# PALO VERDE

## NUCLEAR GENERATING STATION

## 1989 PVNGS
## EMERGENCY PREPAREDNESS
## EXERCISE

ARIZONA PUBLIC SERVICE COMPANY
PROJECT MANAGER AND OPERATING AGENT

**CONFIDENTIAL**

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ARIZONA PUBLIC SERVICE COMPANY

PALO VERDE NUCLEAR GENERATING STATION

EMERGENCY PREPAREDNESS EXERCISE

MAY 3, 1989

# 1.0 INTRODUCTION

## 1.1 Schedule

### 1.1.1 Controller Briefing

Date: May 1, 1989

Time: (later)

Location: Administration Annex Bldg, PVNGS

### 1.1.2 Exercise

Date: May 3, 1989

Time: Normal Working Hours (0700-1530)

### 1.1.3 Utility Critique

Date: May 3, 1989

Time: 1400

Location: Administration Annex Bldg, PVNGS

### 1.1.4 NRC Critique

Date: May 5, 1989

Time: (later)

Location: (later)

### 1.1.5 NRC Exit

Date: May 5, 1989

Time: (later)

Location: (later)

## 1.2 Participating Agencies

### 1.2.1 Utility

Palo Verde Nuclear Generating Station (PVNGS)

Arizona Public Service (APS)

### 1.2.2 Federal

Federal Emergency Management Agency (FEMA), Region V

Nuclear Regulatory Commission (USNRC), Region V

National Weather Service (NWS)

### 1.2.3 State

Arizona Division of Emergency Services (ADES)

Arizona Radiation Regulatory Agency (ARRA)

Arizona Department of Public Safety (DPS)

### 1.2.4 County

Maricopa County Department of Civil Defense and Emergency Services (MCDCD&ES)

Maricopa County Sheriff's Office (MCSO)

### 1.2.5 Volunteer Agencies

American Red Cross (ARC)

### 1.2.6 Support Organizations

Maryvale Samaritan Hospital

## 1.3 Purpose

1.3.1 To conduct an exercise that includes the mobilization of licensee, state, county personnel and resources to adequately verify the capability to respond to an emergency at the Palo Verde Nuclear Generating Station.

1.3.2 To satisfy the requirements of 10 CFR 50, Appendix E, guidance in NUREG 0654/FEMA REP-1, Rev. 1, and 44 CFR 350.9.

## 1.4 Acronyms and Abbreviations

AC - Alternating Current

ACAD - Automated Control Access Device

ADES - Arizona Division of Emergency Services

ADV - Atmospheric Dump Valve

AFAS - Auxiliary Feedwater Actuation Signal

AFW - Auxiliary Feedwater

AHU - Air Handling Unit

AO - Auxiliary Operator

APS - Arizona Public Service

ARC - American Red Cross

ARRA - Arizona Radiation Regulatory Agency

AUX - Auxiliary

BLDG - Building

BO- - Control Board Number (Control Room)

C- - PVNGS Controller Number

CAS - Central Alarm Station

CEA - Control Element Assembly

CEAC - Control Element Assembly Computer

CEC - Corporate Emergency Center

CET - Core Exit Thermocouple

CIAS - Containment Isolation Actuation Signal

CM - Contingency Message

CND - Condenser

CNTMT - Containment

CNTRLLR - Controller

1.4 Acronyms and Abbreviations (Continued)

COND - Condensate

CONT/CNT -Continued

CPIAS - Containment Purge Isolation Actuation Signal

CR - Control Room

CSAS - Containment Spray Actuation Signal

DNBR - Departure From Nucleate Boiling Ratio

DPS - Department of Public Safety

EBS - Emergency Broadcast System

EC - Emergency Coordinator

ECCS - Essential Core Cooling Systems

EDT - Equipment Drain Tank

EMC - Emergency Maintenance Coordinator

EMT - Emergency Medical Technician

ENS - Emergency Notification System

EOC - Emergency Operations Center

EOD - Emergency Operations Director

EOF - Emergency Operations Facility

EPIP - Emergency Plan Implementing Procedure

EPZ - Emergency Planning Zone

ERFDADS - Emergency Response Facility Data Acquisition and Display System

ERT - Emergency Repair Team

ESF - Engineered Safety Feature

FEMA - Federal Emergency Management Agency

FNC - Forward News Center

F.T. - Fire Team

1.4 Acronyms and Abbreviations (Continued)

GE - General Emergency

GLE - Government Liaison Engineer

GPM - Gallons Per Minute

HPSI - High Pressure Safety Injection

IAW - In Accordance With

IST - Inplant Survey Team

JENC - Joint Emergency News Center

JPIP - Joint Public Information Procedure

KI - Potassium Iodide

LLEA - Local Law Enforcement Agency

LPSI - Low Pressure Safety Injection

MCDCD&ES - Maricopa County Department of Civil Defense and Emergency Services

MCSO - Maricopa County Sheriff's Office

MOV - Motor Operated Valve

MPH - Miles Per Hour

MSG - Message

MSIS - Main Steam Isolation Signal

MT - Maintenance Technician

NAN - Notification Alert Network

NCW - Nuclear Cooling Water

NOUE - Notification of Unusual Event

NRC - Nuclear Regulatory Commission

OSC - Operations Support Center

PA - Protected Area

PAB - Protected Area Boundary

1.4 Acronyms and Abbreviations (Continued)

PAG - Protective Action Guideline

PAR - Protective Action Recommendation

PASS - Post-Accident Sampling System

PI- - Public Information Controller Number

PPM - Parts Per Million

PVNGS - Palo Verde Nuclear Generating Station

PZR - Pressurizer

RAC - Radiological Assessment Coordinator

RAS - Recirculation Actuation Signal

RCA - Radiologically Controlled Area

RCC - Reception and Care Center

RCP - Reactor Coolant Pump

RCS - Reactor Coolant System

RDT - Reactor Drain Tank

REAT - Radiological Emergency Assessment Team

REP - Radiation Exposure Permit

RERV - Radiological Emergency Response Vehicle

RMS - Radiation Monitoring System

RMWT - Reactor Makeup Water Tank

RPC - Radiological Protection Coordinator

RPM - Radiation Protection Monitor

RPS - Reactor Protection System

RPT - Radiation Protection Technician

RTL - Repair Team Leader

RVLMS - Reactor Vessel Level Monitoring System

1.4 Acronyms and Abbreviations (Continued)

RWCO - Radwaste Control Room Operator

RWO - Radwaste Operator

RWT - Refueling Water Tank

RWT - Radwaste Technician

Rx - Reactor

SAE - Site Area Emergency

SAS - Secondary Alarm Station

SD - Security Director

SEAS - Safety Equipment Active Status

SEC - Security

SEIS - Safety Equipment Inactive Status

SESS - Safety Equipment Status System

S/G - Steam Generator

SIAS - Safety Injection Actuation Signal

SIT - Safety Injection Tank

SS - Shift Supervisor

SSC - Security Shift Captain

STSC - Satellite Technical Support Center

SWGR - Switchgear

Tave - Average Reactor Coolant Temperature

Tc - Reactor Coolant Cold Leg Temperature

Th - Reactor Coolant Hot Leg Temperature

TOC - Technical Operations Center

TSC - Technical Support Center

U1 - Palo Verde Unit 1

1.4 Acronyms and Abbreviations (Continued)

U2 - Palo Verde Unit 2

U3 - Palo Verde Unit 3

VCT - Volume Control Tank

WRF - Water Reclamation Facility.

## 2.0 EXERCISE OBJECTIVES AND EXTENT OF PLAY

### 2.1 Objectives

#### 2.1.1 PVNGS/APS Onsite Facilities

**A. General Objectives**

- Demonstrate adequacy of the Emergency Plan and Emergency Plan Implementing Procedures both in terms of management control of an emergency situation and the workability of the procedures at all levels.

- Demonstrate ability to respond to an emergency situation initiated during normal day-shift hours (7:00 AM - 3:30 PM).

- Demonstrate ability to activate PVNGS/APS emergency response facilities in a timely fashion.

- Demonstrate functional adequacy of the PVNGS/APS emergency response facilities, including communications links and equipment.

- Demonstrate ability of key personnel to make timely and effective decisions with respect to a radiological emergency.

- Demonstrate methods established to maintain adequate security access control to emergency facilities.

- Demonstrate ability to maintain timely and accurate information on status boards.

- Demonstrate ability to provide first aid and initial care to a contaminated injured individual and provide associated radiological and contamination controls.

B. **Control Room (CR)/Satellite Technical Support Center (STSC) [Simulator]**

- Demonstrate ability to assess plant conditions.

- Prior to TSC activation, demonstrate ability of Shift Supervisor/Onshift Emergency Coordinator to classify events per EPIP-02.

- Prior to TSC/EOF activation, demonstrate ability to identify projected trends and potential consequences.

- Demonstrate ability to take corrective actions to control the situation and mitigate the consequences.

- Demonstrate ability to alert and notify PVNGS emergency response personnel in a timely manner.

- Prior to EOF activation, demonstrate ability to make initial notifications to state and county agencies within 15 minutes of an emergency declaration and the NRC immediately thereafter.

- Prior to EOF activation, demonstrate ability to provide follow-up information as requested by offsite agencies.

- Prior to TSC/EOF activation, demonstrate ability to determine actual or potential onsite and offsite radiological conditions including performance of initial dose projections and preparation for deployment of field monitoring teams.

- Prior to EOF activation, demonstrate ability to make timely Protective Action Recommendations to offsite agencies.

- Demonstrate ability to effectively transfer responsibilities from the Onshift Emergency Coordinator to the Onsite Emergency Coordinator and inform the emergency response organization per EPIP-11.

B. Control Room (CR)/Satellite Technical Support Center (STSC) [Simulator] (Continued)

- Demonstrate the ability to maintain a timely and accurate log of events.

C. Technical Support Center (TSC)

- Demonstrate ability to effectively transfer responsibilities from the Onshift Emergency Coordinator to the Onsite Emergency Coordinator and inform the emergency response organization per EPIP-11.

- Demonstrate effective direction and control of onsite monitoring and repair teams.

- Demonstrate ability to perform health physics practices including contamination control and routine habitability surveys.

- Demonstrate ability to receive and analyze onsite/inplant radiological data.

- Demonstrate capability of the Onsite Emergency Coordinator to classify events per EPIP-02.

- Demonstrate ability to obtain adequate plant documents, drawings, plans and procedures in support of Control Room activities.

- Demonstrate ability to manage onsite emergency response functions, emergency maintenance, safety and hazards control, engineering/technical analysis, radiation protection and reactor analysis.

- Demonstrate ability to establish (and if requested by NRC) maintain communications with the NRC regarding health physics and operations.

## D. Operations Support Center (OSC)

- Demonstrate effective command and control of the OSC personnel by the OSC Coordinator.

- Demonstrate ability of the OSC Coordinator to effectively communicate with the TSC on team assignment and status.

- Demonstrate effective assembly and dispatch of inplant monitoring and repair teams in a timely manner.

- Demonstrate ability to implement personnel dosimetry for emergency response personnel.

- Demonstrate proper utilization and operation of self-contained breathing apparatus (SCBA) or other respiratory protection by field teams.

- Demonstrate ability to gather samples in a field setting.

- Demonstrate capability to perform contamination control, habitability surveys and maintain doses ALARA.

- Demonstrate ability of field monitoring teams to follow plume monitoring directions.

E. Emergency Operations Facility (EOF)

- Demonstrate ability to maintain awareness of plant conditions, projected trends and potential consequences.

- Demonstrate ability to notify state and county agencies within fifteen (15) minutes of an emergency declaration.

- Demonstrate ability to provide follow-up information to offsite agencies.

- Demonstrate ability to make Protective Action Recommendations (PAR's) to offsite agencies.

- Demonstrate ability to direct offsite field monitoring teams for the purposes of tracking plume passage.

- Demonstrate ability to perform onsite and offsite dose assessment and projections in a timely manner.

- Demonstrate ability of the Emergency Operations Director to coordinate onsite and offsite emergency response activities.

- Demonstrate ability to provide approved information on inplant and onsite conditions/activities for release to the media/public.

2.1.2 State of Arizona/County of Maricopa Exercise Objectives

GROUP A.

EMERGENCY CLASSIFICATION LEVELS

1. Demonstrate the ability to monitor, understand and use Emergency Classification Levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECL's as required by the scenario. The four ECL's are: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.

MOBILIZATION OF EMERGENCY PERSONNEL

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

DIRECTION AND CONTROL

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

COMMUNICATIONS

4. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.

FACILITIES EQUIPMENT AND DISPLAYS

5. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.

EMERGENCY WORKER EXPOSURE CONTROL

6. Demonstrate the ability to continuously monitor and control emergency worker exposure.

GROUP A. (Continued)

FIELD RADIOLOGICAL MONITORING

7. Demonstrate the appropriate equipment and procedures for determining field radiation measurements.

8. Demonstrate the 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.

9. Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses.

PLUME DOSE PROJECTION

10. Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure, based on plant and field data.

PLUME PROTECTIVE ACTION DECISIONMAKING

11. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAG's, availability of adequate shelter, evacuation time estimates and other relevant factors.

ALERT, NOTIFICATION AND EMERGENCY INFORMATION

12. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate state and/or local official(s).

13. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.

GROUP A. (Continued)

ALERT, NOTIFICATION AND EMERGENCY INFORMATION (Continued)

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

15. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion.

GROUP B.

USE OF KI

16. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers and institutionalized persons, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.

IMPLEMENTATION OF PROTECTIVE ACTIONS

18. Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependant persons, special needs populations, handicapped persons and institutionalized persons).

19. Demonstrate the ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ.

TRAFFIC CONTROL

20. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

GROUP B. (Continued)

RELOCATION CENTERS (REGISTRATION, MONITORING, CONGREGATE CARE AND DECONTAMINATION)

21. Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees.

22. Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees.

MEDICAL SERVICES (TRANSPORTATION AND FACILITIES)

23. Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured or exposed individuals.

24. Demonstrate the adequacy of medical facilities, equipment, procedures and personnel for handling contaminated, injured or exposed individuals.

GROUP C.

SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)

26. Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies' assistance.

## 2.2 Extent of Play

2.2.1 Activation of all Emergency Response Facilities (ERF's) in accordance with plans and procedures.

- PVNGS Unit 2 Control Room and STSC (activities to be performed in the Simulator), TSC, OSC, EOF and FNC.
- State EOC/TOC including:
  - Public Inquiry Center
  - Joint Emergency News Center (JENC)
- Maricopa County EOC
- REAT Center (ARRA Offices)
- REAT Forward Center
- Maricopa County Sheriff's Office (MCSO) On-Scene Command Post
- Reception and Care Center (1)

2.2.2 Response

- Use of Notification Alert Network (NAN)
- Alert government response organizations.
- Mobilize state and county response agencies.
- Deploy state and county response organization.
- Evacuation of representative resident group (25 to 30 individuals).
- Evacuation of representative resident group with special needs (approximately 2-3 individuals).
- Road Block/Access Control Points (2) demonstrate function, then secure.

2.2.2 Response (Continued)

- Radiation Field Monitoring Teams (3) utility, (3) state (1 of the state teams to be detailed for evacuee monitoring).

- Use of primary and backup communications links as required by the exercise.

- The siren portion of the PVNGS Site Warning Siren/Public Address System will be SIMULATED. The public address portion of this system will be used.

- Use of the Offsite Siren Activation System will be SIMULATED. Siren sounding will not occur, EBS messages will be generated and distributed, but not broadcast. The warnings will be disseminated among the exercise participants through the emergency communications system and to the representative resident group through a supplemental warning team for the evacuation.

- Onsite Evacuation, Assembly and Accountability will be simulated.

- One (1) of the onsite monitoring teams will demonstrate the donning and removal of protective clothing before going into the field. All other teams will simulate the use of protective clothing.

- Inplant teams will don protective clothing as appropriate to the scenario.

- Two (2) simulated contaminated injured individuals will be transported offsite for treatment at Maryvale Samaritan Hospital.

- The JENC staff will produce coordinated press releases and conduct oral briefing of actual and simulated media representatives.

## 2.3 PVNGS Procedures Execution List

| | |
|---|---|
| EPIP-02 | Emergency Classification |
| EPIP-03 | Notification of Unusual Event Implementing Actions |
| EPIP-04 | Alert, Site Area and General Emergency Implementing Actions |
| EPIP-11 | Technical Support Center/Satellite TSC Activation |
| EPIP-12 | Operations Support Center Activation |
| EPIP-13 | Emergency Operations Facility Activation |
| EPIP-14 | Dose Assessment |
| EPIP-15 | Protective Action Guidelines |
| EPIP-18 | Emergency Exposure Guidelines |
| EPIP-19 | Onsite Evacuation |
| EPIP-20 | Personnel Assembly and Accountability |
| EPIP-24 | Security |
| EPIP-26 | Potassium Iodide (KI) Administration |
| EPIP-27 | Post Accident Sampling and Analysis |
| EPIP-30 | Radiological Emergency Response Vehicle Operations |
| EPIP-31 | Recovery |
| EPIP-33 | Offsite Assistance |

## 3.0 EXERCISE SCENARIO

### 3.1 Initial Conditions

Unit 2 is in power operation. Power level has been greater than 90% for the last 180 days. Current power level is 100%, Xenon (Xe) is at equilibrium. Reactor Coolant activity is 0.5 uCi/gm dose-equivalent I-131. Unit 1 is in a maintenance outage and Unit 3 is in a refueling outage.

In anticipation of an upcoming refueling, spent fuel is being shuffled and reracked in the Unit 2 Fuel Building. As a result of previous work in and around the spent fuel pool, the spent fuel handling machine and floor areas adjacent to the spent fuel pool are contaminated. Two Auxiliary Operators (AOs) are working on the spent fuel handling machine.

A power access purge is in progress in anticipation of a containment entry by chemistry at midday to perform monthly safety injection tank (SIT) boron concentration sampling in accordance with (IAW) Technical Specifications (Tech Spec) Item #4.5.1.b.

As a result of a spill of sulfuric acid that occurred on the swing shift May 2nd, final cleanup and recovery actions are taking place within the acid tank dike on the north side of Unit 1. Fire Protection shift team has been standing by as a precaution until completion of this process, which is expected to be finished by 0900.

The following Unit 2 equipment is out of service or under maintenance:

The "A" High Pressure Safety Injection (HPSI) pump (SIA-P02) was tagged-out at 0600 for discharge flange gasket replacement and is undergoing disassembly. This places the Unit in a 72 hour Limiting Condition for Operation (LCO) and the pump work is anticipated to take an additional 8 hours to complete.

The "E" charging pump is tagged-out and the motor is being removed for repair. The motor should be rigged off by 0730 and disassembly for inspection and assessment of damages will begin.

3.1 Initial Conditions (Continued)

The following surveillance tests are to be performed on this shift:

42ST-2SM01, Seismic Instrument Channel Checks

42ST-2SI03, Containment Spray Pump Operability

3.2 Narrative Summary

This scenario is based upon the failure of a weld on the reactor coolant system (RCS) hot leg #1. This weld will begin to leak and shortly thereafter fail catastrophically, resulting in a large-break Loss of Coolant Accident (LOCA) to the containment, fuel damage, liberation of radioactivity and hydrogen to the containment. Ignition of this hydrogen will breach containment through the power access purge system and result in a release to the environment.

As a result of the initiating fire in the "B" train Essential Core Cooling System (ECCS) 4160v switchgear (PBB-S04), the Cardox system discharges carbon dioxide ($CO_2$) into the switchgear room. This fire burning >10 minutes should produce a declaration of NOTIFICATION OF UNUSUAL EVENT (NOUE). PBB-S04 is grounded and isolated, the entire "B" train of ECCS and "B" charging pump are not available for makeup. The "A" train of HPSI is disabled for maintenance.

The Auxiliary Operators (AOs) handling spent fuel in the Fuel Building will experience a sudden and unexpected spent fuel machine motion as a result of an interlock failure. This improper motion will cause the bending and breaking of a spent fuel bundle attached to the hoist and not fully inserted into a rack. The fuel bundle will release radioactivity to the Fuel Building. As a result of the sudden bridge movement and their haste to evacuate the Fuel Building, both AOs are injured and contaminated. The fuel handling accident with release of radioactivity to the Fuel Building should result in a declaration of ALERT.

Later, an RCS hotleg will begin to leak >60 gpm (greater than the single remaining charging pump capacity), resulting in loss of inventory. As RCS level continues to decrease, a Containment Isolation Actuation Signal (CIAS) and Safety Injection Actuation Signal (SIAS) will occur and both HPSI trains "A" and "B" are inoperative. On the CIAS, the inboard power access purge outlet isolation valve (CP-UV-4B) will jam in the open position.

3.2 Narrative Summary (Continued)

Operators should begin to shutdown and depressurize to allow Low Pressure Safety Injection (LPSI) feed as inventory and subcooling are being lost. This should result in a declaration of SITE AREA EMERGENCY (SAE) due to uncontrolled loss of inventory >50 gpm and failure of both trains of ECCS to actuate when required and maintain subcooling. No high-pressure feed to the RCS will exist temporarily.

Suddenly, the leaking hotleg will fail catastrophically, Safety Injection Tanks (SITs) will inject, but the core uncovers. This will produce fuel damage and the liberation of hydrogen ($H_2$) to the containment. As RCS pressure reaches the LPSI injection point, an electrical fault in the 86 relay will trip the running LPSI "A" pump, preventing feed unless the sole operable Containment Spray (CS) "A" pump is secured from containment spray and lined up for RCS feed. Shortly after the core uncovers, LPSI "A" may be recovered to feed the RCS.

A hydrogen ignition occurring in the containment will open a release path to the environment through the open power access purge inboard isolation valve, CP-UV-4B, power access purge outboard isolation valve, CP-UV-5B, (disrupted by the pressure wave) and an improperly seated refueling purge exhaust fan outlet valve, CPN-MO-5B, to the plant vent stack.

The radiological release will continue through this path until equalization of containment pressure removes the driving pressure. Any time after this equalization, repair teams may close CP-UV-5B or CPN-MO-5B to restore containment integrity.

The scenario will be mitigated by:

- Action to restore the "A" LPSI pump (SIA-P01).

- Floodup, cooldown and stabilization of the plant.

- Closure of the stuck-open power access purge outboard valve or refueling access purge fan outlet valve.

- Performance of offsite radiological monitoring and evaluation.

Major Sequence of Events

0700 Initial Conditions

0730 Fire in the "B" ECCS 4160 switchgear (PBB-S04) on the 100' elevation of the Control Building. The Cardox system will discharge and the PBB-S04 bus will be deenergized for the remainder of the scenario.

0745 A **NOTIFICATION OF UNUSUAL EVENT** should be declared based upon a fire in the unit lasting more than 10 minutes.

0830 A jammed interlock on the spent fuel handling machine results in the sudden and unexpected motion of the machine with a spent bundle halfway into a rack, bending the bundle and releasing radioactivity to the Fuel Building. The two AOs operating the machine are injured and contaminated while evacuating the Fuel Building. An **ALERT** should be declared due to a fuel handling accident resulting in the release of radioactivity to the Fuel Building.

0915 The two injured contaminated AOs are sent to Maryvale Samaritan Hospital by ambulance.

0925 Containment sumps and charging/letdown mismatch indicate loss of RCS inventory to the containment of approximately 20 gpm.

0930 RCS leakage increases rapidly to 60 gpm. The one operable charging pump cannot keep up. "B" HPSI is disabled by the fire, "A" HPSI is inoperable. As inventory is lost and subcooling is threatened, a **SITE AREA EMERGENCY** should be declared based upon an uncontrolled loss of RCS inventory >50 gpm and failure of both trains of an ECCS system to actuate when required to maintain subcooling. Operators should begin cooldown and depressurization to allow "A" LPSI injection.

1000 On the CIAS, the inboard power access purge isolation valve, CP-UV-4B, has jammed in the open position.

Major Sequence of Events (Continued)

1030 The leaking hotleg suddenly fails catastrophically without feed, vessel water level drops and uncovers the core. When RCS pressure reaches a level low enough for SITs to inject, they do, but the reflood is only temporary as the injected water runs out the break. When pressure subsides enough to allow "A" LPSI to inject, an electrical fault will trip the pump. Radioactivity from damaged fuel and hydrogen are released to the containment. A GENERAL EMERGENCY should be declared as a result of Reactor Vessel Level Monitoring System (RVLMS) indication of voiding in the outlet plenum, uncontrolled loss of RCS inventory >50 gpm and containment $H_2$ concentration >3.5% by volume.

1100 A hydrogen "burn" occurs in the containment, the resultant pressure spike unseats the outboard power access purge valve, CP-UV-5B and allows a release path for contaminants through the purge system and the plant stack. The "A" LPSI pump may be recovered after this time and the core reflooded.

1200 There is no remaining differential pressure to drive the release from the containment and the release begins to decline. Maintenance teams may now physically close the outboard power access purge isolation valve, CP-UV-5B, or the refueling access purge fan outlet valve, CPN-MO-5B, to restore containment integrity.

1300 (Approximate) When the Plant is cooled-down and stabilized, the outboard isolation valve or the refueling fan outlet valve is closed and radiological monitoring teams have satisfactorily demonstrated their actions--the Exercise is terminated.

# 4.0 DUTIES OF CONTROLLERS AND PLAYERS

## 4.1 Exercise Ground Rules

### 4.1.1 Rules for Controllers

- The Simulator and observation deck will be used as the Unit 2 Control Room and the Unit 2 STSC, respectively.

- Several plant and radiological parameters will be available at predetermined times during the Exercise or upon request at any time. These plant parameters will be available in the Simulator, STSC, EOF and TSC. Radiological data will also be available in the OSC, simulating data obtained from the Radiation Protection Office.

- Simulator plant data and hard copy plant data may vary due to operator action. Players in Emergency Response Facilities should base their actions on hard copy data.

- Know your player's scenario script thoroughly.

- Know the overall Controller Organization and to whom you must communicate during the course of the scenario.

- Keep the play on schedule by checking your script.

- Issue the messages on time. Ensure the players understand the message.

- Issue contingency messages only if required to keep the play on schedule (as indicated in the contingency message instructions).

- Call your Lead Controller immediately for advice if in doubt about what to do.

- Allow the players reasonable flexibility to do their functions and demonstrate their skill, knowledge and initiative.

4.1.1 Rules for Controllers (Continued)

- Call your Lead Controller immediately for advice if the players depart significantly from the scenario script. If necessary, intervene with player action and put play back on track.

- Stop play and notify your Lead Controller if plant or personnel safety is jeopardized.

- Read the Player's Rules.

- Note the strengths, weaknesses and areas for improvement of player's actions. Use the evaluation packages provided separately.

- Do not criticize the player's actions during the play.

- Do not guide player's actions by offering suggestions, reminders, instructions or more scenario information than they have earned through their simulations and problem solving.

- Be on station at least 20 minutes prior to any player action commencing. Locate the phone/radio that you will be utilizing to communicate with your Lead Controller. Check with your Lead Controller to test communications and synchronize your watch and the facility clock to the Exercise Lead Controller's time to ensure correct event timing.

- Non-players are exempt from acting on simulated radiation levels specified for the emergency exercise. However, normal radiological control practices shall be followed throughout the course of the Exercise. (REP No. for the Exercise is: 2-89-9998)

4.1.1 Rules for Controllers (Continued)

- Identification of personnel:

| | | |
|---|---|---|
| PLAYERS: | Red arm bands in addition to security badging. | |
| CONTROLLERS: | Green arm bands in addition to security badging. | |
| EVALUATORS: | NRC - | NRC badges in addition to security badging. |
| | FEMA - | Blue arm bands or badges in addition to security badging. |
| OBSERVERS: | Yellow arm bands in addition to security badging. | |

- Evaluators should interact with the players <u>through</u> the Controllers and not intervene directly into player actions. (An exception to this is a brief question for purposes of clarification.)

- Seek comments and recommendations from the players at the end of play.

- Attend the post-Exercise critique session to provide your comments and recommendations. Complete and sign the evaluation form and provide it to the ANPP Emergency Planning and Fire Protection Manager.

### 4.1.2 Rules for Players

All Players must read and follow the rules given below. This is important to the successful demonstration of emergency response capabilities.

- CONTROLLERS serve an active role in the Exercise by providing messages or instructions to players. They may also serve to initiate certain actions to assure continuity of the events described in the Exercise scenario. They also serve as EVALUATORS.

- EVALUATORS will be noting all actions, both good and bad. They will be the main source of input to the ANPP critique.

- FEDERAL EVALUATORS from FEMA and the NRC will be critiquing the Exercise and the performance of this scenario.

Identification of personnel:

| | | |
|---|---|---|
| PLAYERS: | Red arm bands in addition to security badging. | |
| CONTROLLERS: | Green arm bands in addition to security badging. | |
| EVALUATORS: | NRC - | NRC badges in addition to security badging. |
| | FEMA - | Blue armbands or badges in addition to security badging. |
| OBSERVERS: | Yellow arm bands in addition to security badging. | |

- Identify yourself by name and function to the Exercise Controllers and Federal Evaluators.

4.1.2 Rules for Players (Continued)

- The Exercise will be conducted in real time.

- Controllers/Evaluators will be evaluating performance versus objectives.

- Play out all actions, as much as possible, in accordance with the Emergency Plan and procedures as if it were a real emergency.

- Identify your actions to the Controller. State whether you are going to play them out or simulate them. It is recommended that you play out your actions as much as possible to convincingly demonstrate the proper emergency response.

- If you are in doubt, ask your Controller for clarification. The Controller will not prompt or coach you.

- Periodically speak out loud, identifying your key actions and decisions to the Controller and Federal Evaluators. This may seem artificial, but it will assist in the evaluation process, and is to your benefit.

- Utilize status boards, logbooks and data forms to the maximum extent possible during the exercise in order to record events and document responses. This is of extreme importance in a real-life emergency when events and actions must be reconstructed after the fact and may also be important in an evaluated exercise to clarify a performance weakness perceived by an evaluator.

- All Players should be alert to situations that may affect plant or personnel safety during the Exercise. Inform the Controller if any such situations are recognized.

4.1.2 Rules for Players (Continued)

- Any messages transmitted over communication lines shall be preceded and followed by the statement that: "THIS IS A DRILL".

- You must play as if radiation levels are actually present, in accordance with the information you have received. This will require normal radiological protective measures including the wearing of protective clothing.

- Non-players are exempt from acting on simulated radiation levels specified for the emergency exercise. However, normal radiological control practices shall be followed throughout the course of the Exercise (REP No. for the Exercise is: 2-89-9998).

- Accountability will be simulated.

- Onsite evacuation will be simulated.

- Use of the EBS and EPZ sirens will be simulated.

- Use of the siren portion of the PVNGS Site Warning Siren/Public Address System will be simulated. The public address portion of the system will be used.

- Several plant and radiological parameters will be available at predetermined times during the Exercise, or upon request at any time. These plant parameters will be available in the simulator, STSC, EOF and TSC. Radiological parameters will also be available in the OSC, simulating data obtained from the Radiation Protection office.

- For purposes of the Exercise, the simulator and observation deck will be used as the Unit 2 Control Room and the Unit 2 STSC, respectively.

4.1.2 Rules for Players (Continued)

- Simulator plant data and hard copy plant data may vary due to operator action. Players in Emergency Response Facilities should base their action on hard copy data.

- Keep a list of items which you feel will improve your plans and procedures. Provide this to your Lead Player (Facility Manager or Team Leader). Lead Players will ensure these are considered. If necessary, they will identify these items to the Controller. Remember, one of the main purposes of the Exercise is for **YOU**, the player, to assure yourself that you are adequately prepared. Areas for improvement or lessons learned, when identified, will improve your overall emergency planning and preparedness.

### 4.1.3 Rules for Observers

- The event times and scenario are confidential and should be kept confidential during the Exercise. Do not discuss this with the players.

- Observers should not participate in the Exercise or interfere with actions taken by the Exercise Players, Controllers and Evaluators.

- Identification badges are to be worn on the upper front of the torso, so as to be clearly visible. Badges should be returned at the end of the Exercise or critique. Yellow arm bands must be worn at all times during the Exercise. Identify yourself to the Exercise Controllers.

- If you have questions, contact the Controller of the location you are observing.

- Observers inside the RCA shall adhere to normal radiological controls practices.

