way.

- Has the Emergency Director contacted the TSC Manager?

- The Radiation Protection or Support Personnel are performing duties in an efficient manner and reporting results to the Emergency Director.

- Instrumentation deployed in the EOF is placed in an non-interfering position.

- How problems with the radio and telephone are handled.

- Using time as criteria, release rates and thyroid and whole body exposures to the offsite population are calculated quickly after the receipt of data from the Control Room or the Offsite Monitoring Team(s).

- The time frame of updates to offsite agencies and the reporting of exposure data and changes to site meteorological conditions, to those same agencies.

- The Emergency Director assigns, where possible, the duty of making routine calls to someone else thereby leaving himself free to command the action.

- Assessment Teams methods to make protective actions to offsite populations.

7.9.5 Off-Site Monitoring Teams

The observers shall observe the following items:

- Received KI dose, if necessary.

- Operational check performed on survey instruments, sample counter and sample pump before leaving the site.

- Equipment availability verified.

- Assignment of TLD's and dosimeters before leaving the site.

- Silver Zeolite Cartridges made available before leaving the site.

- Survey instrument operationally checked out and turned on prior to leaving to take field readings.

- Radio check out by communicating to EOF or TSC before leaving.

- Beta and gamma field surveys performed on the way to sample point.

- Sampling and field surveys performed at sample location.

- Instrument calibration performed and samples counted.

- Work performed in a professional manner.

7.9.6 On-Site Monitoring Team

On-site monitoring teams may be assigned field survey work along the perimeter of the site. Check on the following items:

- Where do they receive their instructions?

- Dosimeter and TLD are being worn.

- What type of survey instruments used.

- Do they have radio/cellular phone available?

- Radio/phone check performed.

- Field readings taken along the route to the designated area.

- Work performed in a professional manner.

7.9.7 Security Force

- Are all security personnel accounted for?

- Does security direct people to the assembly area for accountability?

- Are access and egress roads controlled?

7.9.8 Technical Support Center

- The area maintained as a controlled area.

- Are communications initiated?

- Are H.P. Surveys performed and by whom?

7.9.9 Operations Support Center

- How is it staffed?
- What and how many teams are brought to the OSC?
- Are phones continuously manned?
- Are H.P. Surveys performed and by whom?

7.9.10 Radiation Protection Office

- Do they report to the OSC when an Evacuation Alarm Sounds?
- Do they receive instructions and from whom?
- Are accurate protective measures taken if an entry into the controlled area is required?
- Who are survey results reported to? (CR and/or TSC)

7.9.11 Fire Brigade

- Do they receive instructions nd from whom?
- Are protective measures taken if an entry into a controlled are is required?
- Are Fire preplans consulted?
- Is assistance requested from local support fire departments?

7.10 Immediately following the exercise/drill, observers/ controllers should conduct a short critique for participants in their assigned area.

8.0 CRITIQUES AND CORRECTIVE ACTIONS

8.1 Critique

A post exercise/drill critique should be held for observers and plant supervision by the Emergency Planning Coordinator. The critique should be held within 24 hours of the drill/exercise, at a time and place specified by the Emergency Planning Coordinator. This meeting shall be held to help resolve questions raised by various observers and plant supervisors and to develop a list of corrective actions as necessary. The observations should include those actions noted by the observers which were not in accordance with approved procedures. In addition, the exercise drill

observers should identify any areas which require clarification, development or revision of procedures.

8.2 Emergency Plan Improvement Items/Lessons Learned Report

Following the critique, the Emergency Planning Coordinator shall develop a list of Deviation and Event Reports (DER's), improvement items and lessons learned as a result of the drill or exercise. These items may be generated as a result of comments made at the critique, comments made by observers and controllers, or comments made by drill/exercise participants. The Emergency Planning Coordinator or designee shall review these comments and categorize significant comments into "DER's", "Lessons Learned" or "Improvement Items." This listing and associated proposed corrective actions shall be submitted to the General Manager - Support Services for concurrence and approval. From this listing, the General Manager - Support Services shall decide which of these items warrant entry into the JAFNPP Action Commitment Tracking System (ACTS) and assign a completion date. The administration of the ACTS is controlled by JAFNPP Administrative Procedure AP-03.08 "Action Commitment and Tracking System*."

8.3 The Emergency Planning Coordinator shall, after the preparation and review of the Emergency Plan Improvement Items/Lessons Learned listing, present the listing to the Plant Operating Review Committee (PORC). The PORC shall review the listing. This review shall be incorporated into the PORC meeting minutes.

8.4 Any items identified during the critique that pertain to the scenario package used for the drill/exercise shall also be used to improve the package for future use. Scenario packages do not need to be updated until subsequent use.

9.0 FIGURES, FORMS AND ATTACHMENTS

9.1 FORM SAP-6.1 Drill or Exercise Conduct Checklist

9.2 FORM SAP-6.2 Observer Evaluation Forms

FORM SAP 6.1

DRILL OR EXERCISE CONDUCT CHECKLIST

_____ 1. Prepare a drill or exercise scenario.

_____ 2. Prepare a drill or exercise report.

_____ 3. Present the drill or exercise to the Plant Operating Review Committee Representative for approval.

_____ 4. Brief observers on the entire drill or exercise.

_____ 5. Brief the individual observers on specified tasks.

_____ 6. Issue Observer Aids and Drill/Exercise Observation Sheet.

_____ 7. Initiate the drill or exercise.

_____ 8. Ensure the "flow" of activity throughout the drill or exercise.

_____ 9. Terminate the drill or exercise when it's purpose is accomplished.

_____ 10. Conduct a critique with participants or observers.

_____ 11. Collect Drill/Exercise Observation Sheets.

_____ 12. Complete Emergency Plan Corrective Action Report, list all deficiencies and recommendations.

_____ 13. Present the Emergency Plan Corrective Action Report to PORC.

_____ 14. Complete action required on deficiencies.

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: CONTROL ROOM

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Did the Shift Supervisor/ED demonstrate he is in charge?	___	___
2.	Did the Control Room classify the emergency correctly in accordance with IAP-2?	___	___
3.	Were notifications made to NYS and Oswego County within 15 minutes of event classification?	___	___
	Were updates timely?	___	___
4.	Was timely notification made to the NRC (must be completed within one hour from event classification)?	___	___
5.	Were communications prefaced with "This is a drill?"	___	___

6. Log the following times for event classification and notifications:

EAL	Class. Time	RECS Time	Plant Staff Time	NRC Time
NUE	_____	_____	_____	_____
ALERT	_____	_____	_____	_____
SAE	_____	_____	_____	_____
GE	_____	_____	_____	_____

	Did the SS/ED direct Security to initiate call outs? (Not necessary during normal working hours.)	___	___
7.	Were timely briefings given to plant staff?	___	___
8.	Was the ENS phone manned?	___	___
9.	Did the Control Room experience any emergency plan equipment failures?	___	___

If yes, what were the failures and how was the problem addressed:

_____

_____

_____

FORM SAP-6.2

OBSERVER EVALUATION FORM
(CONTROL ROOM CONTINUED)

		YES	NO
10.	Did Control Room personnel adhere to procedures (EOP's, AOP's, Tech. Specs., etc.)?	___	___
11.	Was staffing level adequate?	___	___
12.	Was Emergency Director turnover from the SS thorough?	___	___
	Was plant staff advised of this transfer of responsibility?	___	___
13.	Once initiated, was accountability conducted and maintained throughout the emergency?	___	___
14.	Was shift turnover demonstrated?	___	___
15.	Were logs properly maintained by key personnel?	___	___
16.	Was the plant staff adequately informed regarding plant status?	___	___
17.	Was data flow between facilities and teams accurate, timely and complete?	___	___
18.	Was habitability performed in accordance with EAP-14.6?	___	___
19.	Were all objectives met?	___	___