## 4.2 Controller Assignments

| Controller Number | Station | Name | Phone Number |
|---|---|---|---|
| C-1 | CR Simulator Chief | Frank Casella | 2559 |
| C-1a | CR Simulator | Bob Wells | 2559 |
| C-1b | CR Simulator Operator | Rick Henry | 2559 |
| C-1c | CR Simulator Operator | Jim Stavely | 2559 |
| C-1d | CR Simulator | Doug Stover | 2559 |
| C-2 | EOF (EOD) - | Tom Barsuk | 1873 |
| C-2a | EOF (RAC) | Kevin Kutner | 6185 |
| C-2b | EOF | Gary Waldrep | 1873 |
| C-3 | TSC (EC) Exercise Lead Controller | Harry Bieling | 2047 |
| C-3a | TSC (EC) | Bob Merlino | 2047 |
| C-3b | TSC (EC) | John Allen | 2047 |
| C-3c | TSC (RPC) | Ron Gentry | 2047 |
| C-3d | TSC | Dan Marks | 2047 |
| C-4 | OSC | Tom Ashley | 1122 |
| C-4a | OSC/Fire/Med. | Scott Dodd | 1122/radio |
| C-4b | Hospital Med. Team | Ray Duncan | 239-2222 |
| C-4c | OSC Repair Team | Eric Shouse | 1122/radio |
| C-4d | OSC Repair Team | Ken Byers | 1122/radio |
| C-4e | OSC Repair Team | Tom Stahler | 1122/radio |
| C-4f | OSC Repair Team | Miles Koudelka | 1122/radio |
| C-4g | OSC Coordinator | Carl Churchman | 1122 |
| C-5 | STSC (Simulator) | Pete Frascino | 2544 |

4.2 Controller Assignments (Continued)

| Controller Number | Station | Name | Phone Number |
|---|---|---|---|
| C-6 | Security Shift Captain | Bengino Bacchi | 1681 |
| C-6a | Security | John Hues | 1681 |
| C-7 | Radiation Field Assessment Team | Harold Lines | 6192/radio |
| C-7a | Radiation Field Assessment Team | Jay Vincent | 6192/radio |
| C-7b | Radiation Field Assessment Team | Paul Stowe | 6192/radio |
| C-8 | Chemistry Sample and Lab | Terry Warren | 1122/1266 |
| PI-1 | JENC Work Room | Bill Wolfe | 231-6351 |
| PI-1a | JENC Media Room | Mark Fallon | 231-6352 |
| PI-2 | Forward News Center | Elaine Perrott | 81-1530<br>250-1530 |

LEGEND: C- = PVNGS Controllers
PI-= Public Information Controllers

4.3 PVNGS/APS Observers

| | |
|---|---|
| Mary Pioggia | Floating (All Facilities) |
| Neal Willsey | Floating (All Facilities) |
| Elaine Perrott | Floating (All Facilities--after FNC secured) |

4.4 Exercise Evaluation Form

Exercise evaluation forms are provided separately for each Controller/Evaluator. Complete these forms prior to the critique.

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0700 | 1 | C-1<br>All | SS<br>All | <u>Initial Conditions:</u><br>Unit 2 is operating at 100% power Power level has been >90% for the past 180 days. Xenon is at equilibrium. Reactor Coolant System (RCS) activity is 0.5 uCi/gm Dose Equivalent (DE) I-131. Unit 1 is in a maintenance outage and Unit 3 is in a refueling outage.<br><br>A Power Access Purge is in progress in anticipation of a containment entry by chemistry technicians for routine Safety Injection Tank (SIT) sampling. A spill of sulfuric acid occurred outside Unit 1 on the previous day and is in the final stages of being cleaned up.<br><br>The following Unit 2 equipment is out of service (OOS) or undergoing maintenance:<br><br>"A" High Pressure Safety Injection (HPSI) pump, SIA-P02, was tagged-out at 0600 to replace a blown discharge flange gasket. This places the Unit in a 72 hour Limiting Condition for Operation (LCO). The flange is broken open, being cleaned, repairs are expected to take another 8 hours. | <u>Unit 2 Control Room (CR) [Sim]:</u><br>Shift Supervisor (SS): Review initial conditions, brief the operations shift.<br><br>Continued -- next page... | | 0700 - (All)<br>Distribute the initial conditions to all Facility Managers and Key Players as they are manned during the Exercise.<br><br>0700 - (C-4a)<br>The purpose of this simulated spill cleanup is to have the shift fire protection squad enter the Protected Area to monitor the cleanup and be standing by north of Unit 1. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0700 Cnt. | 1 | C-1 All | SS All | Initial Conditions: (Continued)<br><br>The following surveillance test items are to be performed on this shift:<br><br>42ST-2SM01, Seismic Instrument Channel Checks.<br><br>42ST-2S103, Containment Spray Pump Operability. | | | 0700 (C-1a) Shift Operators (Simulator) should begin these procedures shortly after assuming board responsibility |
| 0700 | 2 | C4a | FT | The Fire Protection Shift Team is to enter the Protected Area and provide coverage of the sulfuric acid spill cleanup outside Unit 1. | Fire Protection Shift Team:<br>Enter the Protected Area (PA) with the truck and equipment and stand by North of Unit 1. | | 0700 (C-4a) Ensure the Shift Team enters the PA. |
| 0730 | 3 | C-1 | SS | Fire alarms are received on the CR (Sim) CRT:<br><br>ALARM E11D ZONE 5B B SWGR<br>ALARM E09D CO2 ZONE 5B B SWGR<br><br>4160V Vital AC bus PBB-S04 deenergizes (feeder breakers open). | U2 CR (Sim):<br>SS: Dispatch Auxiliary Operator (AO) to verify the fire alarm(s). Respond to the loss of PBB-S04, stabilize the electrical plant. | A | 0730 - (C-1) If the Simulator is not operating. |
| 0735 | 4 | C4c | AO | AO dispatched to investigate fire alarms in the "B" Swgr finds smoke and evidence of $CO_2$ system discharge.<br><br>Continued -- next page... | Fire Scene:<br>AO: Report findings to Unit 2 CR (Sim).<br><br>U2 CR (Sim):<br>SS: Notify Fire Protection and Security. | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0735 Cnt. | | | | AO investigating fire alarms reports smoke and $CO_2$ discharge | <u>Security:</u><br>Ensure that Fire Protection is notified. Dispatch Security Officer(s) to the scene.<br><br><u>Fire Protection Shift Team:</u><br>Respond to the fire scene. | | |
| 0740 | S | C4a | FT | Fire Protection shift team arrives at fire scene, verifies operation of the $CO_2$ system. Sets up for firefighting actions. Smoke and $CO_2$ vapor are apparent at the swgr.<br><br>Continued -- next page... | <u>Fire Protection Shift Team:</u><br>Set up and prepare for entry to the switchgear after the 20 min. "soak" required by Standard Operating Procedures (SOPs). Report findings and status to the Unit 2 CR (Sim).<br><br><u>Unit 2 CR/Satellite Technical Support Center (STSC) [Sim]:</u><br>SS: Continue to evaluate the situation and take corrective actions. Declare a NOTIFICATION OF UNUSUAL EVENT (NOUE) as a result of a fire in the Unit lasting more than ten minutes. Direct the STSC Communicator to make onsite an offsite notifications IAW EPIP-03.<br><br>STSC Communicator: Make onsite and offsite notifications<br><br>Radiation Protection Monitor (RPM): Set up for dose assessment and Radiation Protection Technician (RPT) direction. | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0740 Cnt. | | | | Fire Team (FT) arrives at the scene (Continued) | Operations Support Center (OSC)<br>Partial Activation Begins. | | |
| 0800 | 6 | C4a | FT | Fire Team enters the "B" Switchgear room and inspects the damage. | Fire Team:<br>Ventilate and enter the swgr IAW established procedures. Take necessary extinguishing actions. Report findings to the U2 CR (Sim).<br><br>U2 CR/STSC (Sim):<br>Continue to evaluate the consequences of the casualty. | B | 0800 - (C-1)<br>If the SS has not declared a NOTIFICATION OF UNUSUAL EVENT (NOUE) by this time. |
| 0825 | | | | Two AOs shuffling spent fuel on the Spent Fuel Handling Machine are injured and contaminated when a spent fuel bundle is damaged. | Security:<br>Central Alarm Station (CAS): Respond to door alarm on the Fuel Bldg by dispatching officer | | |
| 0830 | | C6a | | Security Officer responding to the door alarm resulting from the hasty evacuation of the AOs from the Fuel Bldg finds the two victims in the Aux Bldg. outside the Fuel Bldg. doors. | Security:<br>Security Officer: Notify the Security Shift Captain (SSC) and CAS.<br><br>SSC: Notify the U2 CR (Sim) and Fire Protection (EMTs).<br><br>Fire Protection:<br>Shift Captain: Dispatch EMTs to the scene.<br><br>U2 CR/STSC (Sim):<br>Onshift Emergency Coordinator (O/S EC): Notify RPM and Medical (Med.).<br><br>RPM: Dispatch RPT(s) | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0835 | 7 | C4a | EMT | Initial medical appraisal is made by the EMTs. | <u>Fire Protection:</u><br>EMTs: evaluate medical situation and begin immediate treatment. Report status of victims to the CR/STSC (Sim) and Med. | | |
| 0835 | 8 | C4d | RPT | Initial radiological appraisal is made by the RPTs.<br><br><u>NOTE:</u><br>The remainder of the medical and radiological data relating to the medical casualties will be provided from the Medical Emergency Scenario <u>Appendix M.</u> | <u>Security:</u><br>Officer onscene: Establish vital area access status of the Fuel Building.<br><br>SSC: Prepare to provide Security support of handling and transport of victims. Alert the Vehicle Access Point(Sally Port)<br><br><u>RPTs:</u><br>Perform initial radiological assessment of the victims and the immediate area. Evaluate the radiological event in the Fuel Bldg. Report radiological status to the U2 CR/STSC (Sim).<br><br><u>U2 CR/STSC (Sim):</u><br>RPM: Evaluate the RPT reports and continue to direct their action. Perform initial dose assessment on the release to the Fuel Building and advise the O/S EC.<br><br>O/S EC: Perform Protective Action Recommendations (PARs) on the results of the RPMs dose assessment. Continue to monitor and respond to the situation. | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0840 | 9 | AO C4a | EMT RPT | One injured AO recounts to the EMTs or RPTs what had occurred in the Fuel Bldg. | <u>RPTs:</u><br>Continue to provide coverage of the treatment and handling of the medical victims. Report radiological conditions to the U2 CR/STSC (Sim). Begin to perform radiological assessment of the Fuel Bldg.<br><br><u>Fire Protection:</u><br>EMTs: continue treatment and stabilization of the victims, prepare the victims for movement to the U2 first aid room.<br><br><u>U2 CR/STSC (Sim):</u><br>O/S EC: Should declare an ALERT based upon a fuel damage accident releasing radioactivity to the Fuel Bldg. Direct notifications IAW EPIP-04.<br><br>STSC Communicator: make onsite and offsite notifications<br><br>RPM: Continue direction of the RPTs and dose assessment of the Fuel Bldg release.<br><br><u>Technical Support Center (TSC):</u><br>Activation Begins.<br><br><u>Emergency Operations Facility (EOF):</u><br>Activation begins. | C | 0840 - (C-4d)<br>If the RPTs don't report Fuel Bldg. information to the U2 CR /STSC (Sim). |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| | | | | Initial medical treatment has been performed and preliminary contamination control is in place. | Fire Protection:<br>EMTs: Victims are littered and readied for movement to the U2 first aid room. | D | 0845 - (C-1) If the Simulator is not operating. |
| 0845 | 10 | C4d | RPT | Radiological conditions in the Aux Bldg. at the scene of the medical emergency. | RPTs:<br>Contamination control boundaries and methodologies are established for the movement of the victims. | | |
| 0845 | 11 | C4d | RPT | Radiological conditions in the Fuel Bldg. | Radiological monitoring of the Fuel Bldg. continues. | | |
| 0900 | | C4a | | Medical emergency victims have been moved to the U2 first aid room and are being examined by site medical representatives and prepared for transport offsite by the site ambulance. | Fire Protection:<br>EMTs: treatment/stabilization and preparation for transport continues. Site ambulance is brought into the Protected Area in preparation of transport.<br><br>Medical:<br>Treatment/stabilization and preparation for transport. The offsite hospital is notified of impending transport.<br><br>Security:<br>Site ambulance is passed into the PA through the Sally Port and egress preparations are set. SSC notifies O/S EC of status. | E | 0900 - (C-1)<br>O/S EC: if ALERT has not been declared by this time. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0915 | | | | Full organization is activated and responds to the ongoing radiological incident in the Fuel Building.<br><br>Continued -- next page... | U2 CR/STSC (Sim):<br>O/S EC: Continue to maintain plant stability and evaluate the immediate consequences of the PBB-S04 fire. Take protective actions as appropriate to the dose projections of the RPM until relieved by the Emergency Coordinator (EC) from the TSC.<br><br>RPM: Continue dose assessment and RPT direction until relieved by the Radiological Protection Coordinator (RPC) and Radiological Assessment Coordinator (RAC) in the TSC.<br><br>Operations Advisor: Communicate ongoing actions with the Operations Coordinator (TSC).<br><br>TSC:<br>Emergency Coordinator (EC): Evaluate the plant conditions, relieve the O/S EC and begin to provide direction and consider protective actions.<br><br>Radiological Protection Coordinator (RPC): Assume direction and control of RPTs and inplant monitoring from the RPM. Continue to evaluate and respond to the radiological incident. | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0915 Cnt. | | | | Full Emergency Organization is activated and responds to the ongoing casualty. (Continued)<br><br>Continued -- next page... | EOF:<br><br>Emergency Operations Director (EOD): Discuss plant conditions and situation with the Government Emergency Operations Center (EOC) and Technical Operations Center (TOC).<br><br>Government Liaison Engineer (GLE): Make notifications to Government.<br><br>Radiological Assessment Coordinator (RAC): Assume dose assessment responsibility from the RPM. Continue dose assessment and projections of the Fuel Bldg release. Provide PARs to the EC.<br><br>OSC:<br><br>OSC Coordinator: Assemble and brief staff. Organize, brief and dispatch teams as directed by the TSC. | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0915 Cnt. | | | | Medical Emergency victims are transported to Maryvale Samaritan Hospital by the onsite ambulance. | RPTs:<br>One RPT rides with the victims to continue radiological monitoring and contamination control enroute to the hospital.<br><br>Fire Protection:<br>EMTs: Drive the ambulance and provide medical treatment while enroute.<br><br>Security:<br>SSC: Directs quick ambulance exit from the site. Notifies the Security Director in the TSC when the ambulance departs.<br><br>TSC:<br>Security Director: Notifies the EC of ambulance departure.<br><br>Medical:<br>Makes notification to offsite hospital that the victims are enroute. | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0925 | | C-1 | | Containment sumps alarm, charging/ letdown flow mismatch indicates an unidentified RCS leakage of 20 gpm. | U2 CR/STSC (Sim):<br>SS: Direct the assessment of the RCS leakage. Monitor plant conditions and attempt to identify the leakage source.<br><br>Operations Advisor: Update the Operations Coordinator (TSC) on plant conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, consider protective actions.<br><br>RPC: Evaluate radiological conditions, direct inplant monitoring.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite radiological consequences.<br><br>OSC:<br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | F | 0925 - (C-1) If the Simulator is not operating. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0930 | | C-1 | | RCS leakage rapidly escalates to 60 gpm. The lone operable charging pump (A) can't keep up with the loss of system inventory. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate plant conditions assist in the mitigation efforts and consider protective measures<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite radiological consequences.<br><br>OSC:<br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | G | 0930 - (C-1) If the Simulator is not operating. |
| 0935 | | C-1 | | Decreasing PZR inventory/pressure triggers SIAS and CIAS. With no HPSI available, RCS inventory and subcooling continue to decrease. | | H | 0935 - (C-1) If the Simulator is not operating. |
| 0935 | | C1a | | On the CIAS, Power Access Purge outlet inboard isolation valve, CP-UV-4B, does not close. | | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0940 | | C1a | | The RCS continues to lose inventory and subcooling. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, declare a SITE AREA EMERGENCY (SAE), based upon a loss of RCS inventory >50 gpm, a a failure of both trains of ECCS to actuate when required and maintain subcooling. Direct notifications.<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite radiological consequences.<br><br>OSC:<br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | I | 0945 - (C-3a) (Approximate time)-When the EC orders accountability and site evacuation. |

# EXERCISE CONTROLLER GUIDE

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 0950 | | C1a | | Operators begin a rapid shutdown/ cooldown/depressurization in order to obtain LPSI injection to the RCS | <u>Unit 2 CR/STSC (Sim):</u><br>SS: Continue to direct the evaluation and mitigation effort Direct rapid shutdown and depressurization in order to obtain RCS makeup with LPSI "A" and/or Containment Spray "A".<br>Operations Advisor: Continue to communicate plant conditions to the Operations Coordinator.<br><u>TSC:</u><br>EC: Evaluate the plant conditions, assist in the mitigation effort, consider protective measures.<br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><u>EOF:</u><br>EOD: Evaluate plant conditions update EOC/TOC.<br>GLE: Update Government.<br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite radiological consequences.<br><u>OSC:</u><br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | J<br>K | 0950 - (C-1) If the Simulator is not operating.<br>0955 -(C-3a) If the SITE AREA EMERGENCY has not been declared. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1000 Aprx | 12 | C4f | RTL | When a repair team is sent to attempt recovery of PBB-S04, the supply cabling is burnt away down into the floor stubs. In order to recover the PBB-S04 bus, new bus bars, new breakers and a surface-run of feed cable is required. | <u>"B" Essential Switchgear:</u><br>Repair Team Leader: Report damage and repair estimates to the OSC. Begin making actual repair equipment collection and work strategy.<br><br><u>OSC:</u><br>OSC Coordinator: Report the PBB-S04 status to the TSC. Coordinate and mediate the ongoing repair simulations. | | |
| 1030 Aprx | 13 | C4e | RTL | When a repair team is sent to expedite repairs to the "A" HPSI pump, the old wound-asbestos (flexitallic) gasket on the discharge has stuck to both flange faces and is requiring an unusual effort to remove. It is too damaged to retighten the flange and there is too much residue to allow a new gasket to seat.<br><br><u>NOTE:</u><br>These message times are approximations and will vary in accordance with actual team dispatch and response. | <u>"A" HPSI Pumproom:</u><br>Repair Team Leader: Report situation and repair time estimates to the OSC. Continue simulated removal of old gasket and actual procurement of tools and material required for the repair.<br><br><u>OSC:</u><br>OSC Coordinator: Report the repair status to the TSC. Coordinate and mediate the ongoing repair simulation. | L | 1030 - (C-3a) (Approximate time)- Result of simulated accountability and evacuation |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1030 | | C-1 | | The leaking weld on the RCS hot leg fails circumferentially, a large-break LOCA to the containment occurs. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, assist in the mitigation effort, consider protective measures.<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite radiological consequences.<br><br>OSC:<br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | M | 1030 - (C-1) If the Simulator is not operating. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1035 | | C1a | | Safety Injection Tanks (SITs) inject, reflooding the reactor vessel. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, assist in the mitigation effort, consider protective measures.<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite radiological consequences.<br><br>OSC:<br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | N | 1035 - (C-1) If the Simulator is not operating. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1040 | | C1a | | Reactor vessel level drops again as the Safety Injection water drains out the broken hotleg. The core uncovers. As RCS pressure reaches the level permitting LPSI pump "A" to inject, LPSI "A" trips and will not remote restart. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort Consider alternate RCS injection from Containment Spray. Request an AO/Repair Team to assess the LPSI "A" failure.<br><br>Operations Advisor: Update the Operations Coordinator (TSC).<br><br>TSC:<br>EC: Evaluate the plant conditions, assist in the mitigation effort, declare a **GENERAL EMERGENCY** based upon loss of RCS inventory >50 gpm, failure of both trains of ECCS to actuate when required and maintain subcooling and RVLMS voiding in the outlet plenum. Direct notifications of the upgraded Emergency Action Level (EAL).<br><br>RPC: Evaluate plant radiological conditions, direct inplant monitoring.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC on new EAL.<br><br>GLE: Update Government on EAL.<br><br>RAC: Perform dose assessment on potential release scenarios, anticipate offsite consequences. | O | 1040 - (C-1) If the Simulator is not operating. |
| 1045 | | | | Fuel damage begins to occur. Containment rad monitors increase. Hydrogen begins to be liberated from the vessel. | | P | 1045 - (C-1) If the Simulator is not operating. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1055 Aprx | 14 | C4c | AO/ RTL | The "A" LPSI pump 86 relay has faulted and will not allow the controller to close. The relay is showing a red flag and will not manually reset until 1100. Any attempt to reset and start the "A" LPSI pump (local or remote) will be successful after 1100. | "A" Essential Switchgear:<br>AO/Repair Team Leader: Attempt to reset the "A" LPSI controller report status to the OSC.<br><br>OSC:<br>OSC Coordinator: Report "A" LPSI status to the TSC. Coordinate and mediate the repair action. | | |
| 1100 | | C1a | | A hydrogen "burn" occurs in the containment. The pressure spike opens the Power Access Purge outlet isolation valve, CP-UV-5B. A release of radioactivity begins through the Power Access Purge system, and improperly seated Refueling Access Purge fan outlet valve (CPN-MO-5B), and the plant stack.<br><br>Continued -- next page... | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, assist in the mitigation effort, consider protective measures.<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government. | Q<br><br><br><br><br><br>R | 1100 - (C-1) If the Simulator is not operating.<br><br>1100 - (C-3a) If a GENERAL EMERGENCY has not been declared. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1100 Cnt. | | | | Hydrogen "burn" in containment, loss of containment, radioactive release. (Continued) | EOF: (Continued)<br>RAC: Perform dose assessment on stack readings. Dispatch field teams for plume tracking. Generate Protective Action Recommendations (PARs). | | |
| 1105 | | | | Stack monitors alarm and begin to ramp up rapidly. Release of containment atmosphere to the environment. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, assist in the mitigation effort, make protective action recommendations.<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Continue to perform dose assessment, control and direct field teams for plume monitoring and tracking. Make PARs. | S<br><br><br><br><br>T<br><br><br><br><br><br><br><br><br><br><br><br><br>U | 1105 - (C-1) If the Simulator is not operating.<br><br><br><br>1105 - (C-1) If the "A" LPSI pump has not been started.<br><br><br><br><br><br><br><br><br><br>1115 - (C-1) If the Simulator is not operating. |
| 1115 | | | | Stack monitors peak. | | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1130 | | | | Stack monitors begin to trend down as the containment differential pressure declines. | U2 CR/STSC (Sim):<br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br>TSC:<br>EC: Evaluate the plant conditions, assist in the mitigation effort, consider protective measures for adequacy.<br><br>RPC: Evaluate radiological conditions, direct inplant team activities.<br><br>EOF:<br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Continue dose assessment. Continue field monitoring activities. Update and validate PARs continuously. | V | 1130 - (C-1) If the Simulator is not operating. |
| 1145 | | | | Stack monitors continue to decline as release driving pressure is equalized. | | | |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1200 Aprx | 15 | C4c | RTL | Driving pressure for the release has equalized. The release has terminated. Radiation dose rates in the 140' East Wrap Room and on the Aux. Bldg. roof have declined. Any field team attempt to close either CP-UV-5B or CPN-MO-5B after 1200 is successful, reinstating containment. | <u>U2 140' E. Wrap/Aux Bldg Roof:</u><br>Repair Team Leader: Any attempt to close the CP-UV-5B or CPN-MO-5B valves is successful. Report valve status to the OSC.<br><br><u>U2 CR/STSC (Sim):</u><br>SS: Continue to direct the evaluation and mitigation effort<br><br>Operations Advisor: Continue to update the Operations Coordinator (TSC) on conditions.<br><br><u>TSC:</u><br>EC: Evaluate the plant conditions, assist in the mitigation effort, consider protective measures.<br><br>RPC: Evaluate radiological conditions, direct inplant RPTs.<br><br><u>EOF:</u><br>EOD: Evaluate plant conditions update EOC/TOC.<br><br>GLE: Update Government.<br><br>RAC: Continue to update dose assessments and perform field plume tracking.<br><br><u>OSC:</u><br>OSC Coordinator: Assemble, brief and field teams as required by the TSC. | W<br><br><br><br><br>X | 1210 - (C-1) If the Simulator is not operating.<br><br>1215 - (C-1) If the Simulator is not operating. |

| TIME | MSG | FRM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CM | CNTRLLR NOTES |
|---|---|---|---|---|---|---|---|
| 1300 | 16 | ALL | ALL | The Exercise is terminated. | ALL FACILITIES:<br>Secure from Exercise activity. Restore Facilities and equipment Hold in-place Player critiques with Lead Controllers and all Participants. | | |

## CONTROLLER INSTRUCTION

---

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

---

FROM: C-1/ALL TO: SS/ALL

MESSAGE NO.: 1 TIME: 0700

LOCATION: U2 CR (Simulator)

---

INSTRUCTION:
Provide the following message to the Shift Supervisor at this time.

---

NOTE:

Provide this message to Facility Managers and Key Players in all Facilities as they are manned in the course of the Exercise.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS/ALL

MESSAGE NO.: 1 TIME: 0700

LOCATION: U2 CR (Simulator)

MESSAGE:

Initial Conditions:

Unit 2 is in power operation. Power level has been greater than 90% for the last 180 days. Current power level is 100%, Xe is at equilibrium. Reactor Coolant activity is 0.5 uCi/gm dose-equivalent I-131. Unit 1 is in a maintenance outage and Unit 3 is in a refueling outage.

In anticipation of an upcoming refueling, spent fuel is being shuffled and reracked in the Unit 2 Fuel Building. As a result of previous work in and around the spent fuel pool, the spent fuel handling machine and floor areas adjacent to the spent fuel pool are contaminated. Two Auxiliary Operators are working on the spent fuel handling machine.

A power access purge is in progress in anticipation of a containment entry by chemistry at midday to perform monthly Safety Injection Tank Tech. Spec. boron concentration sampling (4.5.1.b).

As a result of a spill of sulfuric acid that occurred on the swing shift May 2nd, final cleanup and recovery actions are taking place within the tank dike on the north side of Unit 1. Fire Protection duty shift is standing by as a precaution until completion of this process, which is expected to be finished by 0900.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1/ALL TO: SS/ALL

MESSAGE NO.: 1 (Cont.) TIME: 0700

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message to the Shift Supervisor at this time.

NOTE:

Provide this message to Facility Managers and Key Players in all Facilities as they are manned in the course of the Exercise.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS/ALL

MESSAGE NO.: 1(Cont.) TIME: 0700

LOCATION: U2 CR (Simulator)

MESSAGE:

Initial Conditions: (Continued)

The following Unit 2 equipment is out of service or under maintenance:

The "A" HPSI pump (SIA-P02) was tagged-out at 0600 for discharge flange gasket replacement and is undergoing disassembly. This places the Unit in a 72 hour LCO and the pump work is anticipated to take an additional 8 hours to complete.

The "E" charging pump is tagged-out and the motor is being removed for repair. The motor should be rigged off by 0730 and disassembly for inspection and assessment of damages will begin.

The following surveillance tests are to be performed on this shift:

42ST-2SM01, Seismic Instrument Channel Checks

42ST-2SI03, Containment Spray Pump Operability

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4a TO: Shift Fire Protection Team

MESSAGE NO.: 2 TIME: 0700

LOCATION: Fire Protection Trailer

INSTRUCTION:
Give the following message to the Shift Fire Captain at this time.

Note:

The Shift Fire Team is to enter the protected area with the truck and equipment at this time to stand by on coverage of a sulfuric acid spill cleanup outside Unit 1. This is being done to eliminate the security entrance screening delay that occurs in a drill/simulation response. Since actual response actions are not hindered by this requirement and the fire protection trailer is in the process of being moved within the Protected Area, this simulated coverage will provide a more realistically evaluated response action for the Exercise.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Shift Fire Captain

MESSAGE NO.: 2 TIME: 0700

LOCATION: Fire Protection Trailer

MESSAGE:

A spill of sulfuric acid occurred in the tank dike outside Unit 1 yesterday on the Swing Shift. Cleanup has been underway and is nearly completed. Fire Protection has been standing by in coverage of the cleanup. Have the Shift Fire Team enter the Protected Area at this time to stand by at the cleanup site.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: 3 TIME: 0730

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Give the following message to the Shift Supervisor at this time.

Note:

The fire alarm CRT is not modeled in the Simulator.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: 3 TIME: 0730

LOCATION: U2 CR (Simulator)

MESSAGE:

The following alarms have just occurred on the Fire Alarm CRT:

ALARM E11D ZONE 5B B SWGR

ALARM E09D CO2 ZONE 5B B SWGR

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: A TIME: 0730

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at the time indicated only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

**THIS IS A DRILL!**
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: A TIME: 0730

LOCATION: U2 CR (Simulator)

MESSAGE:

The following Alarms have just occurred:

| | | |
|---|---|---|
| ALRM | DG B OPER | RUNNING |
| ALRM | 4160V SWGR 4 BUS TRBL | ALARM |
| ALRM | ESF BUS UNDV CH B-1 | TRIP |
| ALRM | ESF BUS UNDV CH B-2 | TRIP |
| ALRM | ESF BUS UNDV CH B-3 | TRIP |
| ALRM | ESF BUS UNDV CH B-4 | TRIP |
| ALRM | 480V LC 34 XFMR STATUS | TRBL |
| ALRM | 480V LC 36 XFMR STATUS | TRBL |
| ALRM | 480V LC 32 XFMR STATUS | TRBL |

4160V ESSENTIAL BUS PBB-S04 IS DEENERGIZED

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4c TO: AO

MESSAGE NO.: 4 TIME: 0735

LOCATION: U2 Control Building 100', 4160v "B" Switchgear

INSTRUCTION:
Give the following message to the Auxiliary Operator dispatched to the Unit 2 4160v "B" Switchgear when the operator arrives at the switchgear outer door.

NOTE:

The switchgear is not to be entered. Ensure you dispatch with the AO from the STSC due to multiple approaches to the 4160v "B" Switchgear.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: AO

MESSAGE NO.: 4 TIME: 0735

LOCATION: U2 Control Building 100', 4160v "B" Switchgear

MESSAGE:

The CARDOX System alarm bell and warning light are operating.

There is a strong odor of wintergreen and burnt electrical insulation.

Grey vapor is flowing from under the door to the 4160v "B" Switchgear.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4a TO: FT

MESSAGE NO.: 5 TIME: 0740

LOCATION: U2 Control Bldg. 100' 4160v "B" Switchgear Room

INSTRUCTION:
Issue the following message to the Fire Team upon its arrival at the Unit 2 4160v "B" Switchgear room.

EXERCISE MESSAGE FORM

**THIS IS A DRILL!**
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: FT

MESSAGE NO.: 5 TIME: 0740

LOCATION: U2 Control Bldg. 100' 4160v "B" Switchgear Room

MESSAGE:

The CARDOX unit is alarming and indicates discharge has occurred.

There is a strong odor of wintergreen and burnt electrical insulation around the 4160v "B" Switchgear doors

Light grey vapor/smoke is issuing from under the 4160v "B" Switchgear outer doors.

The "B" Switchgear doors are warm to the touch.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: B TIME: 0800

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Give the following message to the Shift Supervisor only if a NOTIFICATION OF UNUSUAL EVENT has not been declared by this time.

Note:

Due to the Carbon Dioxide dump into the 4160v "B" Switchgear, Fire Protection will not be able to immediately enter the room and verify the duration of the fire. However, due to the external indications of fire, the NOUE declaration should have occurred.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: B TIME: 0800

LOCATION: U2 CR (Simulator)

MESSAGE:

A NOTIFICATION OF UNUSUAL EVENT should be declared at this time due to a fire in the Unit burning for more than ten minutes and affecting the performance of design safety equipment.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4a TO: FT

MESSAGE NO.: 6 TIME: 0800

LOCATION: U2 4160v "B" Switchgear Room

INSTRUCTION:
Provide the following information (NOT the message form) to the Fire Team as they inspect the room.

Note:

The propped-open door to the dead-space is intended to simulate a loss of Carbon Dioxide concentration which allowed the fire to burn longer than anticipated.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: FT

MESSAGE NO.: 6 TIME: 0800

LOCATION: U2 4160v "B" Switchgear Room

MESSAGE:

The following damage is evident in the 4160v "B" Essential Switchgear cubicles:

"D" cubicle is disrupted and severely blackened. The interior of "D" is almost completely burned-out and carbonized.

The Adjacent cubicles are blackened and some minor smoldering insulation is still smoking in their upper cabinetry.

The floor stubs for supply to the bank are blackened and still smoking. The conductors connecting the floor stubs to the bussing are completely burned away.

The back door to the dead space is open and wedged at the bottom with a folded piece of cardboard.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4a TO: EMT

MESSAGE NO.: 7 TIME: 0835

LOCATION: U2 140' Aux Bldg West Wrap at the Fuel Bldg Doors

INSTRUCTION:
Give the following information to the responding EMT as vitals are taken.