If not, explain: _____

OBSERVER EVALUATION FORM
(CONTROL ROOM CONTINUED)

20. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: TSC

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Was the TSC activated in a timely manner?	___	___
	a. Time TSC was called for activation _____		
	b. Time TSC declared themselves operational _____		
2.	Was the TSC set-up in accordance with EAP-14.1?	___	___
3.	Did the TSC Manager demonstrate he is in charge?	___	___
4.	Were offsite notifications made in accordance with EAP-1.1?	___	___
5.	Were onsite notifications made in accordance with EAP-1.1?	___	___
6.	Were communications prefaced with "This is a drill?"	___	___
7.	Log the following times for event classification and notifications (if applicable):		

EAL	Class. Time	RECS Time	Plant Staff Time	NRC Time
NUE	_____	_____	_____	_____
ALERT	_____	_____	_____	_____
SAE	_____	_____	_____	_____
GE	_____	_____	_____	_____

8.	Was staff familiar with their equipment and responsibilities?	___	___
9.	Was the staffing level adequate?	___	___
10.	Were periodic briefings held on plant status?	___	___
11.	Were plant staff aware of changes in emergency classification?	___	___
12.	Were status boards updated in a timely manner?	___	___
13.	Were logs properly maintained by key personnel?	___	___
14.	Did the technical staff support the Control Room?	___	___
15.	Were corrective actions/solutions well thought out?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(TSC CONTINUED)

		YES	NO
16.	Did the TSC experience any emergency plan equipment failures?	___	___
	If yes, what were the failures and how was the problem addressed:		
	_____		
	_____		
	_____		
17.	Did the Emergency Director classify the emergency correctly?	___	___
18.	Was a site evacuation called for?	___	___
	If yes, were local authorities and Niagara Mohawk notified?	___	___
19.	Was the transfer of the Emergency Director and his responsibilities from the TSC to the EOF smooth and complete?	___	___
20.	Once initiated, was accountability conducted and maintained throughout the emergency?	___	___
21.	Was shift turnover demonstrated?	___	___
22.	Was data flow between facilities and teams accurate, timely and complete?	___	___
23.	Was habitability performed in accordance with EAP-14.6?	___	___
24.	Was a Radiation Protection technician dispatched to the JNC upon activation?	___	___
25.	Were all objectives met?	___	___
	If not, explain: _____		
	_____		
	_____		
	_____		

OBSERVER EVALUATION FORM
(TSC CONTINUED)

26. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: OSC

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Was the OSC activated in a timely manner?	___	___
	a. Time OSC was called for activation _____		
	b. Time OSC declared operational _____		
2.	Was the OSC set up in accordance with EAP-14.5?	___	___
3.	Did the OSC Manager demonstrate he is in charge?	___	___
4.	Was the staffing level adequate?	___	___
5.	Was shift turnover demonstrated?	___	___
6.	Were logs properly maintained by key personnel?	___	___
7.	Were status boards updated in a timely manner?	___	___
8.	Log the following times OSC became aware of event classification. NUE _____ Alert _____ SAE _____ GE _____		
9.	Were periodic briefings conducted in the OSC regarding plant status?	___	___
10.	Was data flow between facilities and teams accurate, timely and complete?	___	___
11.	Did the OSC experience any emergency plan equipment failures?	___	___
	If yes, what were the failures and how was the problem addressed:		
	_____		
	_____		
	_____		
12.	Once initiated, was accountability conducted and maintained throughout the emergency?	___	___
13.	Was habitability performed in accordance with EAP-14.6?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(OSC CONTINUED)

		YES	NO
14.	Were repair team briefings adequate and timely?	___	___
15.	Were repair team debriefings adequate and timely?	___	___
16.	Were emergency exposure authorizations necessary?	___	___
	If yes, were actions consistent with procedures?	___	___
17.	Were individual personnel exposure histories obtained in a timely manner for repair team personnel availability?	___	___
18.	Was status of repair teams adequately maintained?	___	___
19.	Were emergency tasks prioritized and acted upon in assigned priority?	___	___
20.	Were all objectives met?	___	___

If not, explain: _____

_____

_____

_____

_____

_____

OBSERVER EVALUATION FORM
(OSC CONTINUED)

21. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: REPAIR & CORRECTIVE ACTION TEAMS

OBSERVER: _____ CONTROLLER: _____

TEAM ACTIVITY: _____

		YES	NO
1.	Did the team consist of a minimum of two individuals?	___	___
2.	Was a briefing conducted?	___	___
	If so, did it include:		
	a. most direct route	___	___
	b. proper tools	___	___
	c. tasks understanding	___	___
	d. visual aids (maps, drawings, etc.)	___	___
	e. simulations	___	___
	f. radiation area dose rates	___	___
3.	Were the OSC Manager and Emergency Maintenance Coordinator cognizant of all Repair and Corrective Action Team efforts?	___	___
4.	Did SS approve work on safety related items?	___	___
5.	Was TSC direction obtained for engineering repair work?	___	___
6.	Was RWP or Emergency Plant Entry Form prepared? (circle one)	___	___
7.	Was dosimetry, protective clothing, etc. issued in accordance with the above form?	___	___
8.	Were there any Emergency Plan equipment failures?	___	___

If so, what were they and how was problem addressed?

_____

_____

_____

_____

OBSERVER EVALUATION FORM
(REPAIR & CORRECTIVE ACTION TEAMS CONTINUED)

		YES	NO
9.	Was a debrief conducted?	___	___
10.	Were all objectives met?	___	___

If not, explain: _____

_____

_____

_____

_____

_____

_____

OBSERVER EVALUATION FORM
(REPAIR & CORRECTIVE ACTION TEAMS CONTINUED)

11. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: FIRE BRIGADE

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Time Control Room notified of fire _____ Time fire alarm sounded _____ Time fire brigade dispatched _____ Time fire brigade responded to scene _____		
2.	Was fire alarm sounded and the announcement properly made over the plant page?	___	___
3.	Was offsite assistance requested?	___	___
	If yes, was Security directed to:		
	a. allow immediate access	___	___
	b. provide dosimetry	___	___
	c. direct and escort fire company	___	___
	d. collect dosimetry upon exit	___	___
4.	Were all unnecessary personnel evacuated from the fire area?	___	___
5.	Was Rad Protection requested to perform a survey?	___	___
6.	Were radiological conditions properly assessed?	___	___
7.	Was emergency exposure criteria addressed and implemented?	___	___
8.	Were all communications preceded with "This is a Drill?"	___	___
9.	Were fire brigade members familiar with their duties?	___	___
10.	Was the emergency classified correctly?	___	___
11.	If the OSC was activated, was the fire brigade dispatched from the OSC with a radiation protection technician?	___	___
12.	Were all objectives met?	___	___

If not, explain: _____

_____

_____

_____

_____

OBSERVER EVALUATION FORM
(FIRE BRIGADE CONTINUED)

13. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: SECURITY/ACCOUNTABILITY

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Was the emergency classification posted at main security?	___	___
2.	Were call-outs performed as directed by the SS/ED? (Not required during normal working hours.)	___	___
3.	Was site access controlled?	___	___
4.	Were guards dispatched to access roads?	___	___
5.	If accountability was called for:		
	a. Time site access/egress was restricted _____		
	b. Time accountability was initiated _____		
	c. Time accountability completed _____		
6.	Did accountability clerks report to their assigned assembly areas when directed?	___	___
7.	Were accountability readers and sign-in sheets used?	___	___
8.	Did accountability clerks experience any emergency plan equipment failures?	___	___
	If yes, explain:		
	_____		
	_____		
	_____		
9.	Was movement of personnel between onsite facilities adequately controlled?	___	___
10.	Was movement of personnel badging offsite timely and orderly?	___	___
11.	Was assembly in the Training Building auditorium controlled?	___	___
	Were personnel updated regarding plant conditions?	___	___