Note:

The remainder of the medical information will be provided from the Medical Emergency Scenario, Appendix M, and its message cards.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: EMT

MESSAGE NO.: 7 TIME: 0835

LOCATION: U2 140' Aux Bldg West Wrap at the Fuel Bldg Doors

MESSAGE:

Initial Vitals on the two victims:

| | VICTIM #1 | VICTIM #2 |
|---|---|---|
| RESP. | 20 | 24 |
| PULSE | 100 | 110 |
| SKIN | WARM, DRY | WARM, DRY |
| | SEMI-CONSCIOUS, 10 CM LACERATION INTERIOR LEFT WRIST SHOWING HEAVY ARTERIAL BLEEDING. 5 CM LACERATION ON RIGHT CHEEK. | CONSCIOUS, EXTREME PAIN, OPEN ANGULATED FRACTURE LEFT FIBIA/TIBIA. CLOTHING IS BECOMING BLOOD-SOAKED IN THE AREA OF THE FRACTURE. |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4d TO: RPT

MESSAGE NO.: 8 TIME: 0835

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

INSTRUCTION:
Provide the following information only to the RPT performing the radiological survey of the scene and victims as each item is surveyed.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: RPT

MESSAGE NO.: 8 TIME: 0835

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

MESSAGE:

Initial Radiological Readings:

| | |
|---|---|
| General Area Surface Contamination: (Immediate Victim Area) | 1,000 to 1,500 Cpm>Bkgnd (per swipe of 100 $cm^2$) |
| Victim's PCs: | 2,000 to 3,000 Cpm>Bkgnd |
| Wounds and Unprotected Skin Areas: | 1,000 to 1,500 Cpm>Bkgnd |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: AO/C-4a TO: EMT/RPT

MESSAGE NO.: 9 TIME: 0840

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

INSTRUCTION:
Have Victim #1 provide the following information to the EMTs/RPTs before being moved away from the Wrap Room.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: EMT/RPT

MESSAGE NO.: 9 TIME: 0840

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

MESSAGE:

We were lowering a spent fuel bundle into the rack when my headphone cord caught on the control console and the Spent Fuel Handling Bridge suddenly moved. I fell down on the bridge and hit my head. _____ fell down too, but wasn't hurt. When the bridge moved, the bundle was halfway into the rack and got bent in the middle. A cloud of gas bubbles came to the surface. When we jumped of the bridge to get out of the Fuel Building, _____ slipped and fell off the bridge. I dragged him out and I must have passed out.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

---

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

---

FROM: C-4d TO: RPT

MESSAGE NO.: C TIME: 0840

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

---

INSTRUCTION:
If the RPT hasn't relayed the AO's report of the accident on the Spent Fuel Handling Machine to the U2 Control Room (Simulator).

---

After a reasonable time span (5 to 10 minutes) following the report of the accident in the Fuel Bldg by the injured AO, give the following message to the RPT on the scene if the information was not forwarded to the U2 CR (Simulator).

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: RPT

MESSAGE NO.: C TIME: 0840

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

MESSAGE:

Notify the Unit 2 Control Room (Simulator) of the information you received on the fuel handling accident in the Spent Fuel Pool.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4d TO: RPT

MESSAGE NO.: 10 TIME: 0845

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

INSTRUCTION:
Provide the following information only to the RPT performing radiological surveys at the medical emergency scene as the areas are surveyed.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: RPT

MESSAGE NO.: 10 TIME: 0845

LOCATION: U2 Aux Bldg 140' West Wrap at the Fuel Bldg Doors

MESSAGE:

Radiological Conditions at the Medical Emergency Scene:

| | |
|---|---|
| Airborne Activity: | As Read |
| General Area Dose Rates: | As Read |
| Surface Contamination (per swipe of 100 $cm^2$): | |
| Floor Area Adjacent to Victims: | 1,000 to 1,500 Cpm>Bkg |
| Doors to Fuel Bldg: | 1,000 Cpm>Bkg |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4d TO: RPT

MESSAGE NO.: 11 TIME: 0845

LOCATION: U2 Fuel Building

INSTRUCTION:
Provide the following information only to the RPTs performing radiological surveys in the Fuel Building as the surveys are performed.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: RPT

MESSAGE NO.: 11 TIME: 0845

LOCATION: U2 Fuel Building

MESSAGE:

Radiological Conditions in the Fuel Building:

General Area Dose Rates: As Read

Surface Contamination (per swipe of 100 $cm^2$):

| | |
|---|---|
| Floor Area Inside Doors | 2,000 Cpm>Bkg |
| Floor Area Between Doors and Spent Fuel Pool | 5,000 Cpm>Bkg |
| Spent Fuel Handling Bridge | 8,000 Cpm>Bkg |

Airborne Contamination (Time indicated is Sample Time)

| | |
|---|---|
| 0845 to 0945 | $5.0 \times 10^{-6}$ uCi/cc (Gross Beta/Gamma) |
| 0945 to 1045 | $2.0 \times 10^{-8}$ uCi/cc (Gross Beta/Gamma) |
| 1045 forward | As Read |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: Onshift EC

MESSAGE NO.: D TIME: 0845

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Give the following message to the Onshift Emergency Coordinator at his time only if the Simulator is not operating.

## EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Onshift EC

MESSAGE NO.: D TIME: 0900

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | | |
|---|---|---|---|
| ALRM | RU-19 | FUEL BLDG 140 SOUTH | HIGH |
| ALRM | RU-31 | FUEL BLDG 140 EAST | HIGH |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: Onshift EC

MESSAGE NO.: E TIME: 0900

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Give the following message to the Onshift Emergency Coordinator at his time if an ALERT has not been declared.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Onshift EC

MESSAGE NO.: E TIME: 0900

LOCATION: U2 CR (Simulator)

MESSAGE:

An ALERT should be declared at this time due to a fuel handling accident releasing radioactivity to the Fuel Building.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: F TIME: 0925

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

## EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: F TIME: 0925

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | BAM PUMP TO VCT FLOW | HI-HI |
| ALRM | CNTMT RADWASTE SUMP EAST LVL | HI-LO |
| ALRM | CNTMT RW SUMP PMP W OPER | EXCESS |
| ALRM | CNTMT RW SUMP PMP E OPER | EXCESS |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

---

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

---

FROM: C-1 TO: SS

MESSAGE NO.: G TIME: 0930

LOCATION: U2 CR (Simulator)

---

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

---

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: G TIME: 0930

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | PZR LEVEL CH X | LO |
| ALRM | PZR LEVEL CH Y | LO |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: H TIME: 0935

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: H TIME: 0935

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | SIAS A LEG 1-3 | TRIP |
| ALRM | SIAS A LEG 2-4 | TRIP |
| ALRM | SIAS B LEG 1-3 | TRIP |
| ALRM | SIAS B LEG 2-4 | TRIP |
| ALRM | CIAS A LEG 1-3 | TRIP |
| ALRM | CIAS A LEG 2-4 | TRIP |
| ALRM | CIAS B LEG 1-3 | TRIP |
| ALRM | CIAS B LEG 2-4 | TRIP |

On the CIAS, Power Access Purge Isolation Valve switch on BO-7, CP-UV-4A/4B is still red. CP-UV-4B light on the SEIS is lit blue.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

f FROM: C-3a TO: EC

MESSAGE NO.: I TIME: 0950 (Approximate)

LOCATION: TSC

INSTRUCTION:
Give the following message to the Emergency Coordinator when he determines that accountability and site evacuation are necessary.

Note:

Accountability and evacuation of non-essential personnel will be simulated. Forty-five (45) minutes after this message has been delivered to the Emergency Coordinator, deliver the companion message, L, to the Security Director in the TSC.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: EC

MESSAGE NO.: I TIME: 0950 (Approximate)

LOCATION: TSC

MESSAGE:

Accountability and evacuation of non-essential personnel will be SIMULATED You will give the necessary directions for accountability and evacuation now, but specify that these events will be simulated.

Page announcements of the simulated site evacuation WILL be made.

The site evacuation siren WILL NOT be sounded.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: J TIME: 0950

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: J TIME: 0950

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | LO PZR PRESS CH A | TRIP |
| ALRM | LO PZR PRESS CH B | TRIP |
| ALRM | LO PZR PRESS CH C | TRIP |
| ALRM | LO PZR PRESS CH D | TRIP |
| ALRM | LO DNBR CH A | TRIP |
| ALRM | LO DNBR CH B | TRIP |
| ALRM | LO DNBR CH C | TRIP |
| ALRM | LO DNBR CH D | TRIP |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-3a TO: EC

MESSAGE NO.: K TIME: 0955

LOCATION: TSC

INSTRUCTION:
Give the following message to the Emergency Coordinator at this time if an SITE AREA EMERGENCY has not been declared.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: EC

MESSAGE NO.: K TIME: 0955

LOCATION: TSC

MESSAGE:

An SITE AREA EMERGENCY should be declared at this time due to a loss of RCS inventory >50 gpm and failure of both trains of ECCS to actuate when required and maintain subcooling.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4f TO: Repair Team Leader

MESSAGE NO.: 12 TIME: 1000 (Approx.)

LOCATION: U2 Control Bldg 100' 4160v "B" Swgr.

INSTRUCTION:
Provide the following message to the Repair Team Leader when a team is sent to appraise the damages to the 4160v "B" Switchgear.

Note:

Detailed play and simulation guidelines are available in the Controller Guide for this Casualty.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Repair Team Leader

MESSAGE NO.: 12 TIME: 1000 (Approx.)

LOCATION: U2 Control Bldg 100' 4160v "B" Swgr.

MESSAGE:

The power supply cables to the PBB-S04 panels are burnt away down into the floor stubs. The bussing in the "D" cubicle is completely destroyed. Buss bars and supports in the cubicles to either side of "D" are blackened and twisted. Burnt insulation residue and carbon is contaminating the entire bank of switchgear.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4e TO: Repair Team Leader

MESSAGE NO.: 13 TIME: 1030 (Approx.)

LOCATION: U2 "A" HPSI Pumproom

INSTRUCTION:
Provide the following message to the Repair Team Leader when a team is dispatched to attempt the recovery of the "A" HPSI pump.

Note:

Allow freeplay on this repair action, but do not allow excessive simulation. Players should, for example, draw a new discharge gasket physically from stores and bring it down to the pumproom.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Repair Team Leader

MESSAGE NO.: 13 TIME: 1030 (Approx.)

LOCATION: U2 "A" HPSI Pumproom

MESSAGE:

The old spiral-wound metal and asbestos gasket has adhered strongly to both discharge flange faces and was torn apart when the flange was separated. The removal of the residue from this gasket is requiring hand scraping and will take at least two hours before the flange is clean enough for installation of a new gasket. The new gasket must be obtained from the warehouse.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-3a TO: Security Director

MESSAGE NO.: L TIME: 1030 (Approximate)

LOCATION: TSC

INSTRUCTION:
Give the following message to the Security Director approximately forty-five (45) minutes after the Emergency Coordinator ordered the simulation of site accountability and evacuation of non-essential personnel.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Security Director

MESSAGE NO.: L TIME: 1030 (Approximate)

LOCATION: TSC

MESSAGE:

The results of the site accountability and evacuation of non-essential personnel are:

| | |
|---|---|
| Number of Evacuated Non-Essential Personnel: | 3253 |
| Number of Essential Personnel: | 220 |
| Number of Personnel Unaccounted For: | 0 |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: M TIME: 1030

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

# EXERCISE CONTINGENCY MESSAGE FORM

**THIS IS A DRILL!**
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: M TIME: 1030

LOCATION: U2 CR (Simulator)

MESSAGE:
The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | HI CNTMT PRESS CH A | TRIP |
| ALRM | HI CNTMT PRESS CH B | TRIP |
| ALRM | HI CNTMT PRESS CH C | TRIP |
| ALRM | HI CNTMT PRESS CH D | TRIP |
| ALRM | HI-HI CNTMT PRESS CH A | TRIP |
| ALRM | HI-HI CNTMT PRESS CH B | TRIP |
| ALRM | HI-HI CNTMT PRESS CH C | TRIP |
| ALRM | HI-HI CNTMT PRESS CH D | TRIP |
| ALRM | CSAS A LEG 1-3 | TRIP |
| ALRM | CSAS A LEG 2-4 | TRIP |
| ALRM | CSAS B LEG 1-3 | TRIP |
| ALRM | CSAS B LEG 2-4 | TRIP |
| ALRM | REAC CAVITY SUMP LEVEL | HI-HI |
| ALRM | REAC CAVITY SUMP PMP OPER | EXCESS |
| ALRM | RU-19 FUEL BLDG 140 SOUTH | ALERT |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: N TIME: 1035

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: N TIME: 1035

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | SIT 1 NAR RNGE LEVEL | LO |
| ALRM | SIT 2 NAR RNGE LEVEL | LO |
| ALRM | SIT 3 NAR RNGE LEVEL | LO |
| ALRM | SIT 4 NAR RNGE LEVEL | LO |
| ALRM | SIT 1 PRESS | LO |
| ALRM | SIT 2 PRESS | LO |
| ALRM | SIT 3 PRESS | LO |
| ALRM | SIT 4 PRESS | LO |
| ALRM | SIT 1 WIDE RNGE LEVEL | LO |
| ALRM | SIT 2 WIDE RNGE LEVEL | LO |
| ALRM | SIT 3 WIDE RNGE LEVEL | LO |
| ALRM | SIT 4 WIDE RNGE LEVEL | LO |
| ALRM | SIT 1 NAR RNGE PRESS | LO |
| ALRM | SIT 2 NAR RNGE PRESS | LO |
| ALRM | SIT 3 NAR RNGE PRESS | LO |
| ALRM | SIT 4 NAR RNGE PRESS | LO |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: 0 TIME: 1040

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: 0 TIME: 1040

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | |
|---|---|---|
| ALRM | A LPSI PMP TRBL | ALARM |
| ALRM | A LPSI PMP DISCH PRESS | LO |
| ALRM | RU-19 FUEL BLDG 140 SOUTH | NORM |
| ALRM | RU-16 CNTMT OPER LVL AREA | HIGH |
| ALRM | RU-17 CNTMT INCORE INST AREA | HIGH |

The "A" LPSI pump has tripped.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: P TIME: 1045

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: P TIME: 1045

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | | |
|---|---|---|---|
| ALRM | RU-148 | CNTMT AREA MONITOR | HIGH |
| ALRM | RU-149 | CNTMT AREA MONITOR | HIGH |
| ALRM | RU-150 | PRIMARY COOLANT MON | HIGH |
| ALRM | RU-151 | PRIMARY COOLANT MON | HIGH |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4c TO: AO/Repair Team Leader

MESSAGE NO.: 14 TIME: 1055 (Approx., prior to 1100)

LOCATION: U2 Control Bldg 100' 4160v "A" Switchgear

INSTRUCTION:
Deliver the following information to the AO or Repair Team upon arrival at the "A" LPSI controller. If it is prior to 1100 when the AO/Team simulates resetting the 86 relay, it will not latch. Any attempts made after 1100 will be successful in resetting the relay and the pump may be started from the CR (Simulator).

EXERCISE MESSAGE FORM

**THIS IS A DRILL!**
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT **ACTUAL** STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: AO/Repair Team Leader

MESSAGE NO.: 14 TIME: 1055 (Approx., prior to 1100)

LOCATION: U2 Control Bldg 100' 4160v "A" Switchgear

MESSAGE:

The "A" LPSI pump controller 86 relay has a red flag showing. Manual reset success will be provided by your controller.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: Q TIME: 1100

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: Q TIME: 1100

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | | |
|---|---|---|---|
| ALRM | RU-37 | A PWR ACC PURGE AREA | HIGH |
| ALRM | RU-38 | B PWR ACC PURGE AREA | HIGH |
| ALRM | RU-143 | PLNT VENT LO RNG MON-GAS | HIGH |

A Pressure "Spike" Has Just Occurred on the Containment Pressure stripchart recorder.

Power Access Purge Isolation Valve switch on BO-7, CP-UV-5A/5B indicates "red". The CP-UV-5B light on the SEIS is lit blue.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-3a TO: Emergency Coordinator

MESSAGE NO.: R TIME: 1100

LOCATION: TSC

INSTRUCTION:
Provide the following message at this time if the Emergency Coordinator has not declared a GENERAL EMERGENCY.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Emergency Coordinator

MESSAGE NO.: R TIME: 1100

LOCATION: TSC

MESSAGE:

A GENERAL EMERGENCY should be declared at this time due to RCS inventory loss >50 gpm, Failure of both trains of ECCS to actuate when required and maintain subcooling and RVLMS voiding in the outlet plenum.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: S TIME: 1105

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: S TIME: 1105

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | | |
|---|---|---|---|
| ALRM | RU-143 | PLNT VENT LO RNG MON-PART | HIGH |
| ALRM | RU-144 | PLNT VENT HI RNG MON-GAS | ALERT |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: T TIME: 1105

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time if the "A" LPSI pump has not been reset and started by a joint CR/field team action. This is to assure continuity of plant data and scenario events in the possibility of a delay or confusion in resetting the "A" LPSI 86 relay.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: T TIME: 1105

LOCATION: U2 CR (Simulator)

MESSAGE:

Attempt a START on the "A" LPSI pump at this time.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: U TIME: 1115

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: U TIME: 1115 .

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

ALRM RU-158C IARM EAST AUX BLDG 140 ALERT

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

---

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

---

FROM: C-1 TO: SS

MESSAGE NO.: V TIME: 1130

LOCATION: U2 CR (Simulator)

---

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

---

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: V TIME: 1130

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

ALRM RU-158C IARM EAST AUX BLDG 140 NORM

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-4c TO: Repair Team Leader

MESSAGE NO.: 15 TIME: 1200 (Approx.)

LOCATION: U2 Aux Bldg Roof/140' East Wrap

INSTRUCTION:
Provide the successful closure of either CPN-MO-5B or CP-UV-5B upon any attempt (new or ongoing) after 1200. Efforts prior to 1200 should be encouraged, but unsuccessful.

Note:

More detailed direction for Player feedback is available in the Controller Guide for this situation.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: Repair Team Leader

MESSAGE NO.: 15 TIME: 1200 (Approx.)

LOCATION: U2 Aux Bldg Roof/140' East Wrap

MESSAGE:

Attempts to close CPN-MO-5B/CP-UV-5B have succeeded.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: W TIME: 1210

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: W TIME: 1210

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | | |
|---|---|---|---|
| ALRM | RU-144 | PLNT VENT HI RNG MON-GAS | NORM |
| ALRM | RU-143 | PLNT VENT LO RNG MON-PART | ALERT |
| ALRM | RU-143 | PLNT VENT LO RNG MON-GAS | ALERT |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTINGENCY CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: C-1 TO: SS

MESSAGE NO.: X TIME: 1215

LOCATION: U2 CR (Simulator)

INSTRUCTION:
Provide the following message at this time only if the Simulator is not operating.

EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: SS

MESSAGE NO.: X TIME: 1215

LOCATION: U2 CR (Simulator)

MESSAGE:

The Following Alarms Have Just Occurred:

| | | | |
|---|---|---|---|
| ALRM | RU-143 | PLNT VENT LO RNG MON-PART | NORM |
| ALRM | RU-143 | PLNT VENT LO RNG MON-GAS | NORM |

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

## CONTROLLER INSTRUCTION

CALL YOUR LEAD CONTROLLER IMMEDIATELY FOR ADVICE
IF IN DOUBT ABOUT WHAT TO DO

FROM: ALL TO: ALL

MESSAGE NO.: 16 TIME: 1300

LOCATION: All Facilities

INSTRUCTION:
Issue the following message when instructed to do so by the Exercise Controller/Lead Controller.

EXERCISE MESSAGE FORM

THIS IS A DRILL!
DO NOT TAKE ANY ACTIONS THAT WILL AFFECT ACTUAL
STATION OPERATIONS OR ACTIVITIES IN PROGRESS

TO: ALL

MESSAGE NO.: 16 TIME: 1300

LOCATION: All Facilities

MESSAGE:

The Exercise is Terminated.

Restore Facilities and Equipment.

Begin In-Place Critique with Lead Controllers.

UNIT 2 CR (Simulator) PHONE: X7200, 7201, 7202, 7203, 7204, 7205

1. Keep Your Controller Informed of Actions To Be Taken.
2. Request Clarification From Your Controller if the Message is not Fully Understood.
3. Request Additional Information if You Feel it is Needed.

# APPENDIX C

# GOVERNMENT CONTROLLER GUIDE

CONTENTS

GOVERNMENT CONTROLLER GUIDE

ACRONYMS

GOVERNMENT CONTROLLER GUIDE

| | |
|---|---|
| ADES | - Arizona Division of Emergency Services |
| ADO | - Assistant Director of Operations |
| ARRA | - Arizona Radiation Regulatory Agency |
| COC | - Chief Offsite Controller |
| COMM. O. | - Communications Officer |
| DC | - Direction and Control |
| DCC | - Direction and Control Controller |
| DO | - Director of Operations |
| DPS | - Department of Public Safety |
| EBS | - Emergency Broadcast System |
| EG | - Evacuation Group |
| EGC | - Evacuation Group Controller |
| EOC | - Emergency Operations Center |
| EOCC | - Emergency Operations Center Controller |
| EOF | - Emergency Operations Facility |
| EPZ | - Emergency Planning Zone |
| ESD | - Equipment Services Department |
| FEMA | - Federal Emergency Management Agency |
| JENC | - Joint Emergency News Center |
| KI | - Potassium Iodide |
| MC | - Maricopa County |
| MCDCD&ES | - Maricopa County Department of Civil Defense and Emergency Services |
| MCSO | - Maricopa County Sheriff's Office |
| NAN | - Notification Alert Network |
| OGC | - Operations Group Chief |
| OSCP | - On Scene Command Post |
| PI | - Public Inquiry |
| POC | - Privately Owned Conveyance |

| | |
|---|---|
| POL | - Petroleum, Oil Lubrication Vehicle |
| PVNGS | - Palo Verde Nuclear Generating Station |
| RB | - Road Block |
| RCC | - Reception and Care Center |
| REAT | - Radiological Emergency Assistance Team |
| RF | - REAT Forward |
| RFC | - REAT Forward Controller |
| SEG | - Special Evacuation Group |
| SS | - Shift Supervisor |
| SW | - Supplemental Warning |
| TOC | - Technical Operations Center |
| TOCC | - Technical Operations Center Controller |
| TOD | - Technical Operations Director |

STATE EMERGENCY OPERATIONS CENTER (EOC)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | ADES staff receives NAN broadcast and verifies authenticator.<br><br>Alerts Assistant Director of Operations (ADO) and ADES Communications Officer (Comm. O.). | | Chief Offsite Controller (COC) and State EOC Controller (EOCC) to be on station in EOC Communications 15 min. prior to exercise.<br><br>COC and EOF Controller set real time by telephone (EOF phone no. 6187/6188). |
| | | | | | ADES OPS staff fans out notification to state response organizations. | | EOCC sets real time on EOC clock and fans out real time to controllers on station in MCEOC, JENC and TOC.<br><br>Record time lines of player arricals and telecommunications. |
| 0840-0905 | | | | ALERT Notification | ADES staff receives NAN broadcast and verifies authenticator.<br><br>Notifies ADO and ADES Communications Officer.<br><br>ADO notifies ADES Director and directs activation of EOC. | | COC and EOCC on station in EOC Communications or EOC arena until notification fan out completed and monitor controller phones. |

STATE EOC (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | ADES Ops staff fans out notification and initiates EOC activation. | | EOCC observes EOC setup and arrangement in progress. Corrective action, as appropriate. (Direction and Control, Technical Operations Center, Public Information Office, Communications and Public Inquiry) |
| | | | | | EOC Shift Supervisor assumes control of EOC activation. | | |
| | | | | | ADES Administrative Organization vacates EOC office spaces. | | |
| | | | | | Shift Supervisor Declares EOF activation. | | EOCC observes staff functioning; corrective action as appropriate. |
| | | | | | EOC staff continues to arrive and function. | | Record time lines. |
| | | | | | Public Inquiry to commence when role players initiate calls. | | EOC Controller acts as exercise contact in declaration process, etc. |
| | | | | | | | EOC Controller acts as contact for initiating role player activities. |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | EOC Communications receives NAN broadcast and verifies authenticator. | | EOCC monitors staff functioning. |
| | | | | | EOC staff fans out notifications. | | |

STATE EOC (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | | | EOCC acts as exercise contact for non-participating government agencies and simulates the actions of those agencies. |
| | | | | | | | Record time lines. |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | EOC Communications receives NAN broadcast and verifies authenticator. | | COC maintains contact with Maricopa County EOC Controller, JENC Controller, and PVNGS EOF Controller, as required. |
| | | | | | TOC recommends Protective Action to Director of Operations. | | EOCC monitors EOC staff functioning. |
| | | | | | Director of Operations decision announced. | | DC Controller monitors Protective Action recommendations and decisions. |
| | | | | | MCDCD&ES liaison transmits decision to Maricopa County EOC for implementation. | | TOCC monitors TOC staff functioning. |
| | | | | | Operations staff monitors Protective Action operations. | | |
| | | | | | Resource staff responds to reguests for resource assistance. | | |

SCENARIO CONTROLLER GUIDE

TECHNICAL OPERATIONS CENTER (TOC)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | ARRA Emergency Coordinator notifies Technical Operations Director (TOD). | | TOCC on station at ARRA spaces 15 min. prior to ALERT. |
| | | | | | TOD directs activation of TOC. | | Call EOCC for real time check. |
| | | | | | TOD directs State Liaison to EOF. | | |
| | | | | | TOC staff relocates to State EOC. | | Relocate to TOC with TOC staff. |
| | | | | | TOC staff sets up and organizes TOC. | | TOCC observes TOC set up and arrangement, corrective action as appropriate in coordination with EOCC. |
| | | | | | TOC performs communications check. | | |
| | | | | | TOC Shift Supervisor reports activation to EOC Shift Supervisor. | | |
| | | | | | Initiates Accident Assessment and formulates Protective Action recommendations as required. | | Record time lines. |
| | | | | | Accident Assessment continues until downgrade. | | Compare dose projections of EOF and TOC, ensure consistency, check inconsistencies for errors. |

TOC (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | Continues Accident Assessment and may formulate Protective Action recommendations. | | TOCC observes TOC staff functioning; corrective action as appropriate. |
| | | | | | | | Record time lines. |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | Accident Assessment continues. | | |
| | | | | | Calculate projected doses as required. | | |
| | | | TOD | | TOD recommends Protective Actions to Director of Operations. | TOC-A | Issue CTG MSG TOC-A when asked by TOC staff which of several RCCs is the one in play. |
| | | | | | Director of Operations decision announced. | | |
| | | | TOC/SS | | TOC directs REAT Forward to dispatch Field Monitor Team to RCC. | TOC-B | Issue CTG MSG TOC-B to TOC Shift Supervisor if TOC staff fails to take action outlined above. |

DIRECTION AND CONTROL (DC)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | ADO notified and notifies the Director of Operations. | | |
| 0840-0905 | | | | ALERT Notification | ADO notified and notifies the Director of Operations. | | DOC on station in State EOC at time of ALERT notification. |
| | | | | | ADO directs Shift Supervisor to activate EOC. | | Contact EOCC for real time check. |
| | | | | | Shift Supervisor declares EOC activated as his discretion when partially staffed. | | Key staff for decision should include: TOD, EOC Shift Supervisor, ADO and MC Liaison. |
| | | | | | Director of Operations and ADO report to EOC at their discretion. | | Record time lines. |
| | | | | | Upon arrival, Director of Operations assumes general direction and control of offsite operations. | | |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | Director of Ops or ADO acts upon TOD recommendations for Protective Action. | | Ensure MC Liaison transcribes Protective Action decision as stated, corrective action as appropriate. |
| | | | | | Director or Ops or ADO formulates and announces Protective Action decisions to key staff and EOF. | | Ops Director and/or TOD may be summoned to JENC to participate in media briefings. |

DIRECTION AND CONTROL (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 1040-1105 | | | | GENERAL EMERGENCY Notification | Director of OPS or ADO acts upon TOD recommendations for Protective Action.<br><br>Director of OPS or ADO formulates and announces, Protective Action decisions to key staff and EOF. | | |

SCENARIO CONTROLLER GUIDE

MARICOPA COUNTY EMERGENCY OPERATIONS CENTER (MCEOC)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | MCDCD&ES staff receives NAN broadcast and verifies authenticator. | | Maricopa County EOC Controller on station in EOC 15 min. prior to NOUE |
| | | | | | Notify Senior Coordinator and MCDCD&ES Director. | | MC EOCC contacts State EOCC for real time check. |
| 0840-0905 | | | | ALERT Notification | MCDCD&ES staff receives NAN broadcast and verifies authenticator. | | |
| | | | | | Notify Senior Coordinator and MCDCD&ES Director. | | |
| | | | | | Initiate activation. Notify State EOC when activated. | | Record time lines of player arrivals and telecommunications establishment. |
| | | | | | Advise County Manager concerning situation and MCEOC activation. | | |
| | | | | | Advise Response Organization to assemble at MCSO Avondale Substation. | | Emergency Response Organization personnel may be assembled at marshalling areas or deployed to forward operational sites. |
| | | | | | EOC staff reports to EOC. | | |
| | | | | | Place EBS on standby. | | |

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | County Liaison Officer reports to State EOC. | | |
| | | | | | Direct On-Scene Commander to deploy Response Organization when assembled. | | |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | MCDCD&ES staff receives NAN broadcast and verifies authenticator. | | |
| | | | | | Maintain readiness status of all deployed resources until further action required. | | County EOC should be notified when forces are in position and ready to operate. |
| | | | | | Notify schools within the EPZ of the situation. | | If a Protective Action is directed during the SITE AREA EMERGENCY, it is assumed that all sirens functioned. |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | MCDCD&ES staff receives NAN broadcast and verifies authenticator. | | |
| | | | | | Receive and implement State EOC Protective Action decision. | | |

MARICOPA COUNTY EOC (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | MC-1 | | MC Ops Group Chief | | Prepare and release Public Warning Message to EBS. | | Issue MSG MC-1 indicating that this is the RCC that will be evaluated. |
| | | | | | Activate sirens. | | Sirens will not be sounded. |
| | MC-2 | | Comm. Warning Officer | | Malfunction of sirens reported by Communications Officer. | | Issue MSG MC-2 indicating that a siren has failed to function properly. |
| | | | | | Monitor EBS receipt of warning. | | |
| | | | MC Ops Group Chief | | Direct activation of RCC at specified sites. | MC-A | Issue CTG MSG MC-A to ensure that RCC being evaluated is activated, if required. |
| | | | MC Ops Group Chief | | Supplemental warning directive sent to On-Scene Command Post. | MC-B | Issue CTG MSG MC-B is a directive to conduct supplemental warning is not sent to OSCP. |
| | MC-3 | | MC Ops Group Chief | | Traffic control instructions issued to On-Scene Command Post. | | Issue MSG MC-3 to ensure that road blocks to be evaluated are included in instructions issued to OSCP. |
| | | | | | Public Information Officer collects and sends releasable information to JENC. | | |

SCENARIO CONTROLLER GUIDE

MARICOPA COUNTY WARNING POINT (MCSO)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | MCSO Warning Point staff receives NAN broadcast and verifies authenticator. | | MSCO Warning Point Controller on station 15 min. prior to NOUE. |
| | | | | | | | Record time lines. |
| | | | | | | | Contact MC EOCC for real time check. |
| | | | | | MCSO conducts internal notification fan out. | | Ensure fan out occurs per MCSO procedure. |
| 0840-0905 | | | | ALERT Notification | MCSO Warning Point staff receives NAN broadcast and verifies authenticator. | | |
| | | | | | MCSO conducts internal notification fan out. | | |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | MCSO Warning Point staff receives NAN broadcast and verifies authenticator. | | |
| | | | | | MCSO conducts internal notification fan out. | | |

MARICOPA COUNTY WARNING POINT (MCSO) (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 1040-1105 | | | | GENERAL EMERGENCY Notification | MCSO Warning Point staff receives NAN broadcast and verifies authenticator.<br><br>MCSO conducts internal notification fan out. | | Maricopa County Highway Dept. to provide barricades, POL vehicle, and to post evacuation signs.<br><br>Maricopa County ESD is to provide a tow truck and driver.<br><br>Evacuation and special assistance problems to be simulated by role players.<br><br>Residents are not to be contacted.<br><br>As loudspeakers will not be used, it is imperative that role players be contacted and given warning message verbatim.<br><br>Role players representing residents with special problems are to be provided assistance and/or transportation.<br><br>Barricades and patrol vehicles are to be used to simulate road blocks.<br><br>Two road blocks are to be established. |

SCENARIO CONTROLLER GUIDE

ON-SCENE COMMAND POST (OSCP) (MCSO)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | Response Organization assembles at MCSO Avondale Substation. | | OSCP Controller on station 15 min. prior to ALERT. |
| | | | | | When directed, deploy as a unit under control of On-Scene Commander. | | Observe deployment and performance. |
| | | | | | Set up OSCP and organize Response Organization Assembly Area. | | |
| | | | | | Prepare for response. | | |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | Receive notification and inform response force to stand ready. | | All road block assignments prior to GENERAL EMERGENCY are constructive. |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | Receive notification and inform response force to stand ready. | | |
| | | | | | Receive Protective Action decision. | | |
| | | On-Scene Commander | | | Supplemental Warning Team deploys to appropriate siren coverage area. | OSCP-A | Issue CTG MSG OSCP-A is OSCP is not directed to dispatch Supplemental Warning Team. |

SCENARIO CONTROLLER GUIDE

ON-SCENE COMMAND POST (OSCP) (MCSO) (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | OSCP-1 | | On-Scene Commander | | Simulate supplemental warning activities.<br><br>Issue warning message to evacuee role players. | | Issue MSG OSCP-1 when directed by MCEOC indicating which RCC has been activated. |
| | | | On-Scene Commander | | Traffic Control Teams deploy to assigned locations.<br><br>Conduct traffic regulatory activities. | OSCP-B | Issue CTG MSG OSCP-B if Road Block Teams are not dispatched to locations being evaluated. |
| | | | | | | | Maricopa County Highway Dept. will provide barricades, POL vehicle, and post evacuation signs. |
| | | | | | | | Maricopa County ESD is to provide a tow truck and driver. |
| | | | | | | | Evacuation and special assistance problems to be simulated by role players. |
| | | | | | | | Residents are not to be contacted. |
| | | | | | | | As loudspealers will not be used, it is imperative that role players be contacted and warning message given verbatim. |

ON-SCENE COMMAND POST (OSCP) (MCSO) (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | | | Role players representing residents with special problems are to be provided with assistance and/or transportation.<br><br>Barricades and patrol vehicles are to be used to simulate road blocks.<br><br>Two road blocks are to be established for evaluation. |
| | OSCP-2 | On-Scene Commander | | When directed by MCEOC to assist special evacuees. | On-Scene Commander will direct special evacuees to Tolleson Union High School RCC. | | Issue MSG OSCP-2 upon On-Scene Commander's first special evacuee directive. |

SCENARIO CONTROLLER GUIDE

SUPPLIMENTAL WARNING TEAMS (MCSO)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | Response Organization assembles at MCSO Avondale Substation. | | SW Controller on station 15 min. prior to ALERT.<br><br>Observe deployment and performance.<br><br>Record time lines of key actions. |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | | | |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | | | |
| | | | | When directed, SW Team activated and assigned mission. | Supplemental Warning Team receives briefing and mission statement.<br><br>SW Team deploys to siren coverage area. | | Sirens, lights and loudspeakers will not be used. |
| | SW-1 | | SW Team | | SW Team simulates supplemental warning.<br><br>SW Team issues warning message verbatim to evacuee role players. | | Issue MSG SW-1 to SW Team. |

SCENARIO CONTROLLER GUIDE

ROAD BLOCK TEAMS (MCSO)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0895 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | Response Organization assembles at MCSO Avondale Substation. | | RB Controller on station 15 min. prior to ALERT.<br>Observe deployment and performance. |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | | | |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | | | |
| | | | | When directed, RB Team activates assigned mission. | Simulate establishment of road blocks/traffic control points. | | |
| | | RB Team #1 | | | | RB-A | Issue CTG MSG RB-A if Road Block Team is not informed of RB location when briefed. |
| | | RB Team #2 | | | | RB-B | Issue CTG MSG RB-B if Road Block Team is not informed of RB location when briefed. |

SCENARIO CONTROLLER GUIDE

REAT FORWARD

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | REAT Forward Team assembles and equips.<br><br>REAT Forward deploys to field location.<br><br>Establish REAT Forward Center. | | REAT Forward Controller on station at ARRA 15 min. prior to ALERT.<br><br>Move to field location.<br><br>Observe assembly and organization of command post. |
| | | | | Initiate monitoring when directed. | Brief and orient Monitor Teams.<br><br>Assign Field Monitoring missions.<br><br>Collect and report field data. | | Observe operation of command post. |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | Continue field monitoring activities.<br><br>Collect and report field data.<br><br>Implement instructions from TOD. | | Continue to observe operation of command post. |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | Continue field monitoring activities.<br><br>Collect and report field data. | | Continue to observe operation of command post. |

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | Implement instructions from TOD | | |
| | | | REAT Cap't. | | | RF-A | Issue CTG MSG RF-A is RCC locations are not identified by the TOC within 30 minutes of evacuation order. |

SCENARIO CONTROLLER GUIDE

REAT FIELD MONITOR TEAMS

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | Monitor pool assembles. | | Controllers on station at ARRA 15 min. prior to ALERT. |
| | | | | | | | Contact REAT Center Controller for real time check. |
| | | | | | Deploys to field location and equips. | | Observe assembly and deployment. |
| | | | | | Co-locates with REAT Forward Center in assembly area. | | |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | REAT Captain briefs monitors and assigns missions. | | |
| | | | | | REAT Captain may direct mission assignment to be executed. | | Accompany monitor team and observe mission performance. |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | Field Teams perform assigned monitoring missions (monitors are to report all background readings). | | Observe mission performance. |
| | | | | | | | Issue field data from date package at appropriate times during mission. |
| | | | | | Receive briefing and evacuee monitoring mission, when directed by REAT Captain. | | |

REAT FIELD MONITOR TEAMS (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | Field Team deploys to RCC and reports to RCC Manager. | | Observe deployment and performance. |
| | | | | | Field Team establishes personnel monitoring station as RCC. | | |
| | | | | | Field Team conducts personnel monitoring of evacuees at RCC. (Monitors are to report all "0" readings.) | | |

SCENARIO CONTROLLER GUIDE

EVACUATION GROUPS (TOLLESON HIGH SCHOOL)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | LEAD CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0715 | | | | All Evacuation Group Controllers assemble | Evacuation Group Controllers assemble at Tolleson Union High School, 9419 W. Van Buren and report to designated Lead Controller. | | All EG and SEG Controllers assemble at Tolleson High School. |
| 0745 | | | | Assemble and load EG and SEG. | EG assembles at Tolleson Union High School, 9419 W. Van Buren. | | Contact Chief Offsite Controller upon arrival for real time check. |
| No Later Than 0800 | | | | Transport EG to PVNGS Energy Information Center. | Travel by bus from Tolleson Union High School to PVNGS Energy Information Center via Interstate 10 and Wintersburg Road. | | |
| 0900 | | | | Begin educational presentation. | Remain at PVNGS Energy Information Center for presentations and refreshments. | | Respond to Special Evacuee Controller request for radio operator assignments. |
| 1045 | | | | Load EG and transport toward Arlington. | Leave PVNGS Energy Information Center for RCC at Tolleson Union High School via Arlington. | | Inform Chief Offsite Controller upon departure from PVNGS Energy Information Center and upon arrival at RCC. |
| 1200 | | | | Arrive at RCC. | Arrive at Tolleson Union High School RCC for processing. | | |

SCENARIO CONTROLLER GUIDE

SPECIAL EVACUATION GROUP (TOLLESON HIGH SCHOOL)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0715 | | | | Assemble with EG Controller. | EG Controllers assemble at Tolleson Union High School, 9419 W. Van Buren, and report to designated Lead Controller. Special EG Controllers do likewise. | | |
| 0745 | | | | Assist with assembly and loading of EG. | EG assembles as Tolleson Union High School, 9419 East Van Buren. | | |
| No Later Than 0800 | | | | Move in convoy with EG to PVNGS Energy Information Center. | Travel by controller vehicle in convoy to PVNGS Energy Information Center via Interstate 10 and Wintersburg Road. | | |
| 0900 | | | | Select 4 Special Evacuees and telephone callers. | Upon arrival, and before educational presentations begin, identify special evacuees and telephone callers. | | Inform Lead Controller of selection and request radio operator assignments to Special Evacuees Group and to telephone callers. |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | Assemble and instruct Special Evacuees, telephone callers and radio operators. | | Issue SEG messages to Special Evacuees and counterpart telephone callers. |
| | SEG-1 | | | | | | SEG-1 (2 copies) |
| | SEG-2 | | | | | | SEG-2 (2 copies) |
| | SEG-3 | | | | | | SEG-3 (2 copies) |
| | SEG-4 | | | | | | SEG-4 (2 copies) |

SPECIAL EVACUATION GROUP (TOLLESON HIGH SCHOOL)(Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | | | One copy of SEG messages goes to Special Evacuee, one to counterpart telephone caller. |
| 1000 | | | | Load and transport Special Evacuees and radio operator to SEG Site #1. | On arrival at SEG Site #1, radio operator contacts telephone caller and requests message SEG-1 be called in to MCEOC (273-1411). | | Instruct Special Evacuee to dismount from vehicle and prepare to be evacuated. |
| | | | | | | | Controller and party remain in vehicle until assistance arrives. |
| | SEG-5 | MCSO Special Assistance Team | | | | | Controller dismounts and issues message SEG-5 to MCSO player. |
| | | | | | | | Depart for SEG Site #2 after Special Evacuee is in custody of adult player and has entered assistance vehicle. |
| Upon arrival at SEG Sites 2, 3 and 4. | | | | | Repeat call in process. | | Repeat controller procedures. |

SCENARIO CONTROLLER GUIDE

PUBLIC NOTIFICATION SITE

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0730 | | | | All Evacuation Group Controllers assemble. | Assemble with EG Controllers, SEG Controllers and radio operators at Tolleson Union High School, 9419 W. Van Buren. | | Wear Controller armbands, carry Player armbands, red flag for vehicle and reg vests for players. |
| 0745 | | | | Assist with assembly and loading of EG. | EG assembles at Tolleson Union High School, 9419 E. Van Buren. | | |
| No Later Than 0800 | | | | Move in convoy with EG to PVNGS Energy Information Center. | Travel by controller vehicle in convoy to PVNGS Energy Information Center via Interstate 10 and Wintersburg Road. | | |
| 0900 | | | | Arrival at PVNGS Energy Information Center. | Upon arrival, organize and brief Public Notification Site party regarding site location, departure time from PVNGS and site set-up and function. | | Upon arrival, request assignment of radio operator from Lead Controller. |
| | | | | | | | Site party consists of 2 controllers and one radio operator. |
| | | | | | | | Site location is the vehicle itself, parked in front of the Post Office in Arlington, east of Arlington School Road on Old U.S. 80. |
| | | | | | | | Site preparation includes: a) Changing to Player armbands. b) Putting on red vests. |

PUBLIC NOTIFICATION SITE (Continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| | | | | | | | c) Marking vehicle with red flag.<br><br>Notify Lead EG Controller when site preparation is completed.<br><br>Maintain radio contact regarding departure of EG from PVNGS. |
| 1040 | | | | EG departs PVNGS. | EG loads bus and leaves PVNGS for Arlington at a slow speed. | | Maintain radio contact with EG Controllers concerning transport progress. |
| 1115-1120 | | | | MCSO SUpplemental Warning Team issues warning. | Supplemental Warning Team approaches and identifies Public Notification Site.<br><br>Supplemental Warning Team issues evacuation warning. | | If EG bus is not in view, notify EG Controllers of receipt of evacuation warning.<br><br>If EG bus is in sight before warning is received, halt the EG bus. When warning is received, notify EG Controllers. EG bus proceeds to RCC at Tolleson Union High School<br><br>Remove vests, Player armbands and vehicle flag. Proceed to Tolleson High School RCC. |

RECEPTION AND CARE CENTER (TOLLESON UNION HIGH SCHOOL)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | | NOTIFICATION OF UNUSUAL EVENT | None | | |
| 0840-0905 | | | | ALERT Notification | Notify Reception and Care Resources. | | |
| 0940-1005 | | | | SITE AREA EMERGENCY Notification | Deploy resources to a forward location. | | |
| 1040-1105 | | | | GENERAL EMERGENCY Notification | | | Controller on station 15 min. prior to GENERAL EMERGENCY. |
| | | | | Shelter Coordinator directs establishment of RCC. | Set up RCC at Tolleson Union High School, 9419 E. Van Buren. | | Observe deployment and performance. |
| | | | | | Assign location for monitoring station. | | |
| | RCC-A | | Shelter Manager | | Conduct evacuee processing. | | Issue CTG MSG RCC-A, if required, to reorganize monitoring and processing. |

JOINT EMERGENCY NEWS CENTER

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | JENC/MGR | PVNGS Unit 2 declares NOUE based on uncontrolled fire in "B" Switchgear Room. | Contacts State and County public information spokespeople, initiates and maintains contact with FNC Director | | |
| 0840-0905 | | | JENC/MGR | PVNGS Unit 2 declares an ALERT based on fuel damage accident releasing radioactivity to the Fuel Building. | Initiate activation, receive hard copy from FNC, determine staffing levels, check equipment operation, prepare for initial press briefing. | | |
| 1005-1300 | JENC-1 thru 17 | | JENC/MGR | JENC activation completed | Receive information from EOF and State and County EOCs, draft press releases, relay to EOF and EOCs for approval, disseminate information through press briefings. | | |
| 0940-1005 | | | JENC/MGR | PVNGS Unit 2 declares a SITE AREA EMERGENCY based on a loss of RCS inventory greater than 50 gpm and failure of both ECCS to actuate when needed. | Continue as above. | JENC-A | To ensure that JENC receives notification of SITE AREA EMERGENCY by 1010. |
| 1040-1105 | | | JENC/MGR | PVNGS Unit 2 declares a GENERAL EMERGENCY based on a loss of inventory greater than 50 gpm, failure of both ECCS trains to inject, voiding in the outlet plenum and containment $H_2$ greater than 3.5%. | Continue as above. | JENC-B | To ensure that JENC receives notification of GENERAL EMERGENCY by 1110. |

JOINT EMERGENCY NEWS CENTER (continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 1300 | | | JENC/MGR | Termination of Exercise. | Receive information from EOF, relay to State and County EOCs, media, Rumor Control Group, and APS Media Relations. | | |
| 1300 | | | JENC/MGR | Commence critique, secure facility. | | | |

PUBLIC INQUIRY

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0840-0905 | | | PI/SS | PVNGS Unit 2 declares an ALERT. | Initiate activation, establish contact with the EOC/GPIO and RCG/SUPV, determine staffing levels, check equipment operation, receive hard copy of press releases from JENC, brief staff. | PI-A | To ensure that PI receives notification of the ALERT by 0930. |
| 1000-1300 | P-1 | | PI/SS | PI activation completed. | Respond, from approved press releases and stock information, to questions from the public, and the media concerning government response to conditions at PVNGS, inform the EOC/GPIO and the RCG/SUPV of any unusual rumors of questions received. | | |
| 1300 | | | PI/SS | Termination of Exercise. | Receive information from EOC/GPIO. | | |
| 1300 | | | PI/SS | Commence critique, secure facility. | | | |

# APPENDIX D

## GOVERNMENT MESSAGES

CONTENTS

GOVERNMENT MESSAGES

## ACRONYMS

## GOVERNMENT MESSAGES

| | |
|---|---|
| ADES | - Arizona Division of Emergency Services |
| ADO | - Assistant Director of Operations |
| ARRA | - Arizona Radiation Regulatory Agency |
| COC | - Chief Offsite Controller |
| COMM. O. | - Communications Officer |
| DC | - Direction and Control |
| DCC | - Direction and Control Controller |
| DO | - Director of Operations |
| DPS | - Department of Public Safety |
| EBS | - Emergency Broadcast System |
| EG | - Evacuation Group |
| EGC | - Evacuation Group Controller |
| EOC | - Emergency Operations Center |
| EOCC | - Emergency Operations Center Controller |
| EOF | - Emergency Operations Facility |
| EPZ | - Emergency Planning Zone |
| ESD | - Equipment Services Department |
| FEMA | - Federal Emergency Management Agency |
| JENC | - Joint Emergency News Center |
| KI | - Potassium Iodide |
| MC | - Maricopa County |
| MCDCD&ES | - Maricopa County Department of Civil Defense and Emergency Services |
| MCSO | - Maricopa County Sheriff's Office |
| NAN | - Notification Alert Network |
| OGC | - Operations Group Chief |
| OSCP | - On Scene Command Post |
| PI | - Public Inquiry |
| POC | - Privately Owned Conveyance |

| | |
|---|---|
| POL | - Petroleum, Oil Lubrication Vehicle |
| PVNGS | - Palo Verde Nuclear Generating Station |
| RB | - Road Block |
| RCC | - Reception and Care Center |
| REAT | - Radiological Emergency Assistance Team |
| RF | - REAT Forward |
| RFC | - REAT Forward Controller |
| SEG | - Special Evacuation Group |
| SS | - Shift Supervisor |
| SW | - Supplemental Warning |
| TOC | - Technical Operations Center |
| TOCC | - Technical Operations Center Controller |
| TOD | - Technical Operations Director |

CONTINGENCY MESSAGE FORM

---

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

---

TO: TOC Director  MESSAGE NO.: TOC-A

LOCATION: Technical Operations Center

TIME: After the TOC Director has inquired about the locations of RCCs.

---

MESSAGE: The Reception and Care Center is as follows:

Tolleson Union High School, 9419 W. Van Buren.

REAT Field Monitor Team is to respond to this RCC.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: TOC Shift Supervisor

MESSAGE NO.: TOC-B

LOCATION: Technical Operations Center

TIME: Issue is TOC staff fails to inform TOC/SS of this information.

MESSAGE: The Reception and Care Center is as follows:

Tolleson Union High School, 9419 W. Van Buren.

REAT Field Monitor Team is to respond to this RCC.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: Maricopa County Operations Group Chief MESSAGE NO.: MC-1

LOCATION: Maricopa County EOC

TIME:

MESSAGE: The Reception and Care Center to be activated for evaluation is as follows:

Tolleson Union High School, 9419 W. Van Buren.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: Maricopa County Communication and Warning Officer

MESSAGE NO.: MC-2

LOCATION: Maricopa County EOC

TIME: After Warning Officer completes Siren Activation Procedure (following GENERAL EMERGENCY)

MESSAGE: Siren Pole No. 38 (INTRAC NO. 473) failed to function.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Maricopa County Operations Group Chief. MESSAGE NO.: MC-3

LOCATION: Maricopa County EOC

TIME: When ordering On-Scene Commander (MCSO) to establish road blocks

---

MESSAGE: Two road blocks will be evaluated. You must establish road blocks at the following locations:

1. Palo Verde Road and Baseline.
2. Palo Verde Road and Southern.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

---

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

---

TO: Maricopa County Operations Group Chief  MESSAGE NO.: MC-A

LOCATION: Maricopa County EOC

TIME: When directing activation of RCCs.

---

MESSAGE: The Reception and Care Center being activated for evaluation purposes is as follows:

Tolleson Union High School, 9419 W. Van Buren.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: Maricopa County Group Operations Chief  MESSAGE NO.: MC-B

LOCATION: Maricopa County EOC

TIME: When supplemental warning instructions are being issued to the On-Scene Command Post (MCSO)

MESSAGE: Siren Pole No. 38 (INTRAC No. 473) failed to function.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

---

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

---

TO: On-Scene Commander

MESSAGE NO.: OSCP-A

LOCATION: On-Scene Command Post

TIME: Following the declaration of a GENERAL EMERGENCY, if required

---

MESSAGE: Siren Pole No. 38 (INTRAC No. 473) failed to function.

Note: Loudspeakers, lights and sirens should not be used by the Supplemental Warning Team.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: On-Scene Commander

MESSAGE NO.: OSCP-B

LOCATION: On-Scene Command Post

TIME: When On-Scene Commander is directing the establishment of Road Blocks

MESSAGE: Two road blocks will be evaluated. You MUST establish road blocks at the following locations:

1. Palo Verde Road and Baseline.

2. Palo Verde Road and Southern.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: On-Scene Commander  MESSAGE NO.: OSCP-1

LOCATION: On-Scene Command Post

TIME:

---

MESSAGE: The Reception and Care Center being activated is as follows:

Tolleson Union High School, 9419 West Van Buren.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: On-Scene Commander

MESSAGE NO.: OSCP-2

LOCATION: On-Scene Command Post

TIME: Upon receipt of information requesting Special Evacuee assistance

MESSAGE: All Special Evacuees need to be picked up. These are actual evacuations.

All Special Evacuees are to be transported to the Reception and Care Center at Tolleson Union High School, 9419 West Van Buren.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Supplemental Warning Team MESSAGE NO.: SW-1

LOCATION: Arlington Post Office
Old U.S. 80 just east of Arlington School Road

TIME: Upon arrival in supplemental warning area

---

MESSAGE: Drive through affected area and simulate giving supplemental warning.

DO NOT activate siren, lights or loudspeaker.

Make certain evacuation group role players in vehicle at Arlington Post Office receive the supplemental warning.

The vehicle will be marked with a red flag. The evacuation group role players will be wearing red vests.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

---

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

---

TO: Road Block Team #1 MESSAGE NO.: RB-A

LOCATION: In Patrol Car

TIME: If On-Scene Commander does not assign same location

---

MESSAGE: Establish a road block for evaluation at Palo Verde Road and Baseline Road.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

---

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

---

TO: Road Block Team #2 MESSAGE NO.: RB-B

LOCATION: In Patrol Car

TIME: If On-Scene Commander does not assign same location

---

MESSAGE: Establish a road block for evaluation at Palo Verde Road and Southern Avenue.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: REAT Forward Captain  MESSAGE NO.: RF-A

LOCATION: REAT Forward

TIME: If information is not received from TOC within 30 minutes of evacuation order

MESSAGE: The Reception and Care Center being activated is as follows:

Tolleson Union High School, 9419 West Van Buren.

A REAT Field Monitoring Team is to respond to the RCC.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Special Evacuee #1-Telephone Caller  MESSAGE NO.: SEG-1

LOCATION: PVNGS Energy Information Center

TIME: At direction of Lead EG Controller

---

MESSAGE: Dial 273-1411 (Maricopa County EOC), when the number answers say:

"This is a drill.

I need help. I'm too old to drive and need a ride. Can you help me? My name is (role player name) .

I am located in from of Arlington Elementary School.

This is a drill."

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Special Evacuee #2-Telephone Caller  MESSAGE NO.: SEG-2

LOCATION: PVNGS Energy Information Center

TIME: At direction of Lead EG Controller

---

MESSAGE: Dial 273-1411 (Maricopa County EOC), when the number answers say:

" This is a drill.

I am located at the Arlington Baptist Church at the corner of Arlington School Road and Old U.S. 80.

I have a flat tire and my spare is also flat. Can you get me a ride out of the area.

My name is (role player name) .

This is a drill."

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Special Evacuee #3-Telephone Caller  MESSAGE NO.: SEG-3

LOCATION: PVNGS Energy Information Center

TIME: At direction of the Lead EG Controller

---

MESSAGE: Dial 273-1411 (Maricopa County EOC), when the number answers say:

"This is a drill.

I am located at the corner of Old U.S. 80 and Arlington School Road. My car won't start. Can you help me?

My name is (role player name) .

This is a drill."

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Special Evacuee #4-Telephone Caller  MESSAGE NO.: SEG-4

LOCATION: PVNGS Energy Information Center

TIME: At direction of Lead EG Controller

---

MESSAGE: Dial 273-1411 (Maricopa County EOC), when the number answers say:

"This is a drill.

I am located at the Arlington Post Office.

I cannot drive. I need a ride. Can you help me?

My name is (role player name) .

This is a drill."

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: MCSO Special Assistance Transportation MESSAGE NO.: SEG-5

LOCATION: Special Evacuee Pick-up Locations

TIME: Upon arrival of MCSO Assistance Team

---

MESSAGE: All Special Evacuees are to be transported to Tolleson Union High School, 9419 West Van Buren. This is the Reception and Care Center that has been activated.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

---

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

---

TO: Reception and Care Center Manager  MESSAGE NO.: RCC-A

LOCATION: Tolleson Union High School

TIME: If required, upon arrival of REAT Field Monitoring Team

---

MESSAGE: Ensure that evacuees are monitored near arrival area.
Uncontaminated go to Reception.
Contaminated for to Decontamination (showers).

Note: The use of the shower facilities for contaminated evacuees is to be simulated.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: JENC Facility Manager

MESSAGE NO.: JENC-A

LOCATION: Joint Emergency News Center

TIME: 1010

MESSAGE: The Maricopa County Public Information Spokesperson indicates to you that he/she has received word that the situation at Palo Verde has escalated to a SITE AREA EMERGENCY.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: JENC Facility Manager

MESSAGE NO.: JENC-B

LOCATION: Joint Emergency News Center

TIME: 1110

MESSAGE: One of the television reporters in the Media Room has passed word to you, through the Media Room Coordinator, that his sources indicate that the plant has declared a GENERAL EMERGENCY.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-1

LOCATION: Joint Emergency News Center

TIME: First News Briefing

---

MESSAGE: Was the declaration of an ALERT related to the fire that occurred earlier today, and what actually caused the NOTIFICATION OF UNUSUAL EVENT?

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson

MESSAGE NO.: JENC-2

LOCATION: Joint Emergency News Center

TIME: Second News Briefing

MESSAGE: Could the problems that are occuring at Palo Verde right now lead to another Chernobyl? How about another Three Mile Island?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: County Public Information Spokesperson. MESSAGE NO.: JENC-3

LOCATION: Joint Emegency News Center

TIME: Second News Briefing

MESSAGE: We understand that a worker at Palo Verde has been killed in a work related accident. Can you tell us more about what happened?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson

MESSAGE NO.: JENC-4

LOCATION: Joint Emergency News Center

TIME: Second News Briefing

MESSAGE: How many people live in the 10-mile area surrounding Palo Verde, and is the state really prepared to handle the situation if this accident turns into another Chernobyl?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson  MESSAGE NO.: JENC-5

LOCATION: Joint Emergency News Center

TIME: 1100-1115 News Briefing

MESSAGE: What is the weather forecast? How far is it estimated that the wind will carry any radiation that might be released? What happens if there is a wind shift?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-6

LOCATION: Joint Emergency News Center

TIME: 1100-1115 News Briefing

MESSAGE: Although you say that you have conditions under control at Palo Verde, do you have a plan for a worst-case meltdown at the plant?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson

MESSAGE NO.: JENC-7

LOCATION: Joint Emergency News Center

TIME: 1115-1130 News Briefing

MESSAGE: What happens to the employees at the plant site when an accident occurs? Are they sent home? Is anyone left to run the plant? If so, are they in danger?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson

MESSAGE NO.: JENC-8

LOCATION: Joint Emergency News Center

TIME: 1115-1130 News Briefing

MESSAGE: How will this accident affect the other two units? Could this same thing happen to them?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-9

LOCATION: Joint Emergency News Center

TIME: 1130-1145 News Briefing

MESSAGE: Back to the accident at the plant. How many other employees have been killed or injured on the job at Palo Verde.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: County Public Information Spokesperson  MESSAGE NO.: JENC-10

LOCATION: Joint Emergency News Center

TIME: 1130-1145 News Briefing

MESSAGE: How long does it take to evacuate all of the residents from the 10-mile area surrounding Palo Verde? How do you know when the total evacuation is complete?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson  MESSAGE NO.: JENC-11

LOCATION: Joint Emergency News Center

TIME: 1145-1200 News Briefing

MESSAGE: What information do you have on how long the release of radioactive materials into the atmosphere is likely to last?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson  MESSAGE NO.: JENC-12

LOCATION: Joint Emergency News Center

TIME: 1145-1200 News Briefing

MESSAGE: What is the estimate of damage to crops and farm animals in the 10-mile area around the plant as a result of the accident at Palo Verde?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-13

LOCATION: Joint Emergency News Center

TIME: 1200-1215 News Briefing

MESSAGE: Are we likely to see a core meltdown as a result of the events that have taken place at Palo Verde today?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-14

LOCATION: Joint Emergency News Center

TIME: 1200-1215 News Briefing

MESSAGE: Is today's situation at Palo Verde just another example of sloppy workmanship and poor management?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-15

LOCATION: Joint Emergency News Center

TIME: 1215-1230 News Briefing

MESSAGE: How long will it take to clean-up after this accident? How much is the estmated cost for this clean-up?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson

MESSAGE NO.: JENC-16

LOCATION: Joint Emergency News Center

TIME: 1215-1230 News Briefing

MESSAGE: How soon after conditions at Palo Verde are back under control will we be able to get in and have a look at the damage ourselves?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-17

LOCATION: Joint Emergency News Center

TIME: 1230-1245 News Briefing

MESSAGE: With the nuclear production of electricity costing more and more as a result of accidents like this, does APS anticipate more towns like Page and Gilbert, Arizona trying to run their own independent electric companies in a better managed and more economical manner?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: Public Inquiry Controller  MESSAGE NO.: P-1

LOCATION: Public Inquiry Center

TIME: 1000

MESSAGE: Call the State Public Inquiry Center at the times indicated on the following list of suggested Public Inquiry questions. Each question may be asked of more than one operator. Other free-play questions are also encouraged.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

PUBLIC INQUIRY QUESTIONS (Refer to MSG PI-1)

1000 I just heard that there's an accident at Palo Verde. Is this the same type of thing that happened at Chernobyl?

1005 I just heard on the radio that there's a problem at Palo Verde, but I didn't hear any warning sirens go off. I live in Arlington and thought we were supposed to be warned if something went wrong at the plant.

1010 What's an ALERT?

1015 What's happening at Palo Verde?

1020 Should we evacuate now, just to be safe?

1025 Is it safe for me to travel west from Phoenix on Interstate 10?

1030 Is radiation being released from Palo Verde? Will someone tell us if we are in danger?

1035 My husband is a construction worker at Palo Verde. Will he be OK?

1040 I just heard the warning sirens go off, but when I tried to tune to KTAR for instructions, my radio quit working. What should I do?

1045 What is a SITE AREA EMERGENCY? Does that mean we're going to die or get cancer if we live within 10-mile of Palo Verde?

1050 Is Palo Verde going to melt down? Exactly what is a melt down?

1055 If they can't get this problem at Palo Verde fixed today, are they going to have to shut off our electricity?

1100 Should I stay inside my house if I live in Goodyear?

1105 What's going on at Palo Verde?

1110 Should I bring my pets/farm animals inside? I live east of Tolleson.

1115 Is the state going to take over the operation of Palo Verde?

1120 I have to fly over Palo Verde to get to a business meeting in Los Angeles. Am I going to be exposed to radiation?

1125 I keep hearing about something called REMS and milleREMS. What the heck are these?

1130 I live in Buckeye. Is it safe for me to go outside?

1135 If we have to leave our home because of the problem at Palo Verde, will someone build us a new home like they did in Russia after the accident at Chernobyl?

1140 Will Ruth Fisher School be open tomorrow?

1145 How much radiation is being released from Palo Verde?

1150 If we have to evacuate to a Reception and Care Center, how long will it be before we can return to our home?

1155 Is the milk I bought at the Hassayampa Store last night safe to drink?

1200 Someone told me that radiation is more dangerous to children and pregnant women than to people like my husband. Why?

1205 I'm on my way to a Reception and Care Center. Will someone make certain my house isn't looted while I'm away?

1210 I live in Avondale. Is our water safe to drink, or has the accident at Palo Verde contaminated it?

1215 I have family living in the 10-mile area surrounding Palo Verde. How do I find out if they have been able to leave the area and are safe?

1220 I heard that the National Guard was going to take over Palo Verde. Is that true? My son is a member and I don't want him near that mess.

1225 I heard that there's a big cloud of steam or something hovering over Palo Verde. Is that radiation or just regular pollution?

1230 When will an evacuation of Phoenix be required?

1235 Are the vegetables from my home garden safe to eat? I live in Youngtown.

1240 My electricity comes from Palo Verde. Is it going to be radioactive? Should I shut off my electricity to protect my family?

1245 Is the radiation going to ruin my cotton crop? I live near Cotton Lane and Interstate 10.

1250 Will I have to throw out the milk from my dairy farm? If so, will APS pay me for it? My farm is near 75th Avenue and Glendale.

1255 I just heard that a GENERAL EMERGENCY has been declared at Palo Verde. Isn't that the same thing that happened in Russia a couple of years ago? I have relatives in Phoenix...are they going to die?

1300 I live in a trailer behind the Red Quail Store near Palo Verde, and want to get out of the area until it's safe again. Can someone come out and help me?