OBSERVER EVALUATION FORM
(SECURITY/ACCOUNTABILITY CONTINUED)

		YES	NO
12.	Was continuous accountability maintained for the remainder of the emergency?	___	___
13.	Was site evacuation called for?	___	___
	If yes, were personnel directed to proceed to the Howard Road remote assembly area?	___	___
	If yes, did the maps distributed to evacuating personnel coincide with the selected evacuation route?	___	___
14.	Were all objectives met?	___	___

If not, explain: _____

_____

_____

_____

_____

OBSERVER EVALUATION FORM
(SECURITY/ACCOUNTABILITY CONTINUED)

15. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: CHEMISTRY TECHNICIAN

OBSERVER: _____ CONTROLLER: _____

	YES	NO
1. Did he/she report to Control Room upon implementing the Emergency Plan?	___	___

2. What tasks were required by the ED for the Chemistry Technician?

_____

_____

_____

3. Was the technician familiar with the procedures for the tasks?	___	___

4. What tasks were required by the Chemistry Supervisor for the technicians?

_____

_____

_____

_____

Were they familiar with the procedures for the tasks?	___	___
5. Did any emergency plan equipment fail to operate?	___	___

If yes, what were the failures and how was the problem addressed?

_____

_____

6. If PASS was demonstrated, was the above 3-hour time commitment met?	___	___

_____

_____

OBSERVER EVALUATION FORM
(CHEMISTRY TECHNICIAN CONTINUED)

7. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: FIELD MONITORING

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Were teams assembled in a timely manner?	___	___
2.	Were teams familiar with procedures?	___	___
3.	Time the team was dispatched: _____ Team was dispatched from OSC/EOF (circle one)		
4.	Did team obtain the proper equipment prior to leaving?	___	___
5.	Were equipment checks performed prior to departure?	___	___
6.	Were calibration dates current?	___	___
7.	Were communication checks conducted prior to departure?	___	___
8.	Was a vehicle/110V power supply check conducted?	___	___
9.	Was the team briefing adequate?	___	___
10.	Did the briefings include:		
	a. Plant conditions/nature of release?	___	___
	b. Meteorological conditions?	___	___
	c. Projected dose rates/stay time	___	___
	d. Protective measures?	___	___
	e. Use of KI?	___	___
	f. Dosimetry recording?	___	___
	g. Types of readings/samples to be obtained?	___	___
	h. Means of communication?	___	___
	i. Emergency exposure limits?	___	___
11.	Was the communications flow between team and dispatcher timely and accurate and complete?	___	___
12.	Were teams briefed frequently by the dispatcher?	___	___
13.	Were survey results properly relayed to the dispatcher?	___	___
14.	Were communications prefaced with "This is a Drill?"	___	___
15.	Were teams proficient in proper survey/sampling techniques?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(FIELD MONITORING CONTINUED)

		YES	NO
16.	Were proper plume traversing techniques demonstrated?	___	___
	If no, explain: _____		
17.	Were vehicles and equipment checked for contamination upon return?	___	___
18.	Was shift turnover demonstrated?	___	___
19.	Did teams experience any Emergency Plan equipment failures?	___	___
	If yes, explain: _____		
20.	Were all objectives met?	___	___
	If not, explain: _____		

FORM SAP-6.2

OBSERVER EVALUATION FORM
(FIELD MONITORING CONTINUED)

21. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: EOF

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Was the EOF activated in a timely manner?	___	___
	a. Time EOF was called for activation _____		
	b. Time EOF declared themselves operational _____		
2.	Was the EOF activated in accordance with EAP-14.2?	___	___
3.	Did the EOF Manager demonstrate he is in charge?	___	___
4.	Was the transfer of command and control from the TSC to the EOF adequate? Time ED assumed duties at the EOF _____	___	___
5.	Were offsite notifications made in accordance with EAP-1.1? (Note the time forms are issued in comments section.)	___	___
6.	Were communications prefaced with "This is a Drill?"	___	___

7. Log the following times for event classification and notifications (if applicable):

EAL	Class. Time	RECS Time	Plant Staff Time	NRC Time
NUE	_____	_____	_____	_____
ALERT	_____	_____	_____	_____
SAE	_____	_____	_____	_____
GE	_____	_____	_____	_____

8.	Was staff familiar with their equipment and responsibilities?	___	___
9.	Was the staffing level adequate?	___	___
10.	Were periodic briefings held on plant status?	___	___
11.	Was EOF staff aware of changes in emergency classification?	___	___
12.	Were EAL's classified correctly?	___	___
13.	Were status boards updated in a timely manner?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(EOF CONTINUED)

		YES	NO
14.	Were logs properly maintained by key personnel?	___	___
15.	Did the EOF experience any emergency plan equipment failures:	___	___
	If yes, what were the failures and how was the problem addressed:		
	_____		
	_____		
	_____		
	_____		
	_____		
16.	Did the ED consult with state and county representatives regarding protective action recommendations?	___	___
17.	Was long term facility staffing considered in accordance with EAP-43?	___	___
18.	Was shift turnover demonstrated?	___	___
19.	Was data flow between facilities accurate, timely and complete?	___	___
20.	Was the ED aware of plant decisions?	___	___
21.	Was access control adequate?	___	___
22.	If a release was in progress, were incoming personnel monitored to prevent spread of contamination?	___	___
23.	Were all objectives met?	___	___
	If not, explain: _____		
	_____		
	_____		
	_____		
	_____		

OBSERVER EVALUATION FORM
(EOF CONTINUED)

24. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: DOSE ASSESSMENT

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Did dose assessment personnel perform equipment checks upon arrival?	___	___
2.	Were personnel familiar with the equipment?	___	___
3.	Was the transfer of activities from the TSC to the EOF timely and complete?	___	___
4.	Were meteorological forecasts obtained?	___	___
5.	Were status boards updated and utilized?	___	___
6.	Were Part II forms completed accurately and on time?	___	___
7.	Were EAP-4 forms properly completed and utilized?	___	___
8.	Was field survey data utilized for comparison with computer projected doses?	___	___
	Were discrepancies resolved?	___	___
9.	Were field teams briefed periodically regarding plant status?	___	___
10.	Were dose calculations and the determination of protective action recommendations performed efficiently and in a timely manner?	___	___
11.	Was the interface with TSC radiological personnel (re: effluent monitor readings, effluent sample results, PASS samples, etc.) adequate?	___	___
12.	Were offsite liaisons utilized for the exchange and comparison of field survey data and dose projections?	___	___
13.	Was there someone available to interface with and answer questions for offsite liaisons?	___	___
14.	Were offsite liaisons included in discussions regarding PARs?	___	___
15.	Were the results of dose calculations and protective action recommendations correct and in accordance with established procedures?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(DOSE ASSESSMENT CONTINUED)

		YES	NO
16.	Were all communications prefaced with "This is a Drill?"	___	___
17.	Was shift turnover demonstrated?	___	___
18.	Did any emergency plan equipment fail to operate?	___	___

If yes, what were the failures and how was the problem address? _____

_____

_____

_____

_____

_____

19. Were all objectives met? ___ ___

If not, explain: _____

_____

_____

_____

_____

_____

_____

OBSERVER EVALUATION FORM
(DOSE ASSESSMENT CONTINUED)

20. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: JNC

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Was the JNC activated in a timely manner?	___	___
	a. Time JNC was called for activation _____ b. Time JNC was operational _____		
2.	Was the JNC set up in accordance with JNC procedures?	___	___
3.	Was information flow between the plant, EOF and JNC accurate, timely and complete?	___	___
4.	Did the utility effectively share information with state and county public information staff?	___	___
5.	If technical information was required, was the information obtained from appropriate personnel?	___	___
6.	Were news releases reviewed and authorized by designated personnel prior to their release to the media?	___	___
7.	Were news releases timely, accurate and complete?	___	___
8.	Was ounty activation of the EBS system timely?	___	___
9.	Were county EBS messages appropriate, timely, and complete?	___	___
10.	Was information provided to the media consistent with the EBS messages?	___	___
11.	Was information released understandable to the public?	___	___
12.	If protective actions were implemented, were affected areas appropriately specified?	___	___
13.	Were press briefings held frequently to give available information as conditions changed?	___	___
14.	When conditions were static, were briefings held frequently to keep the media updated?	___	___
15.	Did the media spokesperson present material effectively?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(JNC CONTINUED)

		YES	NO
16.	Were questions by the media handled properly by the media spokesperson?	___	___
17.	Were status boards and displays updated accurately and timely?	___	___
18.	Was the JNC staff aware of changes in emergency classification?	___	___
19.	Did the rumor control staff respond promptly and accurately to calls?	___	___
20.	Were measures taken to control the spread of rumors that threaten to have an adverse effect on adherence to protective actions?	___	___
21.	Were support functions such as registration and security performed effectively?	___	___
22.	Was habitability initiated and maintained in accordance with EAP-14.6?	___	___
23.	Did the JNC experience any emergency plan equipment failures?	___	___

If yes, explain: _____

_____

_____

_____

_____

24.	Were communications prefaced with "This is a Drill?"	___	___
25.	Was shift turnover demonstrated?	___	___
26.	Were all the objectives met?	___	___

If not, explain: _____

_____

_____

_____

OBSERVER EVALUATION FORM
(JNC CONTINUED)

27. Miscellaneous Comments and Notes:

FORM SAP-6.2

OBSERVER EVALUATION FORM

DATE: _____ LOCATION: ERC

OBSERVER: _____ CONTROLLER: _____

		YES	NO
1.	Was the ERC activated in a timely manner?	___	___
	a. Time ERC was called for activation _____		
	b. Time ERC declared operational _____		
2.	Was the ERC set-up in accordance with procedures?	___	___
3.	Did the Recovery Manager demonstrate command and control?	___	___
4.	Was notification received in accordance with JAF procedure EAP-1.1?	___	___
5.	Were communications prefaced with "This is a drill?"	___	___
6.	Log the following times for event classification and notifications (if applicable):		

EAL	Class. Time	RECS Time	Plant Staff Time	NRC Time
NUE	_____	_____	_____	_____
ALERT	_____	_____	_____	_____
SAE	_____	_____	_____	_____
GE	_____	_____	_____	_____

7.	Was staff familiar with their equipment and responsibilities?	___	___
8.	Was the staffing level adequate?	___	___
9.	Were periodic briefings held on plant status?	___	___
10.	Was staff aware of changes in emergency classification?	___	___
11.	Were status boards updated in a timely manner?	___	___
12.	Were logs properly maintained by key personnel?	___	___
13.	Was shift turnover demonstrated?	___	___
14.	Was data flow between facilities accurate, timely and complete?	___	___

FORM SAP-6.2

OBSERVER EVALUATION FORM
(ERC CONTINUED)

	YES	NO
15. Did the ERC experience any emergency plan equipment failures?	___	___

If yes, what were the failures and how was the problem addressed:

_____

_____

_____

16. Were all objectives met?	___	___

If not, explain: _____

_____

_____

_____

17. Miscellaneous Comments and Notes:

_____

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OBSERVER EVALUATION FORM
(ERC CONTINUED)

17. Miscellaneous Comments and Notes (continued):