# APPENDIX E

# PUBLIC INFORMATION CONTROLLER GUIDE

CONTENTS

PUBLIC INFORMATION CONTROLLER GUIDE

ACRONYMS

PUBLIC INFORMATION CONTROLLER GUIDE

| | |
|---|---|
| ADES | - Arizona Division of Emergency Services |
| APS | - Arizona Public Service Company |
| API | - APS Public Information Spokesperson |
| ARRA | - Arizona Radiation Regulatory Agency |
| CEC | - Corporate Emergency Center |
| COC | - Chief Offsite Controller |
| CPI | - County Public Information Spokesperson |
| CTG | - Contingency |
| DC | - Decision and Control |
| DO | - Duty Officer |
| EBS | - Emergency Broadcast System |
| EOC | - Emergency Operations Center |
| EOF | - Emergency Operations Facility |
| EPZ | - Emergency Planning Zone |
| FEMA | - Federal Emergency Management Agency |
| FM | - From |
| FNC | - Forward News Center |
| GPIO | - Government Public Information Officer |
| JENC | - Joint Emergency News Center |
| LOCA | - Loss Of Coolant Accident |
| MC | - Maricopa County |
| MCDCD&ES | - Maricopa County Department of Civil Defense and Emergency Services |
| MCSO | - Maricopa County Sheriff's Office |
| MSG | - Message |
| NAN | - Notification Alert Network |
| NOUE | - Notification of Unusual Event |
| NRC | - Nuclear Regulatory Commission |

| | |
|---|---|
| PI | - Public Inquiry |
| PVNGS | - Palo Verde Nuclear Generating Station |
| RCG | - Rumor Control Group |
| RCP | - Reactor Coolant Pump |
| RCS | - Reactor Coolant System |
| REAT | - Radiological Emergency Assistance Team |
| RF | - REAT Forward |
| SG | - Steam Generator |
| SPI | - State Public Information Spokesperson |
| SS | - Shift Supervisor |
| TOC | - Technical Operations Center |
| WRF | - Water Reclamation Facility |

SCENARIO CONTROLLER GUIDE

FORWARD NEWS CENTER

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | FNC/DO | PVNGS Unit 2 declares NOUE based on uncontrolled fire in "B" Switchgear Room. | Establish contact with Plant Director, develop and issue press releases, access Media Alert, establish contact with APS Media Relations, transmit hard copy to APS Media Relations | | |
| 0840-0905 | | | FNC/DO | PVNGS Unit 2 declares an ALERT based on fuel damage accident releasing radioactivity to the Fuel Building. | Continue to provide above support until activation of the JENC, deactivate when this is accomplished and then travel to the JENC. | | |

JOINT EMERGENCY NEWS CENTER

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0740-0805 | | | JENC/MGR | PVNGS Unit 2 declares NOUE based on uncontrolled fire in "B" Switchgear Room. | Contacts State and County public information spokespeople, initiates and maintains contact with FNC Director | | |
| 0840-0905 | | | JENC/MGR | PVNGS Unit 2 declares an ALERT based on fuel damage accident releasing radioactivity to the Fuel Building. | Initiate activation, receive hard copy from FNC, determine staffing levels, check equipment operation, prepare for initial press briefing. | | |
| 1005-1300 | JENC-1 thru 17 | | JENC/MGR | JENC activation completed | Receive information from EOF and State and County EOCs, draft press releases, relay to EOF and EOCs for approval, disseminate information through press briefings. | | |
| 0940-1005 | | | JENC/MGR | PVNGS Unit 2 declares a SITE AREA EMERGENCY based on a loss of RCS inventory greater than 50 gpm and failure of both ECCS to actuate when needed. | Continue as above. | JENC-A | To ensure that JENC receives notification of SITE AREA EMERGENCY by 1010. |
| 1040-1105 | | | JENC/MGR | PVNGS Unit 2 declares a GENERAL EMERGENCY, based on a loss of inventory greater than 50 gpm, failure of both ECCS trains to inject, voiding in the outlet plenum and containment $H_2$ greater than 3.5%. | Continue as above. | JENC-B | To ensure that JENC receives notification of GENERAL EMERGENCY by 1110. |

JOINT EMERGENCY NEWS CENTER (continued)

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 1300 | | | JENC/MGR | Termination of Exercise. | Receive information from EOF, relay to State and County EOCs, media, Rumor Control Group, and APS Media Relations. | | |
| 1300 | | | JENC/MGR | Commence critique, secure facility. | | | |

RUMOR CONTROL

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0840-0905 | | | RCG/SUPV | PVNGS Unit 2 declares an ALERT. | Initiate activation, establish contact with JENC Facility Manager and PI/SS, determine staffing levels, check equipment operation, receive hard copy of press releases from JENC, brief staff. | RCG-A | To ensure that RCG receives notification of ALERT by 0930. |
| 1000-1300 | RCG-1 | | RCG/SUPV | RCG activation completed. | Respond, from approved press releases and stock information, to questions from the public and the media concerning conditions at PVNGS, inform JENC Facility Manager and the PI/SS of any unusual rumors or questions received. | | |
| 1300 | | | RCG/SUPV | Termination of Exercise. | Receive termination notification from JENC. | | |
| 1300 | | | RCG/SUPV | Commence critique, secure facility. | | | |

PUBLIC INQUIRY

| TIME | MSG. NO. | FROM | TO | EVENT SUMMARY | ANTICIPATED RESPONSE | CONT. MSG. | CONTROLLER NOTES |
|---|---|---|---|---|---|---|---|
| 0840-0905 | | | PI/SS | PVNGS Unit 2 declares an ALERT. | Initiate activation, establish contact with the EOC/GPIO and RCG/SUPV, determine staffing levels, check equipment operation, receive hard copy of press releases from JENC, brief staff. | PI-A | To ensure that PI receives notification of the ALERT by 0930. |
| 1000-1300 | P-1 | | PI/SS | PI activation completed. | Respond, from approved press releases and stock information, to questions from the public, and the media concerning government response to conditions at PVNGS, inform the EOC/GPIO and the RCG/SUPV of any unusual rumors of questions received. | | |
| 1300 | | | PI/SS | Termination of Exercise. | Receive information from EOC/GPIO. | | |
| 1300 | | | PI/SS | Commence critique, secure facility. | | | |

# APPENDIX F

# PUBLIC INFORMATION MESSAGES

CONTENTS

PUBLIC INFORMATION MESSAGES

## ACRONYMS

## PUBLIC INFORMATION MESSAGES

| | |
|---|---|
| ADES | - Arizona Division of Emergency Services |
| APS | - Arizona Public Services Company |
| API | - APS Public Information Spokesperson |
| ARRA | - Arizona Radiation Regulatory Agency |
| CEC | - Corporate Emergency Center |
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| CPI | - County Public Information Spokesperson |
| CTG | - Contingency |
| DC | - Direction and Control |
| DO | - Duty Officer |
| EBS | - Emergency Broadcast System |
| EOC | - Emergency Operations Center |
| EOF | - Emergency Operations Facility |
| EPZ | - Emergency Planning Zone |
| FEMA | - Federal Emergency Management Agency |
| FM | - From |
| FNC | - Forward News Center |
| GPIO | - Government Public Information Officer |
| JENC | - Joint Emergency News Center |
| LOCA | - Loss of Coolant Accident |
| MC | - Maricopa County |
| MCDCD&ES | - Maricopa County Department of Civil Defense and Emergency Services |
| MCSO | - Maricopa County Sheriff's Office |
| MSG | - Message |
| NAN | - Notification Alert Network |
| NOUE | - Notification of Unusual Event |
| NRC | - Nuclear Regulatory Commission |
| PI | - Public Inquiry |
| PVNGS | - Palo Verde Nuclear Generating Station |
| RCG | - Rumor Control Group |
| RCP | - Reactor Coolant Pump |
| RCS | - Reactor Coolant System |
| REAT | - Radiological Emergency Assistance Team |
| RF | - REAT Forward |
| SG | - Steam Generator |
| SPI | - State Public Information Spokesperson |
| SS | - Shift Supervisor |
| TOC | - Technical Operations Center |
| WRF | - Water Reclamation Facility |

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: JENC Facility Manager

MESSAGE NO.: JENC-A

LOCATION: Joint Emergency News Center

TIME: 1010

MESSAGE: The Maricopa County Public Information Spokesperson indicates to you that he/she has received word that the situation at Palo Verde has escalated to a SITE AREA EMERGENCY.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

CONTINGENCY MESSAGE FORM

T H I S  I S  A  D R I L L !

ISSUE THIS MESSAGE IF ADDRESSEE HAS NOT BEEN INFORMED DURING EXERCISE PLAY

TO: JENC Facility Manager

MESSAGE NO.: JENC-B

LOCATION: Joint Emergency News Center

TIME: 1110

MESSAGE: One of the television reporters in the Media Room has passed word to you, through the Media Room Coordinator, that his sources indicate that the plant has declared a GENERAL EMERGENCY.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-1

LOCATION: Joint Emergency News Center

TIME: First News Briefing

---

MESSAGE: Was the declaration of an ALERT related to the fire that occurred earlier today, and what actually caused the NOTIFICATION OF UNUSUAL EVENT?

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-2

LOCATION: Joint Emergency News Center

TIME: Second News Briefing

MESSAGE: Could the problems that are occuring at Palo Verde right now lead to another Chernobyl? How about another Three Mile Island?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: County Public Information Spokesperson. MESSAGE NO.: JENC-3

LOCATION: Joint Emegency News Center

TIME: Second News Briefing

---

MESSAGE: We understand that a worker at Palo Verde has been killed in a work related accident. Can you tell us more about what happened?

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson

MESSAGE NO.: JENC-4

LOCATION: Joint Emergency News Center

TIME: Second News Briefing

MESSAGE: How many people live in the 10-mile area surrounding Palo Verde, and is the state really prepared to handle the situation if this accident turns into another Chernobyl?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson  MESSAGE NO.: JENC-5

LOCATION: Joint Emergency News Center

TIME: 1100-1115 News Briefing

MESSAGE: What is the weather forecast? How far is it estimated that the wind will carry any radiation that might be released? What happens if there is a wind shift?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-6

LOCATION: Joint Emergency News Center

TIME: 1100-1115 News Briefing

MESSAGE: Although you say that you have conditions under control at Palo Verde, do you have a plan for a worst-case meltdown at the plant?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson

MESSAGE NO.: JENC-7

LOCATION: Joint Emergency News Center

TIME: 1115-1130 News Briefing

MESSAGE: What happens to the employees at the plant site when an accident occurs? Are they sent home? Is anyone left to run the plant? If so, are they in danger?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-8

LOCATION: Joint Emergency News Center

TIME: 1115-1130 News Briefing

---

MESSAGE: How will this accident affect the other two units? Could this same thing happen to them?

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-9

LOCATION: Joint Emergency News Center

TIME: 1130-1145 News Briefing

MESSAGE: Back to the accident at the plant. How many other employees have been killed or injured on the job at Palo Verde.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: County Public Information Spokesperson. MESSAGE NO.: JENC-10

LOCATION: Joint Emergency News Center

TIME: 1130-1145 News Briefing

---

MESSAGE: How long does it take to evacuate all of the residents from the 10-mile area surrounding Palo Verde? How do you know when the total evacuation is complete?

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: State Public Information Spokesperson  MESSAGE NO.: JENC-11

LOCATION: Joint Emergency News Center

TIME: 1145-1200 News Briefing

MESSAGE: What information do you have on how long the release of radioactive materials into the atmosphere is likely to last?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: State Public Information Spokesperson  MESSAGE NO.: JENC-12

LOCATION: Joint Emergency News Center

TIME: 1145-1200 News Briefing

---

MESSAGE: What is the estimate of damage to crops and farm animals in the 10-mile area around the plant as a result of the accident at Palo Verde?

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-13

LOCATION: Joint Emergency News Center

TIME: 1200-1215 News Briefing

MESSAGE: Are we likely to see a core meltdown as a result of the events that have taken place at Palo Verde today?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-14

LOCATION: Joint Emergency News Center

TIME: 1200-1215 News Briefing

MESSAGE: Is today's situation at Palo Verde just another example of sloppy workmanship and poor management?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-15

LOCATION: Joint Emergency News Center

TIME: 1215-1230 News Briefing

MESSAGE: How long will it take to clean-up after this accident? How much is the estmated cost for this clean-up?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson

MESSAGE NO.: JENC-16

LOCATION: Joint Emergency News Center

TIME: 1215-1230 News Briefing

MESSAGE: How soon after conditions at Palo Verde are back under control will we be able to get in and have a look at the damage ourselves?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: APS Public Information Spokesperson  MESSAGE NO.: JENC-17

LOCATION: Joint Emergency News Center

TIME: 1230-1245 News Briefing

MESSAGE: With the nuclear production of electricity costing more and more as a result of accidents like this, does APS anticipate more towns like Page and Gilbert, Arizona trying to run their own independent electric companies in a better managed and more economical manner?

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.
2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.
3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

EXERCISE MESSAGE FORM

---

T H I S  I S  A  D R I L L !

---

TO: Rumor Control Group Controller  MESSAGE NO.: RCG-1

LOCATION: Rumor Control Center

TIME: 1000

---

MESSAGE: Call the Rumor Control Group at the times indicated on the following list of suggested Rumor Control questions. Each question may be asked to more than one Rumor Control Operator. Other free-play questions are also encouraged.

---

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

RUMOR CONTROL QUESTIONS (Refer to MSG RCG-1)

1000 I just came into Phoenix from the west on Interstate 10. They said on the radio that there was a problem at Palo Verde. Was the steam cloud I saw coming out of the plant a release of radiation? Have I been exposed?

1005 My husband works at Palo Verde. I heard someone there was involved in an accident. Can you tell me if it was Paul Long? I'm worried about him.

1010 How serious is an ALERT? What does it mean?

1015 My husband is a construction worker at Palo Verde. Is there a number I can call to find out if he is OK?

1020 Is Palo Verde releasing radiation into the atmosphere?

1030 Is Palo Verde going to melt-down? Exactly what is a melt-down?

1040 If my family has to evacuate our home, we live near Arlington, how will we know where to go?

1045 I'm a newspaper reporter from Tucson. Who do I contact to set up an interview with whoever is in charge of Palo Verde? I want to get a statement for our early afternoon edition.

1050 Is the same thing happening at Palo Verde that happened at Chernobyl? I thought you people said that this plant was safe.

1055 I'm going to drive from Phoenix to Los Angeles later today. Is it safe for me to use Interstate 10, or am I going to be exposed to radiation?

1100 I live in Litchfield Park. Should my family and I evacuate the area? We're very close to Palo Verde.

1105 What are these problems at Palo Verde going to cost me as an APS rate payer? My electric bill is already too high!!!

1115 I just heard that a SITE AREA EMERGENCY was declared at Palo Verde. What does that mean?

1130 I own a lot of Pinacle West stock. With this accident, is my stock going to be worthless? Will APS buy it back from me for what I paid for it? How do I get rid of it?

1135 I live near Palo Verde. How is the accident going to effect me?

1140 I heard a radio report that mentioned an "EPZ" surrounding Palo Verde. What is that?

1145 Is there some kind of plan to protect the public when an accident occurs at Palo Verde?

1150 If my house is contaminated by radiation, will APS pay for having it cleaned-up? Will they build me a new house like the Russians did for the victims of Chernobyl?

1155 This is Terry Smith of the CBA television network. I have a news crew on the way to Palo Verde in a helicopter. Who do I need to talk to so they can land near the plant and shoot some footage for our evening news? Will someone be available at the site to do an interview?

1200 What is radiation going to do to my cotton crop? Who is going to reimburse me for my losses?

1205 One of your people said that this won't be like Chernobyl because Palo Verde has a containment building. What is that?

1210 What direction is the wind blowing? Should we clear out? We live near Perryville.

1215 I understand that a GENERAL EMERGENCY has been declared at Palo Verde. What does that mean to me and my family? We live in Phoenix.

1220 Will our electricity be shut-off because of this problem at Palo Verde?

1225 I have relatives that live in Arlington. Are they going to get cancer because of this problem at Palo Verde?

1230 Will Ruth Fisher School be open tomorrow?

1235 I work in the warehouse at Palo Verde and am scheduled to go work at 3:30pm. Should I show up for work?

1240 Can you tell me which Reception and Care Centers have been opened for people evacuating the area around Palo Verde?

1245 If some of my electricity comes from Palo Verde, does that mean my food will become radioactive if I use my electric stove?

1250 My neighbor tells me that radiation smells like natural gas, is that true?

1255 I have been hearing terms like REM and milleREM being used a lot today. What do those terms mean?

1300 I've been evacuated from my home in Arlington, and my friend just told me that looters have been seen in the area. Can someone guard my house until I get to return home?

EXERCISE MESSAGE FORM

T H I S  I S  A  D R I L L !

TO: Public Inquiry Controller  MESSAGE NO.: P-1

LOCATION: Public Inquiry Center

TIME: 1000

MESSAGE: Call the State Public Inquiry Center at the times indicated on the following list of suggested Public Inquiry questions. Each question may be asked of more than one operator. Other free-play questions are also encouraged.

PLAYER NOTES:

1. KEEP YOUR CONTROLLER INFORMED OF ACTIONS TO BE TAKEN.

2. REQUEST CLARIFICATION FROM YOUR CONTROLLER IF THE MESSAGE IS NOT FULLY UNDERSTOOD.

3. REQUEST ADDITIONAL INFORMATION IF YOU FEEL IT IS NEEDED.

PUBLIC INQUIRY QUESTIONS (Refer to MSG PI-1)

1000 I just heard that there's an accident at Palo Verde. Is this the same type of thing that happened at Chernobyl?

1005 I just heard on the radio that there's a problem at Palo Verde, but I didn't hear any warning sirens go off. I live in Arlington and thought we were supposed to be warned if something went wrong at the plant.

1010 What's an ALERT?

1015 What's happening at Palo Verde?

1020 Should we evacuate now, just to be safe?

1025 Is it safe for me to travel west from Phoenix on Interstate 10?

1030 Is radiation being released from Palo Verde? Will someone tell us if we are in danger?

1035 My husband is a construction worker at Palo Verde. Will he be OK?

1040 I just heard the warning sirens go off, but when I tried to tune to KTAR for instructions, my radio quit working. What should I do?

1045 What is a SITE AREA EMERGENCY? Does that mean we're going to die or get cancer if we live within 10-mile of Palo Verde?

1050 Is Palo Verde going to melt down? Exactly what is a melt down?

1055 If they can't get this problem at Palo Verde fixed today, are they going to have to shut off our electricity?

1100 Should I stay inside my house if I live in Goodyear?

1105 What's going on at Palo Verde?

1110 Should I bring my pets/farm animals inside? I live east of Tolleson.

1115 Is the state going to take over the operation of Palo Verde?

1120 I have to fly-over Palo Verde to get to a business meeting in Los Angeles. Am I going to be exposed to radiation?

1125 I keep hearing about something called REMS and milleREMS. What the heck are these?

1130 I live in Buckeye. Is it safe for me to go outside?

1135 If we have to leave our home because of the problem at Palo Verde, will someone build us a new home like they did in Russia after the accident at Chernobyl?

1140 Will Ruth Fisher School be open tomorrow?

1145 How much radiation is being released from Palo Verde?

1150 If we have to evacuate to a Reception and Care Center, how long will it be before we can return to our home?

1155 Is the milk I bought at the Hassayampa Store last night safe to drink?

1200 Someone told me that radiation is more dangerous to children and pregnant women than to people like my husband. Why?

1205 I'm on my way to a Reception and Care Center. Will someone make certain my house isn't looted while I'm away?

1210 I live in Avondale. Is our water safe to drink, or has the accident at Palo Verde contaminated it?

1215 I have family living in the 10-mile area surrounding Palo Verde. How do I find out if they have been able to leave the area and are safe?

1220 I heard that the National Guard was going to take over Palo Verde. Is that true? My son is a member and I don't want him near that mess.

1225 I heard that there's a big cloud of steam or something hovering over Palo Verde. Is that radiation or just regular pollution?

1230 When will an evacuation of Phoenix be required?

1235 Are the vegetables from my home garden safe to eat? I live in Youngtown.

1240 My electricity comes from Palo Verde. Is it going to be radioactive? Should I shut off my electricity to protect my family?

1245 Is the radiation going to ruin my cotton crop? I live near Cotton Lane and Interstate 10.

1250 Will I have to throw out the milk from my dairy farm? If so, will APS pay me for it? My farm is near 75th Avenue and Glendale.

1255 I just heard that a GENERAL EMERGENCY has been declared at Palo Verde. Isn't that the same thing that happened in Russia a couple of years ago? I have relatives in Phoenix...are they going to die?

1300 I live in a trailer behind the Red Quail Store near Palo Verde, and want to get out of the area until it's safe again. Can someone come out and help me?

PVNGS 1989

APPENDIX G

ANNUAL EMERGENCY PREPAREDNESS EXERCISE

EMERGENCY REPAIR TEAM CONTROLLER

ASSISTANCE AND INFORMATION GUIDES

PVNGS 1989 EMERGENCY PREPAREDNESS EXERCISE
CONTROLLER INFORMATION GUIDES

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(This Information to be Supplied Later)

# APPENDIX H

# PVNGS FREEPLAY AND SIDEPLAY

# MINI-SCENARIOS

PVNGS 1989 EMERGENCY PREPAREDNESS EXERCISE

APPENDIX H

FREEPLAY AND SIDEPLAY MINI SCENARIOS

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(THIS DATA TO BE PROVIDED LATER)

# PVNGS 1989 Exercise

| 80-8 | PARAMETER | 8788 | 80-8 | PARAMETER | 8788 | 80-8 | PARAMETER | 8788 | 80-8 | PARAMETER | 8788 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 80-2 | HPSI DSCH HDR A | 24.03 | 80-2 | SIT PRSS 2 | 610 | 80-4 | RX POWER | 99.85 | 80-6 | CND PMP DSCH | 413.93 |
| 80-2 | HPSI FLW TO 1A | 0 | 80-2 | PZR PRESS | 2229.82 | 80-4 | KW/FT LMT | 109.63 | 80-6 | MN STM HDR PRESS | 1013.16 |
| 80-2 | HPSI FLW TO 1B | 0 | 80-3 | EDT LEVEL | 41 | 80-4 | DNBR LMT | 162.09 | 80-6 | S/G 1 FD FLW | 8.40E+06 |
| 80-2 | LPSI A FLOW | 0 | 80-3 | HUT LEVEL | 3.84 | 80-4 | ASI | 0.09 | 80-6 | S/G 1 STM FLW | 8.30E+06 |
| 80-2 | CNT SPRY A FLW | 0 | 80-3 | RMWT LEVEL | 34.48 | 80-5 | S/G 1 LVL -W | 79.41 | 80-6 | S/G 2 FD FLW | 8.40E+06 |
| 80-2 | HPSI DSCH HDR B | 25.97 | 80-3 | VCT LEVEL | 44.78 | 80-5 | S/G 1 PRESS | 1079.93 | 80-6 | S/G 2 STM FLW | 8.30E+06 |
| 80-2 | HPSI FLW TO 2A | 0 | 80-3 | RDT LEVEL | 67.16 | 80-5 | S/G 2 LVL-W | 79.28 | 80-6 | FD PUMP A DSCH | 1296.14 |
| 80-2 | HPSI FLW TO 2B | 0 | 80-3 | RCP SEAL BLD | HIGH | 80-5 | S/G 2 PRESS | 1079.94 | 80-6 | FD PUMP B DSCH | -14.7 |
| 80-2 | LPSI B FLOW | 0 | 80-3 | BORONMTR | 623.51 | 80-5 | Th LOOP 1 | 621.02 | 80-6 | B AUX FEED FLOW | 0 |
| 80-2 | CNT SPRY B FLW | 0 | 80-3 | PRCSS RAD MON | 1.80E+02 | 80-5 | Th LOOP 2 | 621.02 | 80-6 | A AUX FEED FLOW | 0 |
| 80-2 | CNT PRESS | 0 | 80-3 | L/D FLOW | 71.88 | 80-5 | Tc LOOP 1 | 564.97 | 80-7 | MN TURB LOAD NET | 1205.23 |
| 80-2 | CNT LEVEL | 0 | 80-3 | CHPS RUNNING | 1,2 | 80-5 | Tc LOOP 2 | 564.98 | 80-7 | MN TURB PF | .93 LAG |
| 80-2 | RWT LEVEL | 90.99 | 80-3 | CHGING HDR | 90 | 80-5 | ADV #1-S/G #1 | 0 | 80-7 | COND A VAC | 2.53 |
| 80-2 | SIT LVL 3 | 80.53 | 80-4 | PZR LEVEL | 52.46 | 80-5 | ADV #2-S/G #1 | 0 | 80-7 | COND B VAC | 3.03 |
| 80-2 | SIT LVL 4 | 80.53 | 80-4 | PZR RLF TEMP | 110.8 | 80-5 | ADV #1-S/G #2 | 0 | 80-7 | COND C VAC | 4.06 |
| 80-2 | SIT PRSS 3 | 610 | 80-4 | NCW FLW RCP 1A | 500 | 80-5 | ADV #2-S/G #2 | 0 | 80-7 | CONT TMP | 112.65 |
| 80-2 | SIT PRSS 4 | 610 | 80-4 | NCW FLW RCP 1B | 500 | 80-5 | DNBR MAR | 1.19 | 80-7 | CNT HUMID | 11.84 |
| 80-2 | SIT LVL 1 | 80.53 | 80-4 | NCW FLW RCP 2A | 500 | 80-5 | KW/FT MAR | 9.05 | 80-7 | CNT SMP LVL-E | 24 |
| 80-2 | SIT LVL 2 | 80.53 | 80-4 | NCW FLW RCP 2B | 500 | 80-5 | LIN POWER | 99.85 | 80-7 | CNT SMP LVL-W | 24 |
| 80-2 | SIT PRSS 1 | 610 | 80-4 | CORE D P | 48.57 | 80-6 | CND PMP DSCH | 1.30E+07 | 80-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | #715 | BO-# | PARAMETER | #715 | BO-# | PARAMETER | #715 | BO-# | PARAMETER | #715 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.85 | BO-6 | CND PMP DSCH | 413.93 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.82 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 102.09 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RWWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.41 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.78 | BO-5 | S/G 1 PRESS | 1079.93 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.16 | BO-5 | S/G 2 LVL-W | 79.28 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.94 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 71.88 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1,2 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 90 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.46 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.8 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.86 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.85 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | #738 | BO-# | PARAMETER | #738 | BO-# | PARAMETER | #738 | BO-# | PARAMETER | #738 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.85 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.8 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 101.89 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.79 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.17 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 71.89 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.46 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.85 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | 0745 | BO-# | PARAMETER | 0745 | BO-# | PARAMETER | 0745 | BO-# | PARAMETER | 0745 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.85 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.85 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 101.47 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.8 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.18 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 74.352 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.48 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.85 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | #### | BO-# | PARAMETER | #### | BO-# | PARAMETER | #### | BO-# | PARAMETER | #### |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.85 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.87 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 100.14 | BO-6 | S/G 1 FD FLW | 0.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 0.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 0.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.92 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 0.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.19 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 74.25 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.46 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.85 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | 0815 | BO-# | PARAMETER | 0815 | BO-# | PARAMETER | 0815 | BO-# | PARAMETER | 0815 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.85 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.84 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 99.12 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 45.23 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.2 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.82 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 73.65 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.45 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.85 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | 0830 | BO-# | PARAMETER | 0830 | BO-# | PARAMETER | 0830 | BO-# | PARAMETER | 0830 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.85 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.87 | BO-4 | KW/FT LMT | 189.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 96.35 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 45.89 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.2 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 73.89 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .98 LAG |
| BO-2 | RWT LEVEL | 98.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.46. | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.85 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BB-8 | PARAMETER | 8845 | BB-8 | PARAMETER | 8845 | BB-8 | PARAMETER | 8845 | BB-8 | PARAMETER | 8845 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BB-2 | HPSI DSCH HDR A | 24.03 | BB-2 | SIT PRSS 2 | 610 | BB-4 | RX POWER | 99.85 | BB-6 | CND PMP DSCH | 412.99 |
| BB-2 | HPSI FLW TO 1A | 0 | BB-2 | PZR PRESS | 2229.84 | BB-4 | KW/FT LMT | 109.63 | BB-6 | MN STM HDR PRESS | 1013.16 |
| BB-2 | HPSI FLW TO 1B | 0 | BB-3 | EDT LEVEL | 41 | BB-4 | DNBR LMT | 91.09 | BB-6 | S/G 1 FD FLW | 8.40E+06 |
| BB-2 | LPSI A FLOW | 0 | BB-3 | HUT LEVEL | 3.84 | BB-4 | ASI | 0.09 | BB-6 | S/G 1 STM FLW | 8.30E+06 |
| BB-2 | CNT SPRY A FLW | 0 | BB-3 | RMWT LEVEL | 34.48 | BB-5 | S/G 1 LVL -W | 79.52 | BB-6 | S/G 2 FD FLW | 8.40E+06 |
| BB-2 | HPSI DSCH HDR B | 25.97 | BB-3 | VCT LEVEL | 46.12 | BB-5 | S/G 1 PRESS | 1079.96 | BB-6 | S/G 2 STM FLW | 8.30E+06 |
| BB-2 | HPSI FLW TO 2A | 0 | BB-3 | RDT LEVEL | 67.21 | BB-5 | S/G 2 LVL-W | 79.35 | BB-6 | FD PUMP A DSCH | 1296.14 |
| BB-2 | HPSI FLW TO 2B | 0 | BB-3 | RCP SEAL BLD | HIGH | BB-5 | S/G 2 PRESS | 1079.97 | BB-6 | FD PUMP B DSCH | -14.7 |
| BB-2 | LPSI B FLOW | 0 | BB-3 | BORONMTR | 623.51 | BB-5 | Th LOOP 1 | 621.02 | BB-6 | B AUX FEED FLOW | 0 |
| BB-2 | CNT SPRY B FLW | 0 | BB-3 | PRCSS RAD MON | 1.00E+02 | BB-5 | Th LOOP 2 | 621.02 | BB-6 | A AUX FEED FLOW | 0 |
| BB-2 | CNT PRESS | 0 | BB-3 | L/D FLOW | 73.56 | BB-5 | Tc LOOP 1 | 564.97 | BB-7 | MN TURB LOAD NET | 1205.23 |
| BB-2 | CNT LEVEL | 0 | BB-3 | CHPS RUNNING | 1 | BB-5 | Tc LOOP 2 | 564.98 | BB-7 | MN TURB PF | .93 LAG |
| BB-2 | RWT LEVEL | 90.99 | BB-3 | CHGING HDR | 44 | BB-5 | ADV #1-S/G #1 | 0 | BB-7 | COND A VAC | 2.53 |
| BB-2 | SIT LVL 3 | 80.53 | BB-4 | PZR LEVEL | 52.48 | BB-5 | ADV #2-S/G #1 | 0 | BB-7 | COND B VAC | 3.03 |
| BB-2 | SIT LVL 4 | 80.53 | BB-4 | PZR RLF TEMP | 110.81 | BB-5 | ADV #1-S/G #2 | 0 | BB-7 | COND C VAC | 4.06 |
| BB-2 | SIT PRSS 3 | 610 | BB-4 | NCW FLW RCP 1A | 500 | BB-5 | ADV #2-S/G #2 | 0 | BB-7 | CONT TMP | 112.65 |
| BB-2 | SIT PRSS 4 | 610 | BB-4 | NCW FLW RCP 1B | 500 | BB-5 | DNBR MAR | 1.19 | BB-7 | CNT HUMID | 11.84 |
| BB-2 | SIT LVL 1 | 80.53 | BB-4 | NCW FLW RCP 2A | 500 | BB-5 | KW/FT MAR | 9.05 | BB-7 | CNT SMP LVL-E | 24 |
| BB-2 | SIT LVL 2 | 80.53 | BB-4 | NCW FLW RCP 2B | 500 | BB-5 | LIN POWER | 99.85 | BB-7 | CNT SMP LVL-W | 24 |
| BB-2 | SIT PRSS 1 | 610 | BB-4 | CORE D P | 48.57 | BB-6 | CND PMP DSCH | 1.30E+07 | BB-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | 0900 | BO-# | PARAMETER | 0900 | BO-# | PARAMETER | 0900 | BO-# | PARAMETER | 0900 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.84 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.89 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 86.23 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 46.42 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.23 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 74.46 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.47 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.84 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 38 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | 0915 | BO-# | PARAMETER | 0915 | BO-# | PARAMETER | 0915 | BO-# | PARAMETER | 0915 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.84 | BO-6 | CND PMP DSCH | 412.99 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2229.96 | BO-4 | KW/FT LMT | 109.63 | BO-6 | MN STM HDR PRESS | 1013.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 75.2 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 79.52 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 46.41 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.24 | BO-5 | S/G 2 LVL-W | 79.35 | BO-6 | FD PUMP A DSCH | 1296.14 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.97 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.02 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.08E+02 | BO-5 | Th LOOP 2 | 621.02 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 74.29 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1205.23 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.53 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.44 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3.03 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.81 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.06 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 11.84 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.05 | BO-7 | CNT SMP LVL-E | 24 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.84 | BO-7 | CNT SMP LVL-W | 24 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | #92# | BO-# | PARAMETER | #92# | BO-# | PARAMETER | #92# | BO-# | PARAMETER | #92# |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.83 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.83 | BO-6 | CND PMP DSCH | 411.89 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2230.1 | BO-4 | KW/FT LMT | 109.64 | BO-6 | MN STM HDR PRESS | 1013.21 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 14.14 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 80.07 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 46.33 | BO-5 | S/G 1 PRESS | 1080.01 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.24 | BO-5 | S/G 2 LVL-W | 79.91 | BO-6 | FD PUMP A DSCH | 1292.55 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1080.01 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0 | BO-3 | L/D FLOW | 74.35 | BO-5 | Tc LOOP 1 | 564.97 | BO-7 | MN TURB LOAD NET | 1198.13 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.52 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.36 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.84 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.01 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 110.65 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 13.06 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.06 | BO-7 | CNT SMP LVL-E | 24.22 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.83 | BO-7 | CNT SMP LVL-W | 24.22 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.56 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 38 |

| BO-8 | PARAMETER | 0925 | BO-8 | PARAMETER | 0925 | BO-8 | PARAMETER | 0925 | BO-8 | PARAMETER | 0925 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.83 | BO-6 | CND PMP DSCH | 411.89 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2230.44 | BO-4 | KW/FT LMT | 189.64 | BO-6 | MN STM HDR PRESS | 1013.21 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 2.11 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RNWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 80.07 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.26 | BO-5 | S/G 1 PRESS | 1079.96 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.24 | BO-5 | S/G 2 LVL-W | 79.91 | BO-6 | FD PUMP A DSCH | 1292.55 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.95 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 620.98 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 620.98 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.81 | BO-3 | L/D FLOW | 58.54 | BO-5 | Tc LOOP 1 | 564.96 | BO-7 | MN TURB LOAD NET | 1198.13 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | 1 | BO-5 | Tc LOOP 2 | 564.96 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 98.99 | BO-3 | CHGING HDR | 44 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.52 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 52.37 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 2.99 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.86 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.01 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 119.84 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 21.06 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.06 | BO-7 | CNT SMP LVL-E | 26.75 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.83 | BO-7 | CNT SMP LVL-W | 26.75 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.56 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

| BO-# | PARAMETER | 0930 | BO-# | PARAMETER | 0930 | BO-# | PARAMETER | 0930 | BO-# | PARAMETER | 0930 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.79 | BO-6 | CND PMP DSCH | 411..84 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2225.37 | BO-4 | KW/FT LMT | 109.64 | BO-6 | MN STM HDR PRESS | 1013.19 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0.51 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.69 | BO-6 | S/G 1 STM FLW | 8.38E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 80.06 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.34 | BO-5 | S/G 1 PRESS | 1080.02 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.32 | BO-5 | S/G 2 LVL-W | 79.9 | BO-6 | FD PUMP A DSCH | 1292.41 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1080.01 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621.01 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621.01 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.02 | BO-3 | L/D FLOW | 35.1 | BO-5 | Tc LOOP 1 | 564.98 | BO-7 | MN TURB LOAD NET | 1198.44 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.52 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 51.24 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 2.99 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.85 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.01 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 111.05 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 25.97 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.06 | BO-7 | CNT SMP LVL-E | 28.32 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.79 | BO-7 | CNT SMP LVL-W | 28.32 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.56 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-8 | PARAMETER | 0935 | BO-8 | PARAMETER | 0935 | BO-8 | PARAMETER | 0935 | BO-8 | PARAMETER | 0935 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.78 | BO-6 | CND PMP DSCH | 411.83 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2213.78 | BO-4 | KW/FT LMT | 109.65 | BO-6 | MN STM HDR PRESS | 1013.19 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 80.06 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.77 | BO-5 | S/G 1 PRESS | 1080.01 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.34 | BO-5 | S/G 2 LVL-W | 79.91 | BO-6 | FD PUMP A DSCH | 1292.51 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1080.02 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 621 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 621 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.03 | BO-3 | L/D FLOW | 34.69 | BO-5 | Tc LOOP 1 | 564.98 | BO-7 | MN TURB LOAD NET | 1198.47 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 564.98 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 99.99 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.52 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 47.24 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.86 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.01 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 111.61 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 41.74 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.06 | BO-7 | CNT SMP LVL-E | 33.43 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.78 | BO-7 | CNT SMP LVL-W | 33.43 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.57 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

| BO-# | PARAMETER | 0940 | BO-# | PARAMETER | 0940 | BO-# | PARAMETER | 0940 | BO-# | PARAMETER | 0940 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.78 | BO-6 | CND PMP DSCH | 411.85 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2212.17 | BO-4 | KW/FT LMT | 109.65 | BO-6 | MN STM HDR PRESS | 1013.13 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.40E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 80.07 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.69 | BO-5 | S/G 1 PRESS | 1079.97 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.36 | BO-5 | S/G 2 LVL-W | 79.91 | BO-6 | FD PUMP A DSCH | 1292.49 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.96 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 620.99 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 620.99 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.04 | BO-3 | L/D FLOW | 3.94 | BO-5 | Tc LOOP 1 | 564.98 | BO-7 | MN TURB LOAD NET | 1198.43 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 564.99 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 90.99 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.52 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 46.36 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 3 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.87 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.01 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 111.74 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.19 | BO-7 | CNT HUMID | 45.68 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.06 | BO-7 | CNT SMP LVL-E | 34.72 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.78 | BO-7 | CNT SMP LVL-W | 34.72 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.58 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 30 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | #945 | BO-# | PARAMETER | #945 | BO-# | PARAMETER | #945 | BO-# | PARAMETER | #945 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 99.24 | BO-6 | CND PMP DSCH | 411.85 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2219.73 | BO-4 | KW/FT LHT | 189.64 | BO-6 | MN STM HDR PRESS | 1012.85 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LHT | 0 | BO-6 | S/G 1 FD FLW | 8.40E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0.09 | BO-6 | S/G 1 STM FLW | 8.30E+06 |
| BO-2 | CNT SPRY A FLW | 0 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 80.88 | BO-6 | S/G 2 FD FLW | 8.40E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 42.41 | BO-5 | S/G 1 PRESS | 1079.61 | BO-6 | S/G 2 STM FLW | 8.30E+06 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.41 | BO-5 | S/G 2 LVL-W | 79.93 | BO-6 | FD PUMP A DSCH | 1292.41 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1079.59 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 620.82 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 620.82 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.07 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 564.92 | BO-7 | MN TURB LOAD NET | 1197.88 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 564.92 | BO-7 | MN TURB PF | .93 LAG |
| BO-2 | RWT LEVEL | 98.99 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 2.51 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 42.43 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 2.99 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110.88 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 4.01 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 112.46 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 1.21 | BO-7 | CNT HUMID | 68.82 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 9.12 | BO-7 | CNT SMP LVL-E | 42.43 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 99.24 | BO-7 | CNT SMP LVL-W | 42.43 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48.59 | BO-6 | CND PMP DSCH | 1.30E+07 | BO-7 | RX CAV SMP LVL | 38 |

# PVNGS 1989 Exercise

| 80-8 | PARAMETER | 0950 | 80-8 | PARAMETER | 0950 | 80-8 | PARAMETER | 0950 | 80-8 | PARAMETER | 0950 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 80-2 | HPSI DSCH HDR A | 24.03 | 80-2 | SIT PRSS 2 | 610 | 80-4 | RX POWER | 13.53 | 80-6 | CND PMP DSCH | 458.07 |
| 80-2 | HPSI FLW TO 1A | 0 | 80-2 | PZR PRESS | 2154.02 | 80-4 | KW/FT LMT | 62.86 | 80-6 | MN STM HDR PRESS | 1141.04 |
| 80-2 | HPSI FLW TO 1B | 0 | 80-3 | EDT LEVEL | 41 | 80-4 | DNBR LMT | 6.64 | 80-6 | S/G 1 FD FLW | 1.50E+06 |
| 80-2 | LPSI A FLOW | 0 | 80-3 | HUT LEVEL | 3.84 | 80-4 | ASI | 0.02 | 80-6 | S/G 1 STM FLW | 5.30E+06 |
| 80-2 | CNT SPRY A FLW | 0 | 80-3 | RMWT LEVEL | 34.48 | 80-5 | S/G 1 LVL -W | 70.81 | 80-6 | S/G 2 FD FLW | 1.50E+06 |
| 80-2 | HPSI DSCH HDR B | 25.97 | 80-3 | VCT LEVEL | 43.41 | 80-5 | S/G 1 PRESS | 1182.03 | 80-6 | S/G 2 STM FLW | 5.30E+06 |
| 80-2 | HPSI FLW TO 2A | 0 | 80-3 | RDT LEVEL | 67.43 | 80-5 | S/G 2 LVL-W | 71.2 | 80-6 | FD PUMP A DSCH | 1322.69 |
| 80-2 | HPSI FLW TO 2B | 0 | 80-3 | RCP SEAL BLD | HIGH | 80-5 | S/G 2 PRESS | 1181.97 | 80-6 | FD PUMP B DSCH | -14.7 |
| 80-2 | LPSI B FLOW | 0 | 80-3 | BORONMTR | 623.51 | 80-5 | Th LOOP 1 | 597.17 | 80-6 | B AUX FEED FLOW | 0 |
| 80-2 | CNT SPRY B FLW | 0 | 80-3 | PRCSS RAD MON | 1.00E+02 | 80-5 | Th LOOP 2 | 597.17 | 80-6 | A AUX FEED FLOW | 0 |
| 80-2 | CNT PRESS | 0.19 | 80-3 | L/D FLOW | 0 | 80-5 | Tc LOOP 1 | 571.68 | 80-7 | MN TURB LOAD NET | 0 |
| 80-2 | CNT LEVEL | 0 | 80-3 | CHPS RUNNING | NONE | 80-5 | Tc LOOP 2 | 571.63 | 80-7 | MN TURB PF | 1.00 LEAD |
| 80-2 | RWT LEVEL | 90.99 | 80-3 | CHGING HDR | 0 | 80-5 | ADV #1-S/G #1 | 0 | 80-7 | COND A VAC | 4.33 |
| 80-2 | SIT LVL 3 | 80.53 | 80-4 | PZR LEVEL | 22.47 | 80-5 | ADV #2-S/G #1 | 0 | 80-7 | COND B VAC | 3.49 |
| 80-2 | SIT LVL 4 | 80.53 | 80-4 | PZR RLF TEMP | 110.9 | 80-5 | ADV #1-S/G #2 | 0 | 80-7 | COND C VAC | 3.12 |
| 80-2 | SIT PRSS 3 | 610 | 80-4 | NCW FLW RCP 1A | 500 | 80-5 | ADV #2-S/G #2 | 0 | 80-7 | CONT TMP | 115.44 |
| 80-2 | SIT PRSS 4 | 610 | 80-4 | NCW FLW RCP 1B | 500 | 80-5 | DNBR MAR | 2.06 | 80-7 | CNT HUMID | 100 |
| 80-2 | SIT LVL 1 | 80.53 | 80-4 | NCW FLW RCP 2A | 500 | 80-5 | KW/FT MAR | 16.08 | 80-7 | CNT SMP LVL-E | 45.26 |
| 80-2 | SIT LVL 2 | 80.53 | 80-4 | NCW FLW RCP 2B | 500 | 80-5 | LIN POWER | 13.53 | 80-7 | CNT SMP LVL-W | 45.26 |
| 80-2 | SIT PRSS 1 | 610 | 80-4 | CORE D P | 48.5 | 80-6 | CND PMP DSCH | 7.70E+06 | 80-7 | RX CAV SMP LVL | 30 |

| BO-# | PARAMETER | 0955 | BO-# | PARAMETER | 0955 | BO-# | PARAMETER | 0955 | BO-# | PARAMETER | 0955 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 0.87 | BO-6 | CND PMP DSCH | 459.91 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 2051.63 | BO-4 | KW/FT LMT | 58.93 | BO-6 | MN STM HDR PRESS | 1170.82 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 1.79 | BO-6 | S/G 1 FD FLW | 1.50E+06 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | -0.03 | BO-6 | S/G 1 STM FLW | 2.80E+05 |
| BO-2 | CNT SPRY A FLW | 143.74 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 63.65 | BO-6 | S/G 2 FD FLW | 1.50E+06 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 43.41 | BO-5 | S/G 1 PRESS | 1174.81 | BO-6 | S/G 2 STM FLW | 2.80E+05 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.43 | BO-5 | S/G 2 LVL-W | 63.61 | BO-6 | FD PUMP A DSCH | 1319.57 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1174.81 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 569.49 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 569.49 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.22 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 565.99 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 566 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 90.82 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.78 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 0.95 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.47 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110..9 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.53 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 116.81 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 14.77 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 20.7 | BO-7 | CNT SMP LVL-E | 51.15 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 0.87 | BO-7 | CNT SMP LVL-W | 51.15 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 48 | BO-6 | CND PMP DSCH | 7.70E+06 | BO-7 | RX CAV SMP LVL | 30 |

| BO-# | PARAMETER | 1000 | BO-# | PARAMETER | 1000 | BO-# | PARAMETER | 1000 | BO-# | PARAMETER | 1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 24.03 | BO-2 | SIT PRSS 2 | 610 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 465.55 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 1592.12 | BO-4 | KW/FT LMT | 57.84 | BO-6 | MN STM HDR PRESS | 1149.11 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0.32 | BO-6 | S/G 1 FD FLW | 4.70E+05 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | -0.04 | BO-6 | S/G 1 STM FLW | 2.70E+04 |
| BO-2 | CNT SPRY A FLW | 142.64 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 93.01 | BO-6 | S/G 2 FD FLW | 3.50E+05 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 44.63 | BO-5 | S/G 1 PRESS | 1151.36 | BO-6 | S/G 2 STM FLW | 1.50E+05 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.47 | BO-5 | S/G 2 LVL-W | 92.81 | BO-6 | FD PUMP A DSCH | 1331.18 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | HIGH | BO-5 | S/G 2 PRESS | 1151.26 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONNTR | 623.51 | BO-5 | Th LOOP 1 | 563.49 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 563.49 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 0.3 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 559.63 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 559.61 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 90.82 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.37 |
| BO-2 | SIT LVL 3 | 80.53 | BO-4 | PZR LEVEL | 0.88 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.34 |
| BO-2 | SIT LVL 4 | 80.53 | BO-4 | PZR RLF TEMP | 110..9 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.35 |
| BO-2 | SIT PRSS 3 | 610 | BO-4 | NCW FLW RCP 1A | 500 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 117.45 |
| BO-2 | SIT PRSS 4 | 610 | BO-4 | NCW FLW RCP 1B | 500 | BO-5 | DNBR MAR | 2.44 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 80.53 | BO-4 | NCW FLW RCP 2A | 500 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 67.94 |
| BO-2 | SIT LVL 2 | 80.53 | BO-4 | NCW FLW RCP 2B | 500 | BO-5 | LIN POWER | 0. | BO-7 | CNT SMP LVL-W | 67.94 |
| BO-2 | SIT PRSS 1 | 610 | BO-4 | CORE D P | 12.54 | BO-6 | CND PMP DSCH | 6.70E+06 | BO-7 | RX CAV SMP LVL | 38 |

# PVNGS 1989 Exercise

| 80-# | PARAMETER | 1015 | 80-# | PARAMETER | 1015 | 80-# | PARAMETER | 1015 | 80-# | PARAMETER | 1015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 80-2 | HPSI DSCH HDR A | 24.03 | 80-2 | SIT PRSS 2 | 610 | 80-4 | RX POWER | 0 | 80-6 | CND PMP DSCH | 473.29 |
| 80-2 | HPSI FLW TO 1A | 0 | 80-2 | PZR PRESS | 1345.03 | 80-4 | KW/FT LMT | 27.69 | 80-6 | MN STM HDR PRESS | 1178.8 |
| 80-2 | HPSI FLW TO 1B | 0 | 80-3 | EDT LEVEL | 41 | 80-4 | DNBR LMT | 0.32 | 80-6 | S/G 1 FD FLW | 0.00E+00 |
| 80-2 | LPSI A FLOW | 0 | 80-3 | HUT LEVEL | 3.84 | 80-4 | ASI | -0.72 | 80-6 | S/G 1 STM FLW | 3.60E+05 |
| 80-2 | CNT SPRY A FLW | 142.64 | 80-3 | RMWT LEVEL | 34.48 | 80-5 | S/G 1 LVL -W | 88.98 | 80-6 | S/G 2 FD FLW | 0.00E+00 |
| 80-2 | HPSI DSCH HDR B | 25.97 | 80-3 | VCT LEVEL | 41.77 | 80-5 | S/G 1 PRESS | 1183.26 | 80-6 | S/G 2 STM FLW | 3.60E+05 |
| 80-2 | HPSI FLW TO 2A | 0 | 80-3 | RDT LEVEL | 67.49 | 80-5 | S/G 2 LVL-W | 88.97 | 80-6 | FD PUMP A DSCH | 1347.4 |
| 80-2 | HPSI FLW TO 2B | 0 | 80-3 | RCP SEAL BLD | HIGH | 80-5 | S/G 2 PRESS | 1183.26 | 80-6 | FD PUMP B DSCH | -14.7 |
| 80-2 | LPSI B FLOW | 0 | 80-3 | BORONMTR | 623.51 | 80-5 | Th LOOP 1 | 580.86 | 80-6 | B AUX FEED FLOW | 0 |
| 80-2 | CNT SPRY B FLW | 0 | 80-3 | PRCSS RAD MON | 1.00E+02 | 80-5 | Th LOOP 2 | 580.86 | 80-6 | A AUX FEED FLOW | 0 |
| 80-2 | CNT PRESS | 0.37 | 80-3 | L/D FLOW | 0 | 80-5 | Tc LOOP 1 | 558.02 | 80-7 | MN TURB LOAD NET | 0 |
| 80-2 | CNT LEVEL | 0 | 80-3 | CHPS RUNNING | NONE | 80-5 | Tc LOOP 2 | 558.02 | 80-7 | MN TURB PF | 1.00 LEAD |
| 80-2 | RWT LEVEL | 90.82 | 80-3 | CHGING HDR | 0 | 80-5 | ADV #1-S/G #1 | 0 | 80-7 | COND A VAC | 1.45 |
| 80-2 | SIT LVL 3 | 80.53 | 80-4 | PZR LEVEL | 1.97 | 80-5 | ADV #2-S/G #1 | 0 | 80-7 | COND B VAC | 1.35 |
| 80-2 | SIT LVL 4 | 80.53 | 80-4 | PZR RLF TEMP | 110.91 | 80-5 | ADV #1-S/G #2 | 0 | 80-7 | COND C VAC | 1.34 |
| 80-2 | SIT PRSS 3 | 610 | 80-4 | NCW FLW RCP 1A | 500 | 80-5 | ADV #2-S/G #2 | 0 | 80-7 | CONT TMP | 118.53 |
| 80-2 | SIT PRSS 4 | 610 | 80-4 | NCW FLW RCP 1B | 500 | 80-5 | DNBR MAR | 1.97 | 80-7 | CNT HUMID | 100 |
| 80-2 | SIT LVL 1 | 80.53 | 80-4 | NCW FLW RCP 2A | 500 | 80-5 | KW/FT MAR | 21.03 | 80-7 | CNT SMP LVL-E | 80 |
| 80-2 | SIT LVL 2 | 80.53 | 80-4 | NCW FLW RCP 2B | 500 | 80-5 | LIN POWER | 0 | 80-7 | CNT SMP LVL-W | 80 |
| 80-2 | SIT PRSS 1 | 610 | 80-4 | CORE D P | 0.3 | 80-6 | CND PMP DSCH | 4.20E+06 | 80-7 | RX CAV SMP LVL | 30 |

| BO-# | PARAMETER | 1030 | BO-# | PARAMETER | 1030 | BO-# | PARAMETER | 1030 | BO-# | PARAMETER | 1030 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 25.96 | BO-2 | SIT PRSS 2 | 111.1 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 470.72 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 96.17 | BO-4 | KW/FT LMT | 60.25 | BO-6 | MN STM HDR PRESS | 387.75 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0.05 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 142.64 | BO-3 | RNWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 47.86 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.97 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 537.93 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 45.97 | BO-6 | FD PUMP A DSCH | 1342.3 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 588.76 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONWTR | 623.51 | BO-5 | Th LOOP 1 | 362.34 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 362.34 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 6.24 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 229.14 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 0 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 229.14 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 90.75 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.27 |
| BO-2 | SIT LVL 3 | 6.38 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.29 |
| BO-2 | SIT LVL 4 | 6.38 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.33 |
| BO-2 | SIT PRSS 3 | 111.1 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 176.94 |
| BO-2 | SIT PRSS 4 | 111.1 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 6.38 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 6.38 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIN POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 111.1 | BO-4 | CORE D P | 0.3 | BO-6 | CND PMP DSCH | 5.00E+06 | BO-7 | RX CAV SMP LVL | 30 |

| BO-8 | PARAMETER | 1835 | BO-8 | PARAMETER | 1835 | BO-8 | PARAMETER | 1835 | BO-8 | PARAMETER | 1835 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 25.89 | BO-2 | SIT PRSS 2 | 103.66 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 470.72 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 88.29 | BO-4 | KW/FT LMT | 60.25 | BO-6 | MN STM HDR PRESS | 156.5 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0.05 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 1309.02 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 3900 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 46.78 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.82 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 509.55 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 44.81 | BO-6 | FD PUMP A DSCH | 1342.3 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 376.09 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 295.89 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 295.89 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 8.83 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 320.2 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 9.86 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 320.2 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 90.47 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.27 |
| BO-2 | SIT LVL 3 | 0.57 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.29 |
| BO-2 | SIT LVL 4 | 0.57 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.33 |
| BO-2 | SIT PRSS 3 | 103.66 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 190.39 |
| BO-2 | SIT PRSS 4 | 103.66 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 0.57 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 0.57 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIN POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 103.66 | BO-4 | CORE D P | 0.3 | BO-6 | CND PMP DSCH | 5.80E+06 | BO-7 | RX CAV SMP LVL | 60 |

| BO-2 | PARAMETER | 1845 | BO-2 | PARAMETER | 1845 | BO-2 | PARAMETER | 1845 | BO-2 | PARAMETER | 1845 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 23.71 | BO-2 | SIT PRSS 2 | 103.66 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 0 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 78.6 | BO-4 | KW/FT LMT | 60.16 | BO-6 | MN STM HDR PRESS | 61.68 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 0 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 3900 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 46.48 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.82 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 494.63 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 43.77 | BO-6 | FD PUMP A DSCH | 0 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 364.11 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONHTR | 623.51 | BO-5 | Th LOOP 1 | 344.23 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 345.23 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 19.23 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 333.23 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 21.45 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 335.23 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 87.67 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.18 |
| BO-2 | SIT LVL 3 | 8.57 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.19 |
| BO-2 | SIT LVL 4 | 0.57 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.2 |
| BO-2 | SIT PRSS 3 | 103.66 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 193.48 |
| BO-2 | SIT PRSS 4 | 103.66 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 0.57 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 0.57 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIN POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 103.66 | BO-4 | CORE D P | 0.2 | BO-6 | CND PMP DSCH | 0.00E+00 | BO-7 | RX CAV SMP LVL | 60 |

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| BO-2 | PARAMETER | 1100 | BO-2 | PARAMETER | 1100 | BO-3 | PARAMETER | 1100 | BO-3 | PARAMETER | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 23.71 | BO-2 | SIT PRSS 2 | 103.66 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 0 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 71.9 | BO-4 | KW/FT LMT | 68.16 | BO-6 | MN STM HDR PRESS | 68.93 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 2309 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 3900 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 46.13 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.82 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 479.83 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 43.77 | BO-6 | FD PUMP A DSCH | 0 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 337.03 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONWTR | 623.51 | BO-5 | Th LOOP 1 | 335 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 339 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 56.98 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 324 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 44.78 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 329 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 81.78 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.18 |
| BO-2 | SIT LVL 3 | 0.57 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.19 |
| BO-2 | SIT LVL 4 | 0.57 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.2 |
| BO-2 | SIT PRSS 3 | 103.66 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | %REF? |
| BO-2 | SIT PRSS 4 | 103.66 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 0.57 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 0.57 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIN POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 103.66 | BO-4 | CORE D P | 0.2 | BO-6 | CND PMP DSCH | 0.00E+00 | BO-7 | RX CAV SMP LVL | 60 |

| BO-# | PARAMETER | 1115 | BO-# | PARAMETER | 1115 | BO-# | PARAMETER | 1115 | BO-# | PARAMETER | 1115 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 23.71 | BO-2 | SIT PRSS 2 | 103.66 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 0 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 65.2 | BO-4 | KW/FT LMT | 60.16 | BO-6 | MN STM HDR PRESS | 58.76 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 2005 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 3900 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 45.87 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.82 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 467.03 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 43.77 | BO-6 | FD PUMP A DSCH | 0 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 328.11 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 326.33 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 323.33 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 36.4 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 316.23 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 78.8 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 312.3 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 77.57 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.18 |
| BO-2 | SIT LVL 3 | 0.57 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.19 |
| BO-2 | SIT LVL 4 | 0.57 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.2 |
| BO-2 | SIT PRSS 3 | 103.66 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 194.2 |
| BO-2 | SIT PRSS 4 | 103.66 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 0.57 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 0.57 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIN POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 103.66 | BO-4 | CORE D P | 0.2 | BO-6 | CND PMP DSCH | 0.00E+00 | BO-7 | RX CAV SMP LVL | 60 |

| BO-2 | PARAMETER | 1130 | BO-2 | PARAMETER | 1130 | BO-4 | PARAMETER | 1130 | BO-6 | PARAMETER | 1130 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 23.71 | BO-2 | SIT PRSS 2 | 103.66 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 0 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 56.4 | BO-4 | KW/FT LMT | 60.16 | BO-6 | MN STM HDR PRESS | 56.25 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 1987 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 3900 | BO-3 | RHWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 45.43 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.82 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 455.03 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 43.77 | BO-6 | FD PUMP A DSCH | 0 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 319.11 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONHTR | 623.51 | BO-5 | Th LOOP 1 | 317.23 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 327.23 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 22.56 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 306.3 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 94.6 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 317.2 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 71.91 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.18 |
| BO-2 | SIT LVL 3 | 0.57 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.19 |
| BO-2 | SIT LVL 4 | 0.57 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.2 |
| BO-2 | SIT PRSS 3 | 103.66 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 197.7 |
| BO-2 | SIT PRSS 4 | 103.66 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 0.57 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 0.57 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIN POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 103.66 | BO-4 | CORE D P | 0.2 | BO-6 | CND PMP DSCH | 0.00E+00 | BO-7 | RX CAV SMP LVL | 60 |

# PVNGS 1989 Exercise

| BO-# | PARAMETER | 1200 | BO-# | PARAMETER | 1200 | BO-# | PARAMETER | 1200 | BO-# | PARAMETER | 1200 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BO-2 | HPSI DSCH HDR A | 29.71 | BO-2 | SIT PRSS 2 | 103.66 | BO-4 | RX POWER | 0 | BO-6 | CND PMP DSCH | 0 |
| BO-2 | HPSI FLW TO 1A | 0 | BO-2 | PZR PRESS | 39.87 | BO-4 | KW/FT LMT | 60.16 | BO-6 | MN STM HDR PRESS | 54.16 |
| BO-2 | HPSI FLW TO 1B | 0 | BO-3 | EDT LEVEL | 41 | BO-4 | DNBR LMT | 0 | BO-6 | S/G 1 FD FLW | 0.00E+00 |
| BO-2 | LPSI A FLOW | 1802 | BO-3 | HUT LEVEL | 3.84 | BO-4 | ASI | 0 | BO-6 | S/G 1 STM FLW | 0.00E+00 |
| BO-2 | CNT SPRY A FLW | 3900 | BO-3 | RMWT LEVEL | 34.48 | BO-5 | S/G 1 LVL -W | 47.23 | BO-6 | S/G 2 FD FLW | 0.00E+00 |
| BO-2 | HPSI DSCH HDR B | 25.82 | BO-3 | VCT LEVEL | 43.33 | BO-5 | S/G 1 PRESS | 479.03 | BO-6 | S/G 2 STM FLW | 0.00E+00 |
| BO-2 | HPSI FLW TO 2A | 0 | BO-3 | RDT LEVEL | 67.57 | BO-5 | S/G 2 LVL-W | 43.77 | BO-6 | FD PUMP A DSCH | 0 |
| BO-2 | HPSI FLW TO 2B | 0 | BO-3 | RCP SEAL BLD | LOW | BO-5 | S/G 2 PRESS | 337.11 | BO-6 | FD PUMP B DSCH | -14.7 |
| BO-2 | LPSI B FLOW | 0 | BO-3 | BORONMTR | 623.51 | BO-5 | Th LOOP 1 | 323 | BO-6 | B AUX FEED FLOW | 0 |
| BO-2 | CNT SPRY B FLW | 0 | BO-3 | PRCSS RAD MON | 1.00E+02 | BO-5 | Th LOOP 2 | 327.4 | BO-6 | A AUX FEED FLOW | 0 |
| BO-2 | CNT PRESS | 4.12 | BO-3 | L/D FLOW | 0 | BO-5 | Tc LOOP 1 | 318 | BO-7 | MN TURB LOAD NET | 0 |
| BO-2 | CNT LEVEL | 111.4 | BO-3 | CHPS RUNNING | NONE | BO-5 | Tc LOOP 2 | 316.6 | BO-7 | MN TURB PF | 1.00 LEAD |
| BO-2 | RWT LEVEL | 60.2 | BO-3 | CHGING HDR | 0 | BO-5 | ADV #1-S/G #1 | 0 | BO-7 | COND A VAC | 1.18 |
| BO-2 | SIT LVL 3 | 0.57 | BO-4 | PZR LEVEL | 0 | BO-5 | ADV #2-S/G #1 | 0 | BO-7 | COND B VAC | 1.19 |
| BO-2 | SIT LVL 4 | 0.57 | BO-4 | PZR RLF TEMP | 110.93 | BO-5 | ADV #1-S/G #2 | 0 | BO-7 | COND C VAC | 1.2 |
| BO-2 | SIT PRSS 3 | 103.66 | BO-4 | NCW FLW RCP 1A | 0 | BO-5 | ADV #2-S/G #2 | 0 | BO-7 | CONT TMP | 196 |
| BO-2 | SIT PRSS 4 | 103.66 | BO-4 | NCW FLW RCP 1B | 0 | BO-5 | DNBR MAR | 1.09 | BO-7 | CNT HUMID | 100 |
| BO-2 | SIT LVL 1 | 0.57 | BO-4 | NCW FLW RCP 2A | 0 | BO-5 | KW/FT MAR | 21.03 | BO-7 | CNT SMP LVL-E | 80 |
| BO-2 | SIT LVL 2 | 0.57 | BO-4 | NCW FLW RCP 2B | 0 | BO-5 | LIM POWER | 0 | BO-7 | CNT SMP LVL-W | 80 |
| BO-2 | SIT PRSS 1 | 103.66 | BO-4 | CORE D P | 0.2 | BO-6 | CND PMP DSCH | 0.00E+00 | BO-7 | RX CAV SMP LVL | 60 |

# PVNGS 1989 Exercise

| 00-0 | PARAMETER | 1230 | 00-0 | PARAMETER | 1230 | 00-0 | PARAMETER | 1230 | 00-0 | PARAMETER | 1230 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 00-2 | HPSI DSCH HDR A | 23.71 | 00-2 | SIT PRSS 2 | 103.66 | 00-4 | RX POWER | 0 | 00-6 | CND PMP DSCH | 0 |
| 00-2 | HPSI FLW TO 1A | 0 | 00-2 | PZR PRESS | 30.5 | 00-4 | KW/FT LMT | 60.16 | 00-6 | MN STM HDR PRESS | 52.76 |
| 00-2 | HPSI FLW TO 1B | 0 | 00-3 | EDT LEVEL | 41 | 00-4 | DNBR LMT | 0 | 00-6 | S/G 1 FD FLW | 0.00E+00 |
| 00-2 | LPSI A FLOW | 1800 | 00-3 | HUT LEVEL | 3.84 | 00-4 | ASI | 0 | 00-6 | S/G 1 STM FLW | 0.00E+00 |
| 00-2 | CNT SPRY A FLW | 3900 | 00-3 | RMWT LEVEL | 34.48 | 00-5 | S/G 1 LVL -W | 46.89 | 00-6 | S/G 2 FD FLW | 0.00E+00 |
| 00-2 | HPSI DSCH HDR B | 25.82 | 00-3 | VCT LEVEL | 43.33 | 00-5 | S/G 1 PRESS | 474.5 | 00-6 | S/G 2 STM FLW | 0.00E+00 |
| 00-2 | HPSI FLW TO 2A | 0 | 00-3 | RDT LEVEL | 67.57 | 00-5 | S/G 2 LVL-W | 43.77 | 00-6 | FD PUMP A DSCH | 0 |
| 00-2 | HPSI FLW TO 2B | 0 | 00-3 | RCP SEAL BLD | LOW | 00-5 | S/G 2 PRESS | 336.8 | 00-6 | FD PUMP B DSCH | -14.7 |
| 00-2 | LPSI B FLOW | 0 | 00-3 | BORONMTR | 623.51 | 00-5 | Th LOOP 1 | 315.7 | 00-6 | B AUX FEED FLOW | 0 |
| 00-2 | CNT SPRY B FLW | 0 | 00-3 | PRCSS RAD MON | 1.00E+02 | 00-5 | Th LOOP 2 | 313.8 | 00-6 | A AUX FEED FLOW | 0 |
| 00-2 | CNT PRESS | 0.15 | 00-3 | L/D FLOW | 0 | 00-5 | Tc LOOP 1 | 302.5 | 00-7 | MN TURB LOAD NET | 0 |
| 00-2 | CNT LEVEL | 122.4 | 00-3 | CHPS RUNNING | NONE | 00-5 | Tc LOOP 2 | 303.2 | 00-7 | MN TURB PF | 1.00 LEAD |
| 00-2 | RWT LEVEL | 51.87 | 00-3 | CHGING HDR | 0 | 00-5 | ADV #1-S/G #1 | 0 | 00-7 | COND A VAC | 1.18 |
| 00-2 | SIT LVL 3 | 0.57 | 00-4 | PZR LEVEL | 0 | 00-5 | ADV #2-S/G #1 | 0 | 00-7 | COND B VAC | 1.19 |
| 00-2 | SIT LVL 4 | 0.57 | 00-4 | PZR RLF TEMP | 110.93 | 00-5 | ADV #1-S/G #2 | 0 | 00-7 | COND C VAC | 1.2 |
| 00-2 | SIT PRSS 3 | 103.66 | 00-4 | NCW FLW RCP 1A | 0 | 00-5 | ADV #2-S/G #2 | 0 | 00-7 | CONT TMP | 195.2 |
| 00-2 | SIT PRSS 4 | 103.66 | 00-4 | NCW FLW RCP 1B | 0 | 00-5 | DNBR MAR | 1.09 | 00-7 | CNT HUMID | 100 |
| 00-2 | SIT LVL 1 | 0.57 | 00-4 | NCW FLW RCP 2A | 0 | 00-5 | KW/FT MAR | 21.03 | 00-7 | CNT SMP LVL-E | 80 |
| 00-2 | SIT LVL 2 | 0.57 | 00-4 | NCW FLW RCP 2B | 0 | 00-5 | LIN POWER | 0 | 00-7 | CNT SMP LVL-W | 80 |
| 00-2 | SIT PRSS 1 | 103.66 | 00-4 | CORE D P | 0.2 | 00-6 | CND PMP DSCH | 0.00E+00 | 00-7 | RX CAV SMP LVL | 60 |

| BB-# | PARAMETER | 1300 | BB-# | PARAMETER | 1300 | BB-# | PARAMETER | 1300 | BB-# | PARAMETER | 1300 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BB-2 | HPSI DSCH HDR A | 23.71 | BB-2 | SIT PRSS 2 | 103.66 | BB-4 | RX POWER | 0 | BB-6 | CND PMP DSCH | 0 |
| BB-2 | HPSI FLW TO 1A | 0 | BB-2 | PZR PRESS | 24.4 | BB-4 | KW/FT LHT | 60.16 | BB-6 | MN STM HDR PRESS | 50.8 |
| BB-2 | HPSI FLW TO 1B | 0 | BB-3 | EDT LEVEL | 41 | BB-4 | DNBR LHT | 0 | BB-6 | S/G 1 FD FLW | 0.00E+00 |
| BB-2 | LPSI A FLOW | 1725 | BB-3 | HUT LEVEL | 3.84 | BB-4 | ASI | 0 | BB-6 | S/G 1 STM FLW | 0.00E+00 |
| BB-2 | CNT SPRY A FLW | 3900 | BB-3 | RHWT LEVEL | 34.48 | BB-5 | S/G 1 LVL -W | 46.89 | BB-6 | S/G 2 FD FLW | 0.00E+00 |
| BB-2 | HPSI DSCH HDR B | 25.82 | BB-3 | VCT LEVEL | 43.33 | BB-5 | S/G 1 PRESS | 462.2 | BB-6 | S/G 2 STM FLW | 0.00E+00 |
| BB-2 | HPSI FLW TO 2A | 0 | BB-3 | RDT LEVEL | 67.57 | BB-5 | S/G 2 LVL-W | 43.77 | BB-6 | FD PUMP A DSCH | 0 |
| BB-2 | HPSI FLW TO 2B | 0 | BB-3 | RCP SEAL BLD | LOW | BB-5 | S/G 2 PRESS | 382.4 | BB-6 | FD PUMP B DSCH | -14.7 |
| BB-2 | LPSI B FLOW | 0 | BB-3 | BORONMTR | 623.51 | BB-5 | Th LOOP 1 | 309.5 | BB-6 | B AUX FEED FLOW | 0 |
| BB-2 | CNT SPRY B FLW | 0 | BB-3 | PRCSS RAD MON | 1.00E+02 | BB-5 | Th LOOP 2 | 307.7 | BB-6 | A AUX FEED FLOW | 0 |
| BB-2 | CNT PRESS | 0 | BB-3 | L/D FLOW | 0 | BB-5 | Tc LOOP 1 | 300.15 | BB-7 | MN TURB LOAD NET | 0 |
| BB-2 | CNT LEVEL | 123.5 | BB-3 | CHPS RUNNING | NONE | BB-5 | Tc LOOP 2 | 297.7 | BB-7 | MN TURB PF | 1.00 LEAD |
| BB-2 | RWT LEVEL | 41.2 | BB-3 | CHGING HDR | 0 | BB-5 | ADV #1-S/G #1 | 0 | BB-7 | COND A VAC | 1.18 |
| BB-2 | SIT LVL 3 | 0.57 | BB-4 | PZR LEVEL | 0 | BB-5 | ADV #2-S/G #1 | 0 | BB-7 | COND B VAC | 1.19 |
| BB-2 | SIT LVL 4 | 0.57 | BB-4 | PZR RLF TEMP | 110.93 | BB-5 | ADV #1-S/G #2 | 0 | BB-7 | COND C VAC | 1.2 |
| BB-2 | SIT PRSS 3 | 103.66 | BB-4 | NCW FLW RCP 1A | 0 | BB-5 | ADV #2-S/G #2 | 0 | BB-7 | CONT TMP | 194.6 |
| BB-2 | SIT PRSS 4 | 103.66 | BB-4 | NCW FLW RCP 1B | 0 | BB-5 | DNBR MAR | 1.09 | BB-7 | CNT HUMID | 100 |
| BB-2 | SIT LVL 1 | 0.57 | BB-4 | NCW FLW RCP 2A | 0 | BB-5 | KW/FT MAR | 21.03 | BB-7 | CNT SMP LVL-E | 80 |
| BB-2 | SIT LVL 2 | 0.57 | BB-4 | NCW FLW RCP 2B | 0 | BB-5 | LIN POWER | 0 | BB-7 | CNT SMP LVL-W | 80 |
| BB-2 | SIT PRSS 1 | 103.66 | BB-4 | CORE D P | 0.2 | BB-6 | CND PMP DSCH | 0.00E+00 | BB-7 | RX CAV SMP LVL | 60 |

# APPENDIX J

# HEALTH PHYSICS DATA

# HEALTH PHYSICS DATA

-- NOTE --

This Appendix contains health physics and radiological data for the duration of the scenario. The first section includes an RMS system summary, a listing of the RMS monitor designations and individual RMS data sheets to be provided at designated intervals (as indicated) in the following locations:

- Control Room/STSC (Simulator)
- Radiation Protection Office

Normally, the RMS terminal has the capability to provide trend data via histograms. For the purposes of this scenario trend data is not provided. Trends may be derived from comparison with earlier data sheets.

This Appendix also contains in-plant, on-site, off-site maps and information to be provided to field monitoring teams. The necessary data for performing dose assessment is provided in the format that would be provided by ERFDADS.

# APPENDIX J

## HEALTH PHYSICS DATA

RMS SUMMARY

| MONITOR #: | UNITS | 07:00 | 07:30 | 07:45 | 08:00 | 08:15 | 08:30 | 08:45 | 09:00 | 09:15 |
|---|---|---|---|---|---|---|---|---|---|---|
| RU-1(P) | uCi/cc | 1.02E-10 | 1.02E-10 | 1.02E-10 | 1.02E-10 | 1.02E-10 | 1.02E-10 | 1.02E-10 | 1.02E-10 | 1.02E-10 |
| RU-1(I) | uCi/cc | 5.00E-11 | 5.00E-11 | 5.00E-11 | 5.00E-11 | 5.00E-11 | 5.00E-11 | 5.00E-11 | 5.00E-11 | 5.00E-11 |
| RU-1(G) | uCi/cc | 8.55E-05 | 8.55E-05 | 8.55E-05 | 8.55E-05 | 8.55E-05 | 8.55E-05 | 8.55E-05 | 8.55E-05 | 8.55E-05 |
| RU-2/3 | uCi/cc | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE |
| RU-4 | uCi/cc | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 |
| RU-5 | uCi/cc | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 |
| RU-6 | uCi/cc | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 |
| RU-7 | uCi/cc | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP |
| RU-8(P) | uCi/cc | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 |
| RU-8(I) | uCi/cc | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 |
| RU-9 | uCi/cc | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 |
| RU-10 | uCi/cc | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 |
| RU-12 | uCi/cc | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 |
| RU-13(P) | uCi/cc | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 |
| RU-13(I) | uCi/cc | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 |
| RU-13(G) | uCi/cc | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 |
| RU-14 | uCi/cc | 4.60E-10 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 |
| RU-15 | uCi/cc | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 |
| RU-16 | mR/hr | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 |
| RU-17 | mR/hr | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 |
| RU-18 | mR/hr | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 |
| RU-19 | mR/hr | 5.18E-02 | 5.18E-02 | 5.18E-02 | 5.18E-02 | 5.18E-02 | 2.17E-01 | 8.12E+01 ** | 7.15E+01 ** | 5.18E+01 ** |
| RU-20 | mR/hr | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 |
| RU-21 | mR/hr | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 |
| RU-22 | mR/hr | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 |
| RU-23 | mR/hr | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 |
| RU-25 | mR/hr | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 |
| RU-26 | mR/hr | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 |
| RU-27/28 | mR/hr | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 |
| RU-29 | uCi/cc | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 |
| RU-30 | uCi/cc | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 |
| RU-31 | mR/hr | 1.15E-01 | 1.15E-01 | 1.15E-01 | 1.15E-01 | 1.15E-01 | 4.15E+00 | 1.15E+02 ** | 1.01E+02 ** | 7.15E+01 ** |
| RU-33 | mR/hr | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP |
| RU-34 | uCi/cc | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 |
| RU-37 | mR/hr | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 |
| RU-38 | mR/hr | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 |
| RU-139A/B | mR/hr | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 |
| RU-140A/B | mR/hr | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 |
| RU-141(P/I | mR/hr | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RU-141(G) | uCi/cc | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 |
| RU-142 | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-143(P) | uCi/cc | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 |
| RU-143(I) | uCi/cc | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 |
| RU-143(G) | uCi/cc | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 |
| RU-144(P/I | mR/hr | 2.50E+01 | 2.50E+01 | 2.50E+01 | 2.50E+01 | 2.50E+01 | 2.60E+01 | 2.60E+01 | 2.60E+01 | 2.60E+01 |
| RU-144(G) | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-145(G) | uCi/cc | 6.60E-08 | 6.60E-08 | 6.60E-08 | 6.60E-08 | 6.60E-08 | 3.30E-04 * | 8.60E-05 * | 4.30E-05 * | 9.10E-06 |
| RU-146(P/I | mR/hr | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-146(G) | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-148 | mR/hr | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 |
| RU-149 | mR/hr | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 |
| RU-150 | mR/hr | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 |
| RU-151 | mR/hr | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 |
| RE-152A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152D | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-153A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-153B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |

Legend: * Alert Alarm ** High Alarm

RMS SUMMARY

| MONITOR #: | UNITS | 07:00 | 07:30 | 07:45 | 08:00 | 08:15 | 08:30 | 08:45 | 09:00 | 09:15 |
|---|---|---|---|---|---|---|---|---|---|---|
| RE-153C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-156A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-156B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-156C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-158A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-158B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-158C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-158D | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RY-204 | uCi/cc | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 |

Legend: * Alert Alarm ** High Alarm

| MONITOR #: | UNITS | 09:30 | 09:45 | 10:00 | 10:15 | 10:30 | 10:40 | 10:42 | 10:45 | 11:00 |
|---|---|---|---|---|---|---|---|---|---|---|
| RU-1(P) | uCi/cc | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED |
| RU-1(I) | uCi/cc | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED |
| RU-1(G) | uCi/cc | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED |
| RU-2/3 | uCi/cc | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE |
| RU-4 | uCi/cc | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 |
| RU-5 | uCi/cc | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 |
| RU-6 | uCi/cc | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 |
| RU-7 | uCi/cc | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP |
| RU-8(P) | uCi/cc | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 |
| RU-8(I) | uCi/cc | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 |
| RU-9 | uCi/cc | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 |
| RU-10 | uCi/cc | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 |
| RU-12 | uCi/cc | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 |
| RU-13(P) | uCi/cc | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 | 5.00E-10 |
| RU-13(I) | uCi/cc | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 | 7.51E-11 |
| RU-13(G) | uCi/cc | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 | 3.00E-07 |
| RU-14 | uCi/cc | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 |
| RU-15 | uCi/cc | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 |
| RU-16 | mR/hr | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.00E+00 | 6.02E+00 | 6.00E+01 ** | 9.00E+03 ** | OFFSCALE ** | OFFSCALE ** |
| RU-17 | mR/hr | 3.94E+02 | 3.94E+02 | 3.94E+02 | 3.94E+02 | 4.00E+02 | 4.60E+02 | 9.50E+03 ** | OFFSCALE ** | OFFSCALE ** |
| RU-18 | mR/hr | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 |
| RU-19 | mR/hr | 3.13E+01 ** | 2.05E+01 ** | 1.10E+01 ** | 5.11E+00 ** | 2.17E+00 * | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 |
| RU-20 | mR/hr | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 |
| RU-21 | mR/hr | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 |
| RU-22 | mR/hr | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 |
| RU-23 | mR/hr | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 4.97E-02 | 5.00E-02 | 9.00E-02 | 5.00E-01 | 1.00E+00 |
| RU-25 | mR/hr | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 |
| RU-26 | mR/hr | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 5.98E-01 | 6.00E-01 | 8.10E-01 | 1.10E+00 | 2.00E+00 |
| RU-27/28 | mR/hr | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 |
| RU-29 | uCi/cc | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 |
| RU-30 | uCi/cc | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 |
| RU-31 | mR/hr | 5.56E+01 ** | 2.98E+01 ** | 1.17E+01 ** | 6.23E+00 | 3.18E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 |
| RU-33 | mR/hr | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP |
| RU-34 | uCi/cc | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 |
| RU-37 | mR/hr | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.00E-02 | 5.50E-02 | 5.60E-01 | 2.50E+01 ** |
| RU-38 | mR/hr | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.17E-02 | 5.70E-02 | 6.00E-01 | 3.00E+01 ** |
| RU-139A/B | mR/hr | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 |
| RU-140A/B | mR/hr | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 |
| RU-141(P/I | mR/hr | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RU-141(G) | uCi/cc | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 |
| RU-142 | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-143(P) | uCi/cc | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 1.40E-12 | 5.00E-09 |
| RU-143(I) | uCi/cc | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 2.98E-13 | 7.20E-09 |
| RU-143(G) | uCi/cc | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-06 | 1.34E-03 ** |
| RU-144(P/I | mR/hr | 2.70E+01 | 2.70E+01 | 2.70E+01 | 2.70E+01 | 2.70E+01 | 2.80E+01 | 2.80E+01 | 2.80E+01 | 2.90E+01 |
| RU-144(G) | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-145(G) | uCi/cc | 4.30E-06 | 5.00E-07 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 |
| RU-146(P/I | mR/hr | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-146(G) | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-148 | mR/hr | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 1.03E+03 | 2.10E+03 | 1.00E+05 ** | 3.00E+06 ** | 1.30E+07 ** |
| RU-149 | mR/hr | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 1.00E+03 | 2.00E+03 | 1.00E+05 ** | 3.00E+06 ** | 1.30E+07 ** |
| RU-150 | mR/hr | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.00E+06 ** | 1.00E+07 ** | 1.50E+07 ** |
| RU-151 | mR/hr | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.34E+04 | 2.00E+06 ** | 1.00E+07 ** | 1.50E+07 ** |
| RE-152A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152D | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-153A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-153B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |

Legend: * Alert Alarm ** High Alarm

RMS SUMMARY

| MONITOR #: | UNITS | 09:30 | 09:45 | 10:00 | 10:15 | 10:30 | 10:40 | 10:42 | 10:45 | 11:00 |
|---|---|---|---|---|---|---|---|---|---|---|
| RE-153C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-156A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-156B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-156C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-157B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-158A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-158B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.50E+01 | 2.00E+01 | 3.00E+01 | 1.00E+02 |
| RE-158C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 3.00E+01 |
| RE-158D | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RY-204 | uCi/cc | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 5.00E-01 | 4.00E+00 * | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** |

Legend: * Alert Alarm ** High Alarm

RMS SUMMARY

| MONITOR #: | UNITS | 11:05 | 11:15 | 11:30 | 11:45 | 12:00 | 12:15 | 12:30 | 12:45 | 13:00 |
|---|---|---|---|---|---|---|---|---|---|---|
| RU-1(P) | uCi/cc | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED |
| RU-1(I) | uCi/cc | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED |
| RU-1(G) | uCi/cc | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED | ISOLATED |
| RU-2/3 | uCi/cc | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE | OFF LINE |
| RU-4 | uCi/cc | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 | 9.78E-07 |
| RU-5 | uCi/cc | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 | 5.89E-07 |
| RU-6 | uCi/cc | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 | 8.58E-08 |
| RU-7 | uCi/cc | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP |
| RU-8(P) | uCi/cc | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 | 1.00E-10 |
| RU-8(I) | uCi/cc | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 | 4.80E-08 |
| RU-9 | uCi/cc | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 | 9.00E-07 |
| RU-10 | uCi/cc | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 | 1.05E-05 |
| RU-12 | uCi/cc | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 | 2.99E-04 |
| RU-13(P) | uCi/cc | 5.00E-10 | 5.50E-10 | 6.10E-10 | 6.20E-10 | 6.00E-10 | 5.61E-10 | 5.42E-10 | 5.22E-10 | 5.10E-10 |
| RU-13(I) | uCi/cc | 7.51E-11 | 8.80E-11 | 3.90E-10 | 6.45E-10 | 6.27E-10 | 5.75E-10 | 5.44E-10 | 5.29E-10 | 5.00E-10 |
| RU-13(G) | uCi/cc | 3.00E-07 | 3.40E-07 | 1.00E-06 | 1.50E-06 | 1.40E-06 | 1.35E-06 | 1.14E-06 | 1.02E-06 | 1.01E-06 |
| RU-14 | uCi/cc | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 | 4.60E-09 |
| RU-15 | uCi/cc | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 | 6.23E-05 |
| RU-16 | mR/hr | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** |
| RU-17 | mR/hr | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** |
| RU-18 | mR/hr | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 | 1.36E-03 |
| RU-19 | mR/hr | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 | 1.05E+00 |
| RU-20 | mR/hr | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 | 4.43E-02 |
| RU-21 | mR/hr | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 | 1.74E-01 |
| RU-22 | mR/hr | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 | 3.21E-01 |
| RU-23 | mR/hr | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 |
| RU-25 | mR/hr | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 | 2.44E-01 |
| RU-26 | mR/hr | 2.00E+00 | 2.00E+00 | 2.00E+00 | 2.00E+00 | 2.00E+00 | 2.00E+00 | 2.00E+00 | 2.00E+00 | 2.00E+00 |
| RU-27/28 | mR/hr | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 | 1.00E+00 |
| RU-29 | uCi/cc | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 | 7.00E-07 |
| RU-30 | uCi/cc | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 | 6.00E-07 |
| RU-31 | mR/hr | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 | 2.24E+00 |
| RU-33 | mR/hr | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP | INOP |
| RU-34 | uCi/cc | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 | 1.00E-06 |
| RU-37 | mR/hr | 5.00E+03 ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | 8.00E+03 ** | 8.00E+03 ** | 8.00E+03 ** | 7.50E+03 ** | 7.50E+03 ** |
| RU-38 | mR/hr | 5.10E+03 ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | 8.00E+03 ** | 8.00E+03 ** | 8.00E+03 ** | 7.50E+03 ** | 7.50E+03 ** |
| RU-139A/B | mR/hr | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 |
| RU-140A/B | mR/hr | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 | 1.50E+00 |
| RU-141(P/I | mR/hr | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 | 0.00E+00 |
| RU-141(G) | uCi/cc | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 | 1.76E-06 |
| RU-142 | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-143(P) | uCi/cc | 2.60E-03 ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | 2.75E-03 ** | 1.70E-07 | 3.10E-09 | 2.50E-09 | 1.60E-09 |
| RU-143(I) | uCi/cc | 6.50E-02 ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | 6.80E-02 ** | 2.30E-07 * | 5.50E-09 | 5.36E-09 | 5.31E-09 |
| RU-143(G) | uCi/cc | 1.49E+00 ** | OFFSCALE ** | OFFSCALE ** | 8.00E-01 ** | 3.50E-02 ** | 6.50E-05 | 1.44E-05 | 8.78E-06 | 8.65E-06 |
| RU-144(P/I | mR/hr | 3.30E+01 | 1.00E+02 | 1.40E+02 | 2.50E+02 | 3.10E+02 | 3.25E+02 | 3.27E+02 | 3.30E+02 | 3.33E+02 |
| RU-144(G) | uCi/cc | 1.45E+00 * | 3.88E+00 * | 2.49E+00 * | 8.30E-01 * | 3.20E-02 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-145(G) | uCi/cc | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 | 9.00E-08 |
| RU-146(P/I | mR/hr | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-146(G) | uCi/cc | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 | 0.00E-01 |
| RU-148 | mR/hr | 1.60E+07 ** | 2.20E+07 ** | 3.00E+07 ** | 2.90E+07 ** | 2.80E+07 ** | 2.70E+07 ** | 2.70E+07 ** | 2.50E+07 ** | 2.50E+07 ** |
| RU-149 | mR/hr | 1.60E+07 ** | 2.20E+07 ** | 3.00E+07 ** | 2.90E+07 ** | 2.80E+07 ** | 2.70E+07 ** | 2.70E+07 ** | 2.50E+07 ** | 2.50E+07 ** |
| RU-150 | mR/hr | 1.80E+07 ** | 2.50E+07 ** | 3.30E+07 ** | 3.30E+07 ** | 3.20E+07 ** | 3.10E+07 ** | 3.00E+07 ** | 2.90E+07 ** | 2.90E+07 ** |
| RU-151 | mR/hr | 1.80E+07 ** | 2.50E+07 ** | 3.30E+07 ** | 3.30E+07 ** | 3.20E+07 ** | 3.10E+07 ** | 3.00E+07 ** | 2.90E+07 ** | 2.90E+07 ** |
| RE-152A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-152D | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-153A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-153B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |

Legend: * Alert Alarm ** High Alarm

RMS SUMMARY

| MONITOR #: | UNITS | 11:05 | 11:15 | 11:30 | 11:45 | 12:00 | 12:15 | 12:30 | 12:45 | 13:00 |
|---|---|---|---|---|---|---|---|---|---|---|
| RE-153C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-154C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155A | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-155C | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-156A | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-156B | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-156C | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157A | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-157B | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RE-157C | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-158A | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-158B | mR/hr | 1.00E+02 | 1.60E+02 | 1.80E+02 | 1.80E+02 | 1.70E+02 | 1.70E+02 | 1.70E+02 | 1.60E+02 | 1.60E+02 |
| RE-158C | mR/hr | 1.50E+02 | 1.80E+03 * | 1.50E+03 | 1.20E+03 | 6.00E+02 | 4.00E+02 | 2.00E+02 | 2.00E+02 | 2.00E+02 |
| RE-158D | mR/hr | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 | 1.00E+01 |
| RY-204 | uCi/cc | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** | OFFSCALE ** |

Legend: * Alert Alarm ** High Alarm

## J.2 RMS DESIGNATIONS

| | |
|---|---|
| RU-1 | Containment Building Atmosphere |
| RU-2&3 | Essential Cooling Water System Monitors |
| RU-4 | Steam Generator #1 Blowdown |
| RU-5 | Steam Generator #2 Blowdown |
| RU-6 | Nuclear Cooling Water System Monitor |
| RU-7 | Auxiliary Steam Condensate Receiver Tank Inlet Monitor |
| RU-8 | Aux. Bldg. Ventilation Exhaust Filter Inlet Monitor |
| RU-9 | Aux. Bldg. Lower Levels Ventilation Exhaust Monitor |
| RU-10 | Aux. Bldg. Upper Level Ventilation Exhaust Monitor |
| RU-12 | Waste Gas Decay Tank Monitor |
| RU-13 | TSC and EOF Monitors |
| RU-14 | Radwaste Bldg. Ventilation Exhaust Filter Inlet Monitor |
| RU-15 | Waste Gas Area Combined Ventilation Exhaust Monitor |
| RU-16 | Containment Operating Level Area |
| RU-17 | Containment Incore Instrument Area |
| RU-18 | Control Room Area Monitor |
| RU-19 | New Fuel Area Monitor |
| RU-20 | Solid Waste Processing Station Area Monitor |
| RU-21 | Solid Waste Storage Area Monitor |
| RU-22 | Loading Bay Area Monitor |
| RU-23 | Radiochemical Laboratory Area Monitor |
| RU-25 | Controlled Machine Shop Area Monitor |
| RU-26 | Sample Room Area Monitor |
| RU-27&28 | Waste Solidification System Process Control Area Monitor |
| RU-29 | "A" Control Room Ventilation Intake Monitor |
| RU-30 | "B" Control Room Ventilation Intake Monitor |
| RU-31 | "A" Fuel Pool Area Monitor |
| RU-33 | "A" Refueling Machine Area Monitor |
| RU-34 | "B" Containment Building Refueling Purge Exhaust Monitor |
| RU-37 | "A" Power Access Purge Area Monitor |
| RU-38 | "B" Power Access Purge Area Monitor |
| RU-139A&B | Main Steam Line Monitors (S/G #1) |
| RU-140A&B | Main Steam Line Monitors (S/G #2) |

| | |
|---|---|
| RU-141 | Condenser Exhaust (Low Range) |
| RU-142 | Condenser Exhaust (High Range) |
| RU-143 | Plant Vent Monitor (Low Range) |
| RU-144 | Plant Vent Monitor (High Range) |
| RU-145 | Fuel Bldg. Ventilation Exhaust Monitor (Low Range) |
| RU-146 | Fuel Bldg. Ventilation Exhaust Monitor (High Range) |
| RU-148&149 | Containment Area Monitors |
| RU-150&151 | Primary Coolant Monitors |
| RU-152A-D | Personnel IARMS |
| RU-153A-C | Personnel IARMS |
| RU-154A-C | Personnel IARMS |
| RU-155A | Penetration IARM MSSS "A" 88' |
| RU-155B | Penetration IARM MSSS "B" 88' |
| RU-155C | Penetration IARM West Piping Aux. Bldg. 70' |
| RU-156A-C | Penetration IARMS |
| RU-157A | Penetration IARM MSSS "A" 100' |
| RU-157B | Penetration IARM MSSS "B" 100' |
| RU-157C | Penetration IARM West Aux. Bldg. 120' |
| RU-158A-D | Penetration IARMS |
| RY-204 | Letdown Monitor |

## J.3 RAD MONITOR DATA SHEETS

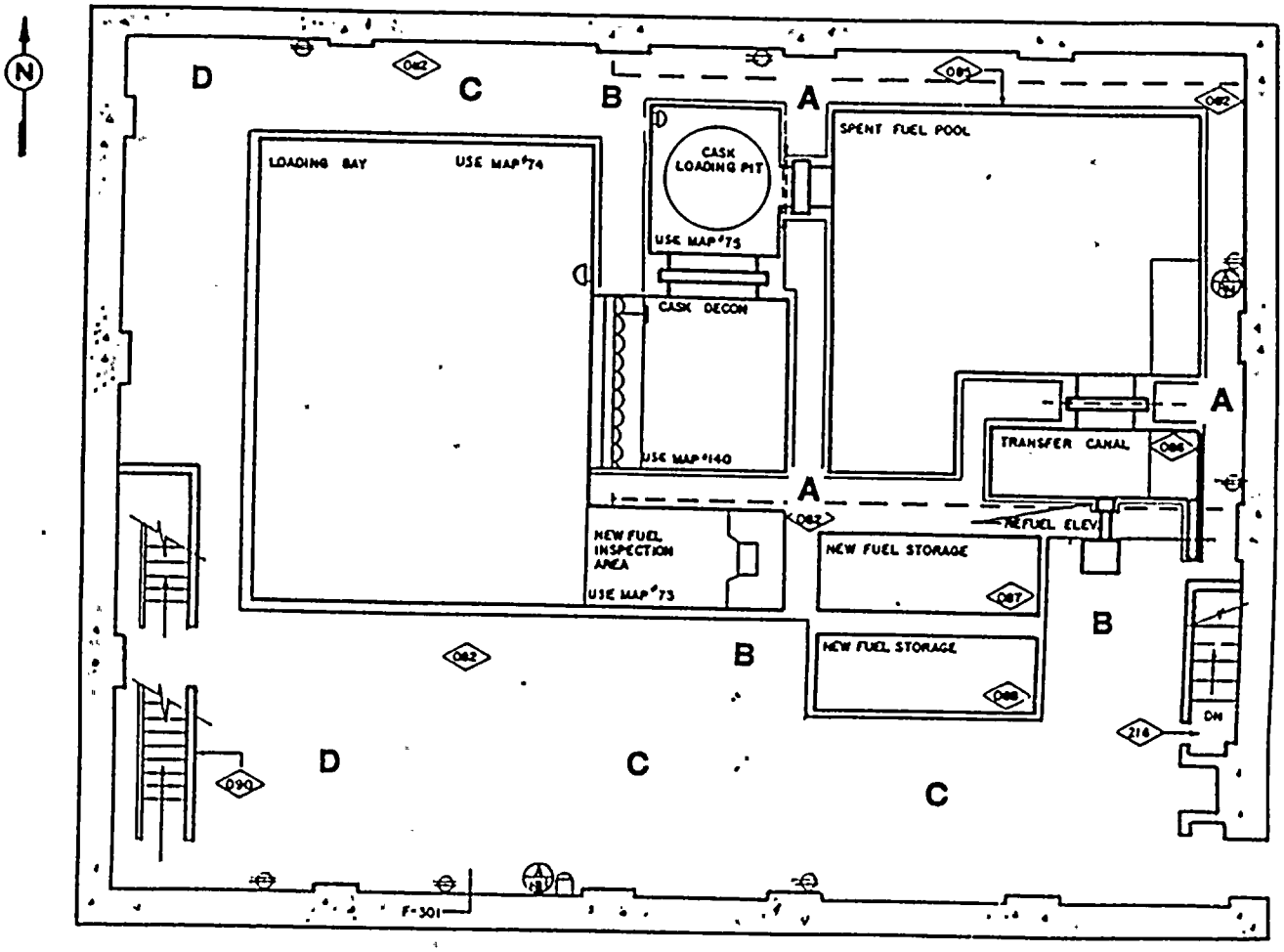
(To be added - see Section J.1 for data)

## J.4 IN-PLANT RADIOLOGICAL DATA

-- NOTE --

Radiological measurements not incorporated in this section should be given "as read".

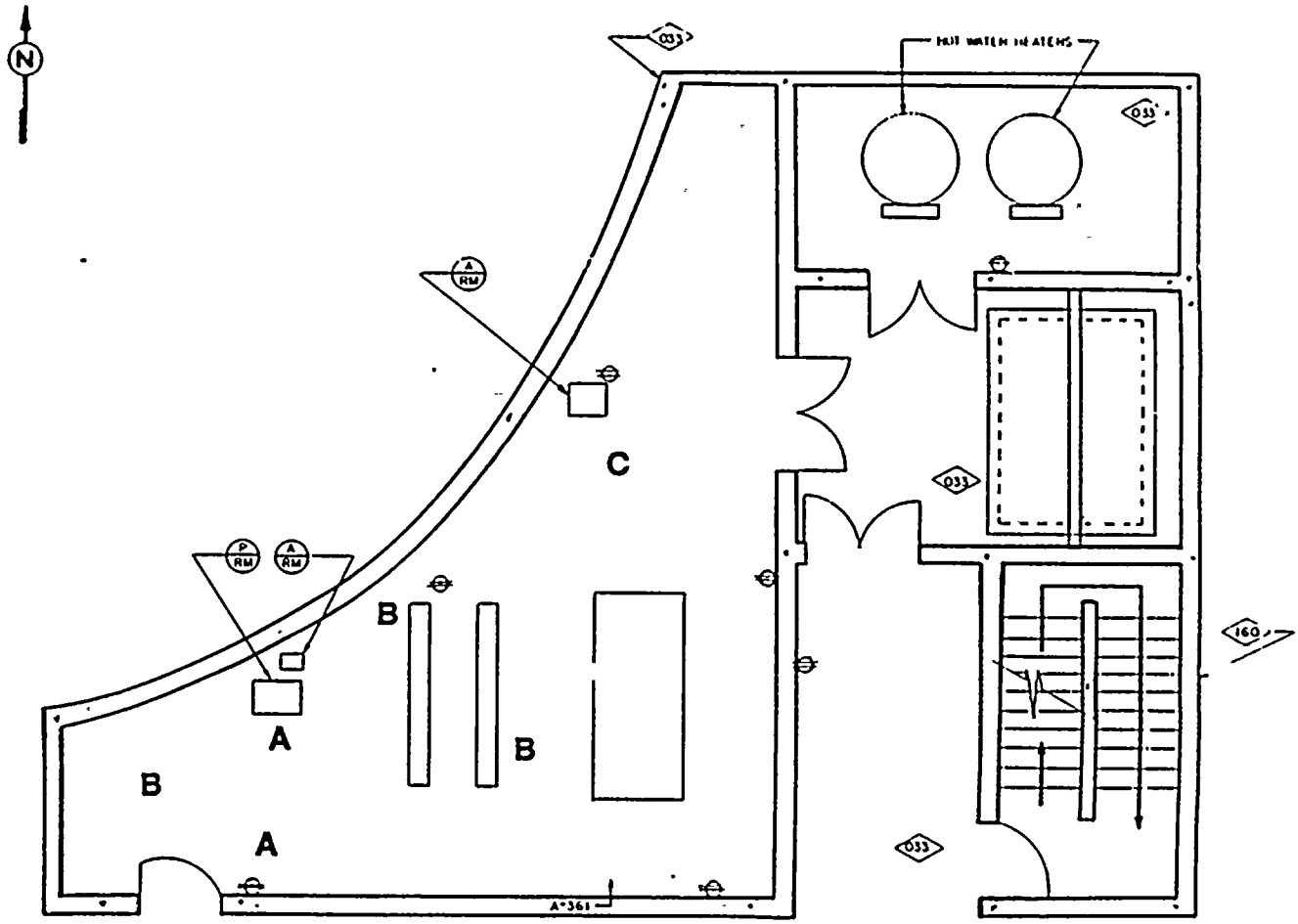
FUEL BUILDING 140'




| 1. | Dose Rate and Contamination Levels | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | mR/hr Unless Noted | | | | | | |
| HRS | A | B | C | D | E | F | GENERAL NOTES |
| 0835 | 150 | 100 | 70 | 50 | | | |
| 0900 | 100 | 80 | 80 | 30 | | | |
| 0930 | 50 | 30 | 20 | 10 | | | |
| 1030 | As Read | As Read | As Read | As Read | | | |

| 2. | Airborne Concentrations and Contamination Levels | | | | |
|---|---|---|---|---|---|
| | mR/hr Unless Noted | | | | |
| TIME HRS | Noble Gas (uCi/cc) | Iodines (uCi/cc) | Particulates (uCi/cc) | Contamination (CPM) | GENERAL NOTES |
| 0830 | 1E-4 | As Read | As Read | As Read | |
| 0900 | 9.0E-5 | As Read | As Read | As Read | |
| 0930 | 4.0E-5 | As Read | As Read | As Read | |
| 1030 | As Read | As Read | As Read | As Read | |

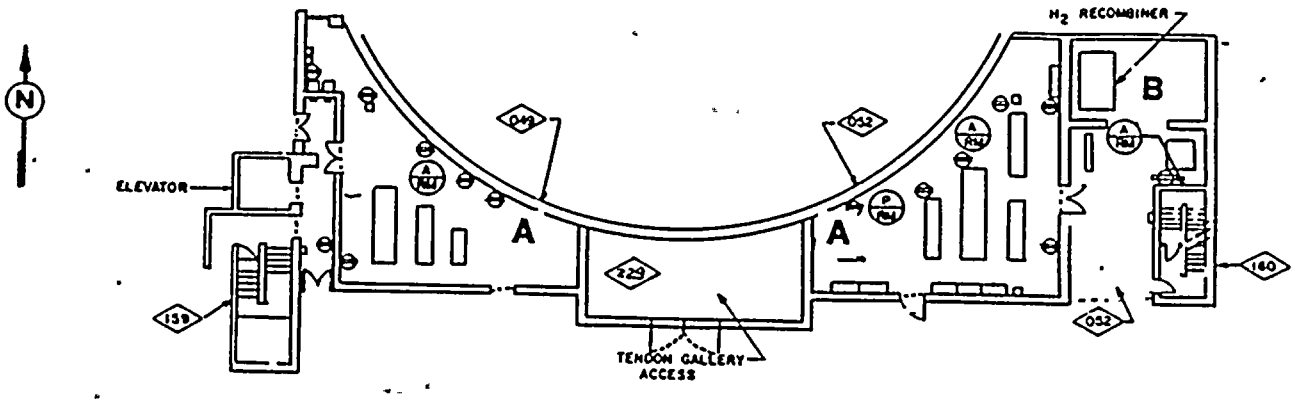
AUXILIARY BUILDING 140'
EAST WRAP ROOM




| 1. | Dose Rate and Contamination Levels | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | mR/hr Unless Noted | | | | | | |
| HRS | A | B | C | D | E | F | GENERAL NOTES |
| 1100 | 750 | 400 | 300 | | | | |
| 1115 | 20R/hr | 10R/hr | 2000 | | | | |
| 1145 | 10R/hr | 5R/hr | 1000 | | | | |
| 1200 | 8R/hr | 3R/hr | 500 | | | | |

| 2. | Airborne Concentrations and Contamination Levels | | | | |
|---|---|---|---|---|---|
| | mR/hr Unless Noted | | | | |
| TIME HRS | Noble Gas (uCi/cc) | Iodines (uCi/cc) | Particulates (uCi/cc) | Contamination (CPM) | GENERAL NOTES |
| 1100 | As Read | As Read | As Read | As Read | |
| 1115 | As Read | As Read | As Read | As Read | |
| 1145 | As Read | As Read | As Read | As Read | |
| 1200 | As Read | As Read | As Read | As Read | |

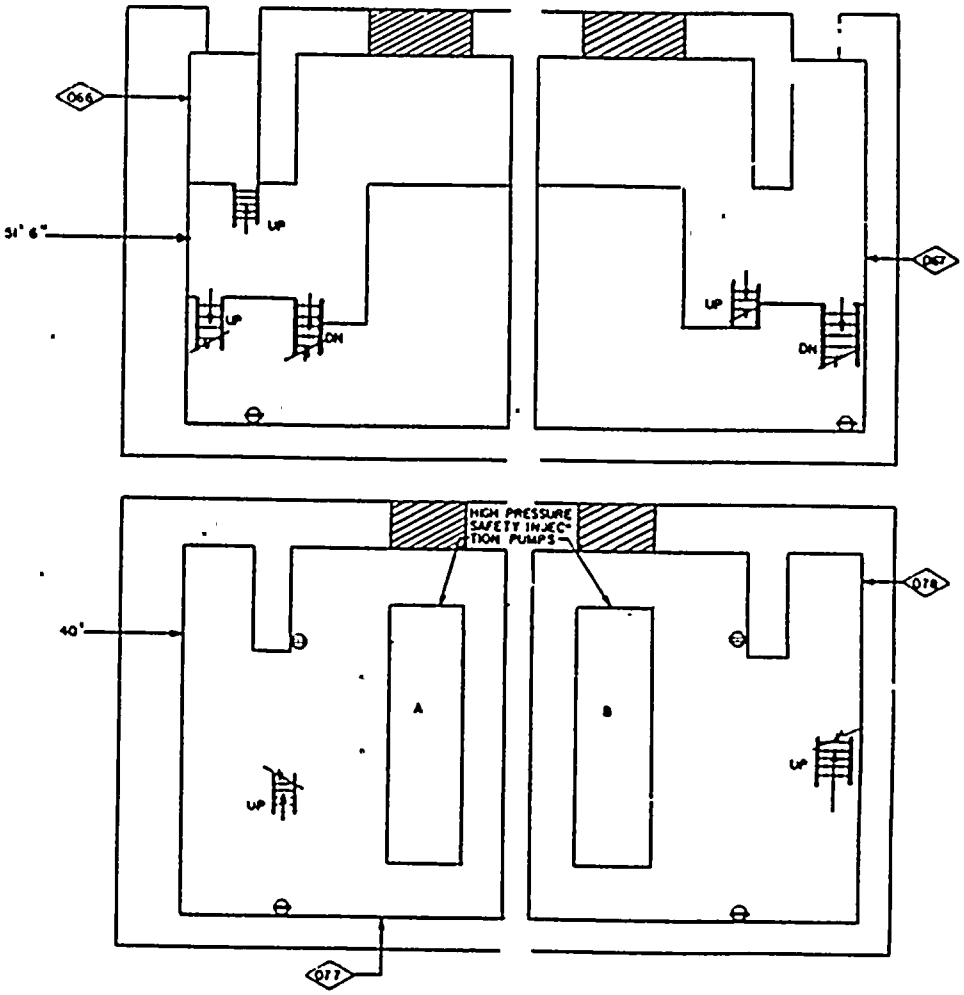
AUXILIARY BUILDING 100'
$H_2$ RECOMBINER AREA




| 1. Dose Rate and Contamination Levels | | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | mR/hr Unless Noted | | | | | | |
| HRS | A | B | C | D | E | F | GENERAL NOTES |
| 0800-1115 | As Read | As Read | | | | | |
| 1115 on | 160 | 50 | | | | | |
| | | | | | | | |
| | | | | | | | |

| 2. Airborne Concentrations and Contamination Levels | | | | | |
|---|---|---|---|---|---|
| | mR/hr Unless Noted | | | | |
| TIME HRS | Noble Gas (uCi/cc) | Iodines (uCi/cc) | Particulates (uCi/cc) | Contamination (CPM) | GENERAL NOTES |
| 0800 on | As Read | As Read | As Read | As Read | |
| | | | | | |
| | | | | | |
| | | | | | |

AUXILIARY BUILDING 40' & 51'6"
HPSI PUMP ROOM AREAS




| 1. Dose Rate and Contamination Levels | | | | | | | |
|---|---|---|---|---|---|---|---|
| TIME | mR/hr Unless Noted | | | | | | |
| HRS | A | B | C | D | E | F | GENERAL NOTES |
| 0800 on | As Read | As Read | As Read | As Read | As Read | As Read | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| 2. Airborne Concentrations and Contamination Levels | | | | | |
|---|---|---|---|---|---|
| | mR/hr Unless Noted | | | | |
| TIME HRS | Noble Gas (uCi/cc) | Iodines (uCi/cc) | Particulates (uCi/cc) | Contamination (CPM) | GENERAL NOTES |
| 0800 on | As Read | As Read | As Read | As Read | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

PASS RADIOLOGICAL INFORMATION

| Parameter | mR/hr Unless Noted | |
|---|---|---|
| | Time: 0800-1040 | Time: 1040 On |
| **A. RCS PASS** | | |
| 1. Unshielded sample dose rate; contact. | As Read | 80 R/hr |
| 2. Unshielded sample dose rate; 3 feet. | As Read | 90 |
| 3. Shielded sample dose rate; contact. | As Read | 1500 |
| 4. Shielded sample dose rate; 3 feet. | As Read | 10 |
| 5. General area dose rates outside sample room; recirculation. | As Read | 100 |

## J.5 ON-SITE RADIOLOGICAL MAPS AND INSTRUMENT READINGS

## ON-SITE MONITORING MAP INFORMATION

1. Each data table is followed immediately by its corresponding map for the listed time period. Data is keyed to map locations.

2. Dose Rates indicated in net mR/hr. Background approximately 0.02-0.04 mR/hr.

3. Iodine Cartridge Count Rate assumes a sample volume of 10 $ft^3$ and E-520 detector efficiency of 0.05 cpm/dpm. Instrument background approximately 60 cpm is subtracted.

4. Abbreviations:

   a. LMD = Less Than Minimum Detectable
   b. CPM = Counts Per Minute
   c. W.O. = Window Open
   d. W.C. = Window Closed

5. Edge of Plume values are roughly 10 percent of centerline values. Controllers should interpolate between centerline and edge of plume values as appropriate.

6. Smear measurements with E-520, 100 $cm^2$

NOTE

RADIOLOGICAL MEASUREMENTS NOT INCORPORATED

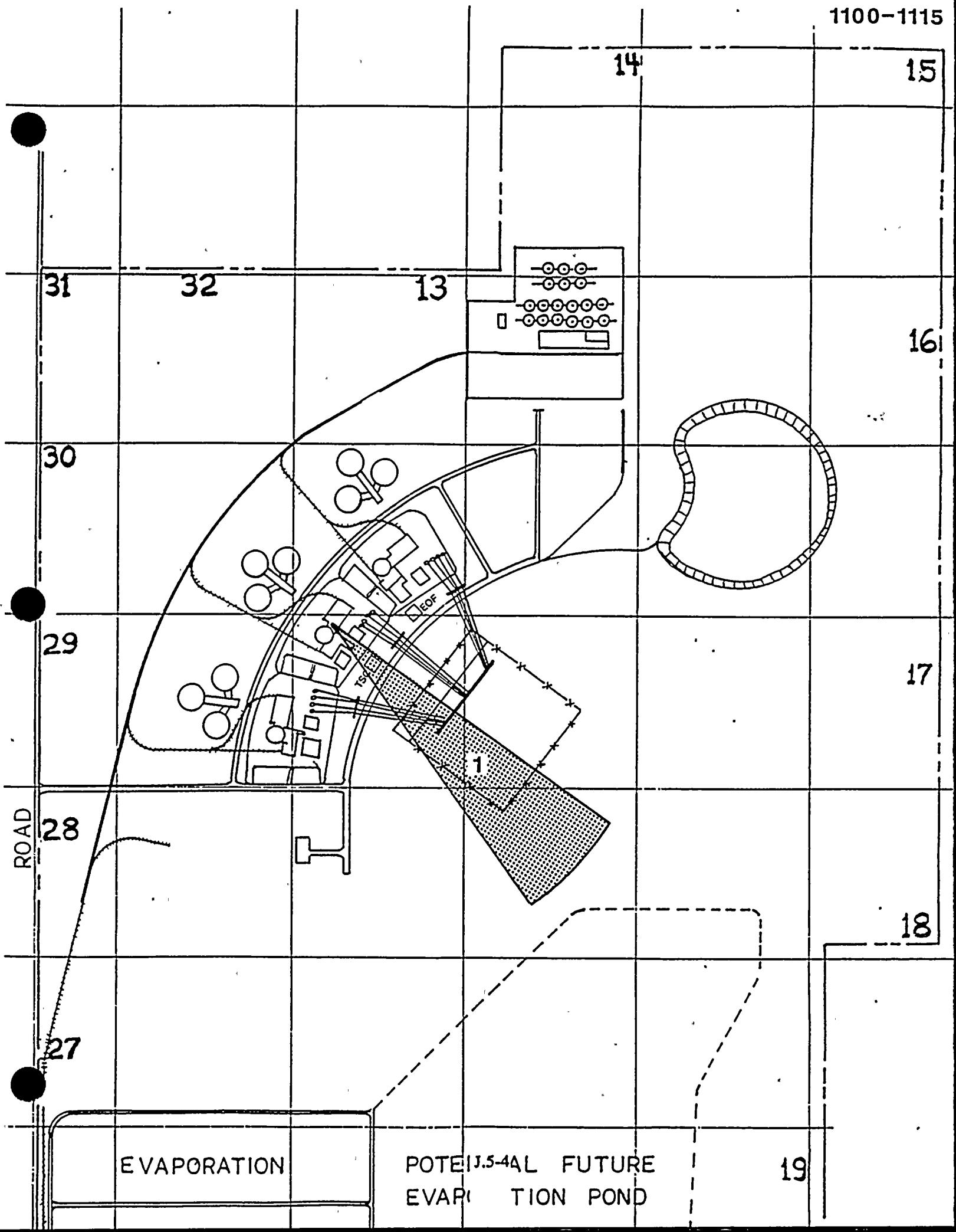
IN THIS SECTION SHOULD BE GIVEN AS READ

## ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1100-1115

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 1. Centerline | 1,600 | 1,032 | 80 mR/hr | 23,268 | 4.93E-5 | As Read |
| 1. Edge of Plume | 150 | 100 | 155,000 | 2,320 | 4.93E-6 | As Read |


1100-1115
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TION POND
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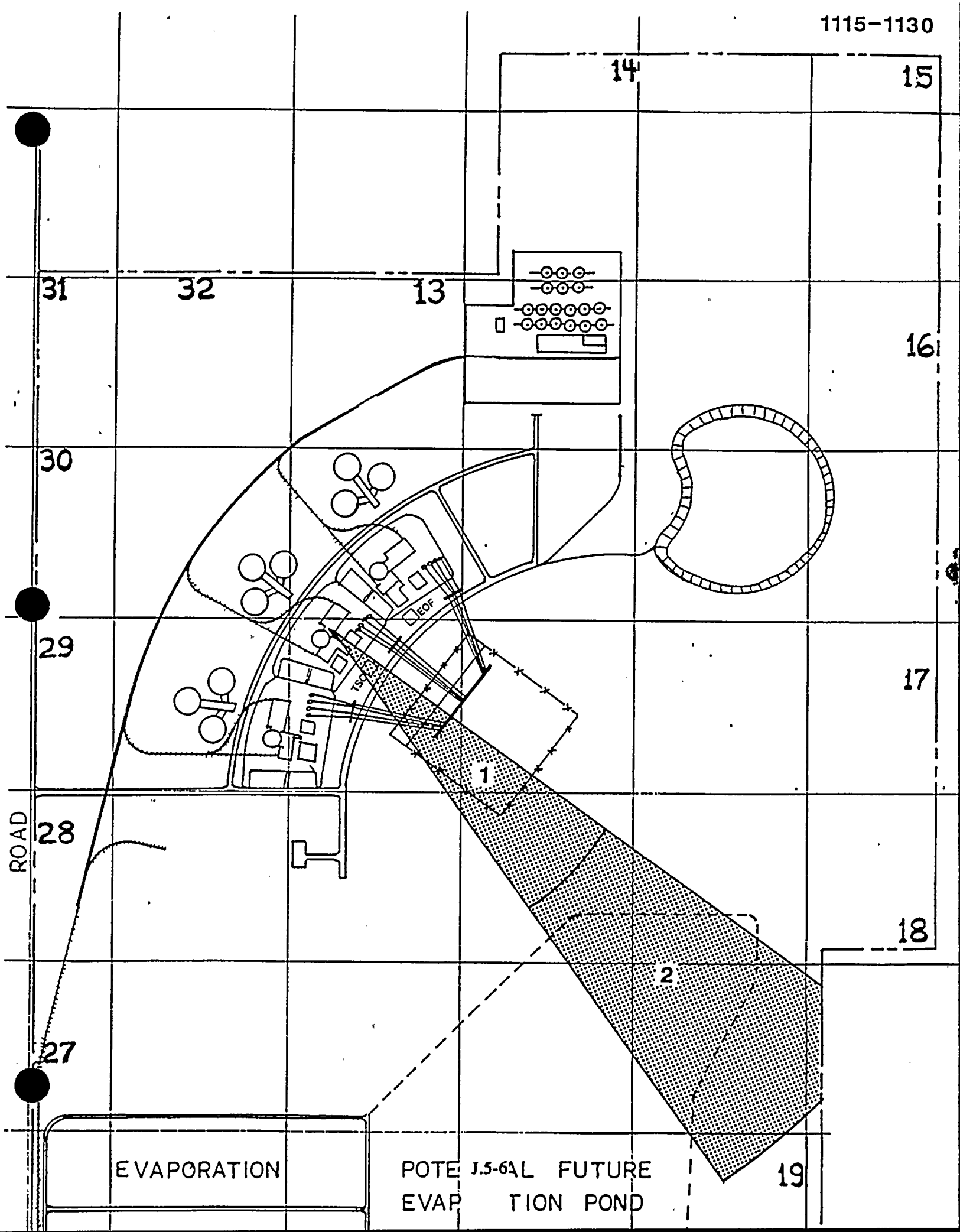
## ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1115-1130

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 1. Centerline | 4,000 | 2,500 | 200 mR/hr | 40,800 | 1.30E-4 | 1,000 |
| 1. Edge of Plume | 400 | 250 | 408,000 | 4,080 | 1.30E-5 | 100 |
| 2. Centerline | 280 | 180 | 60 mR/hr | 6,532 | 2.08E-5 | 500 |
| 2. Edge of Plume | 30 | 20 | 65,321 | 653 | 2.10E-6 | As Read |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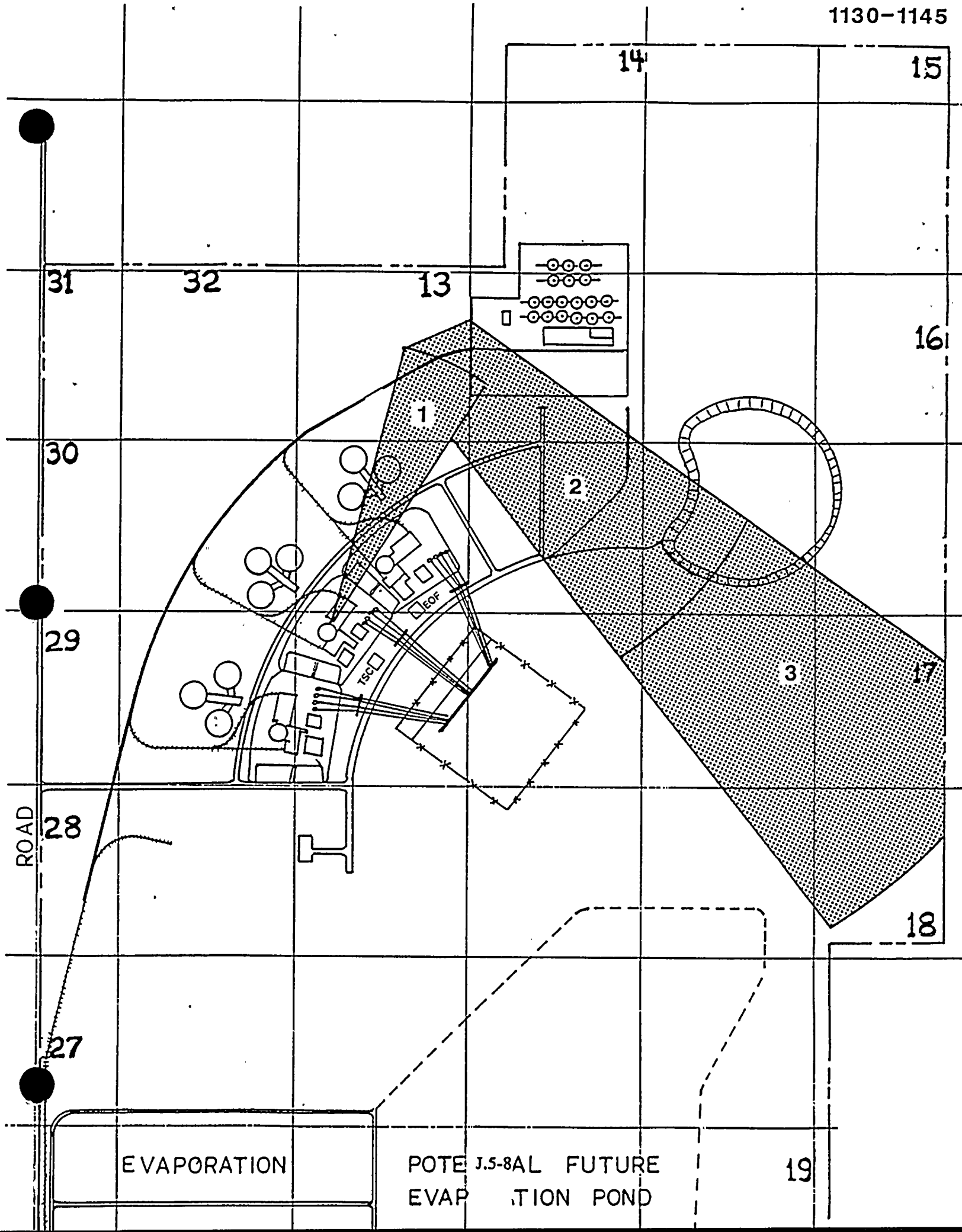
## ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1130-1145

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 1. Centerline | 1,000 | 660 | 50 mR/hr | 8,094 | 1.72E-5 | 2,000 |
| 1. Edge of Plume | 100 | 60 | 54,130 | 800 | 1.72E-6 | 200 |
| 2. Centerline | 1,200 | 770 | 100 mR/hr | 25,832 | 5.48E-5 | 1,000 |
| 2. Edge of Plume | 120 | 75 | 172,215 | 2,583 | 5.48E-6 | 100 |
| 3. Centerline | 220 | 140 | 114,410 | 1,716 | 3.64E-6 | 500 |
| 3. Edge of Plume | 20 | 15 | 11,441 | 172 | 3.64E-7 | As Read |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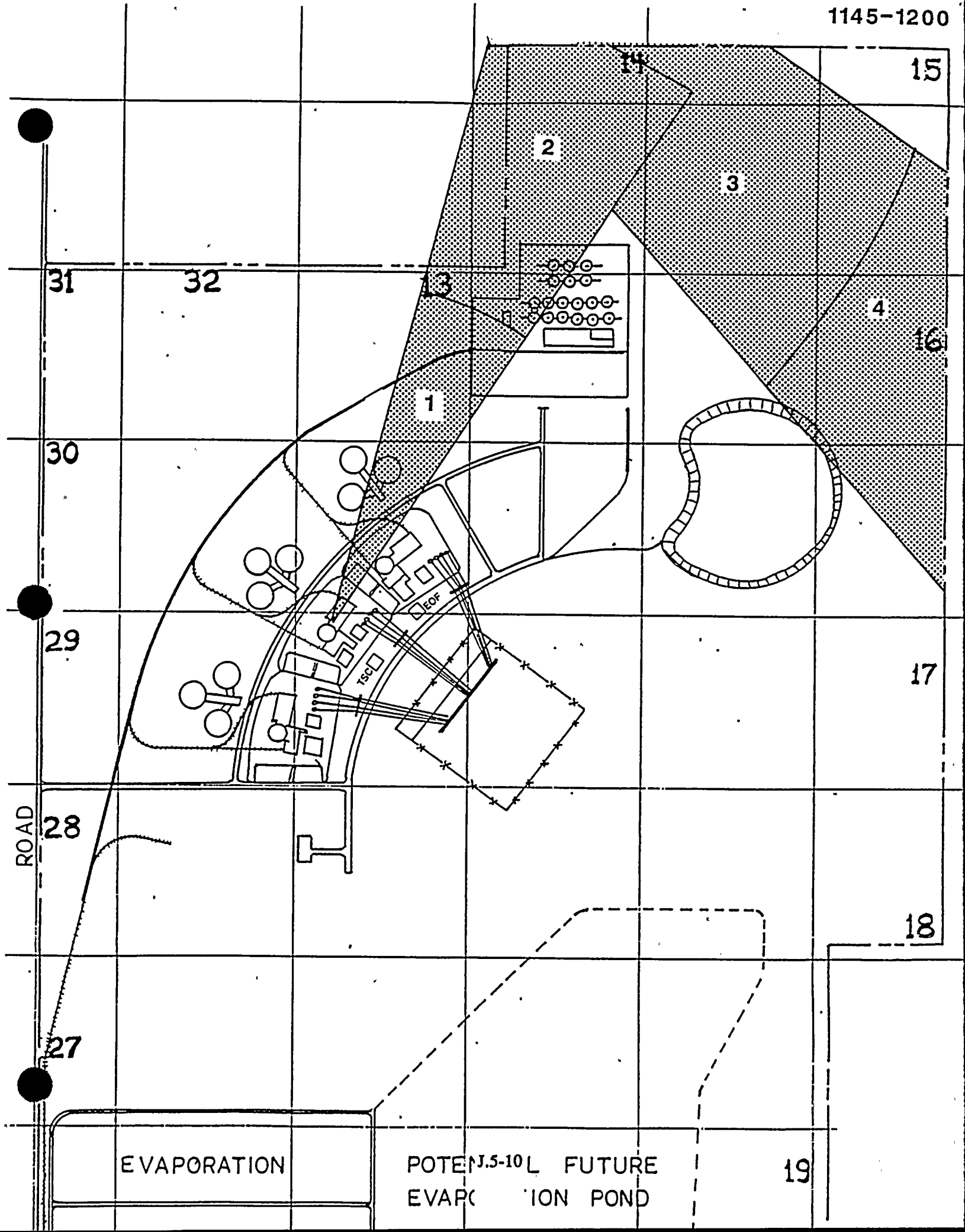
## ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1145-1200

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 1. Centerline | 300 | 190 | 149,590 | 2,244 | 4.76E-6 | 2,500 |
| 1. Edge of Plume | 30 | 20 | 14,959 | 224 | 4.76E-7 | 250 |
| 2. Centerline | 150 | 100 | 129,717 | 1,946 | 2.55E-6 | 2,000 |
| 2. Edge of Plume | 15 | 10 | 12,971 | 195 | 2.55E-7 | 200 |
| 3. Centerline | 320 | 180 | 288,618 | 4,329 | 1.49E-5 | 1,500 |
| 3. Edge of Plume | 30 | 20 | 28,862 | 433 | 1.49E-6 | 130 |
| 4. Centerline | 560 | 350 | 301,627 | 4,524 | 9.59E-6 | 1,000 |
| 4. Edge of Plume | 60 | 35 | 30,163 | 455 | 9.59E-7 | 100 |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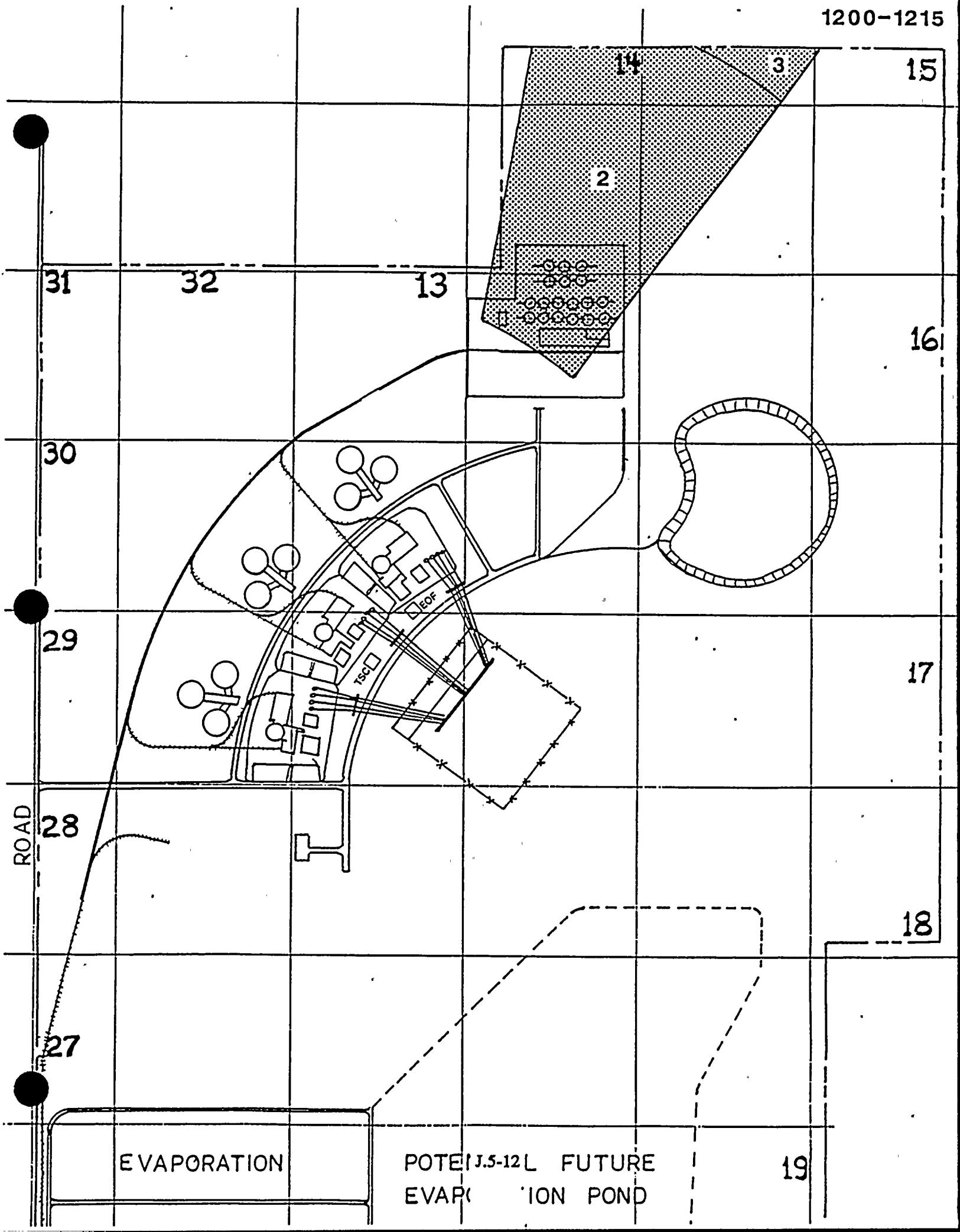
19

ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1200-1215

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 2. Centerline | 150 | 100 | 129,717 | 1,946 | 4.13E-6 | 2,500 |
| 2. Edge of Plume | 15 | 10 | 12,971 | 194 | 4.13E-7 | 250 |
| 3. Centerline | 80 | 50 | 80,037 | 1,201 | 2.55E-6 | 1,800 |
| 3. Edge of Plume | 8 | 5 | 8,003 | 120 | 2.55E-7 | 180 |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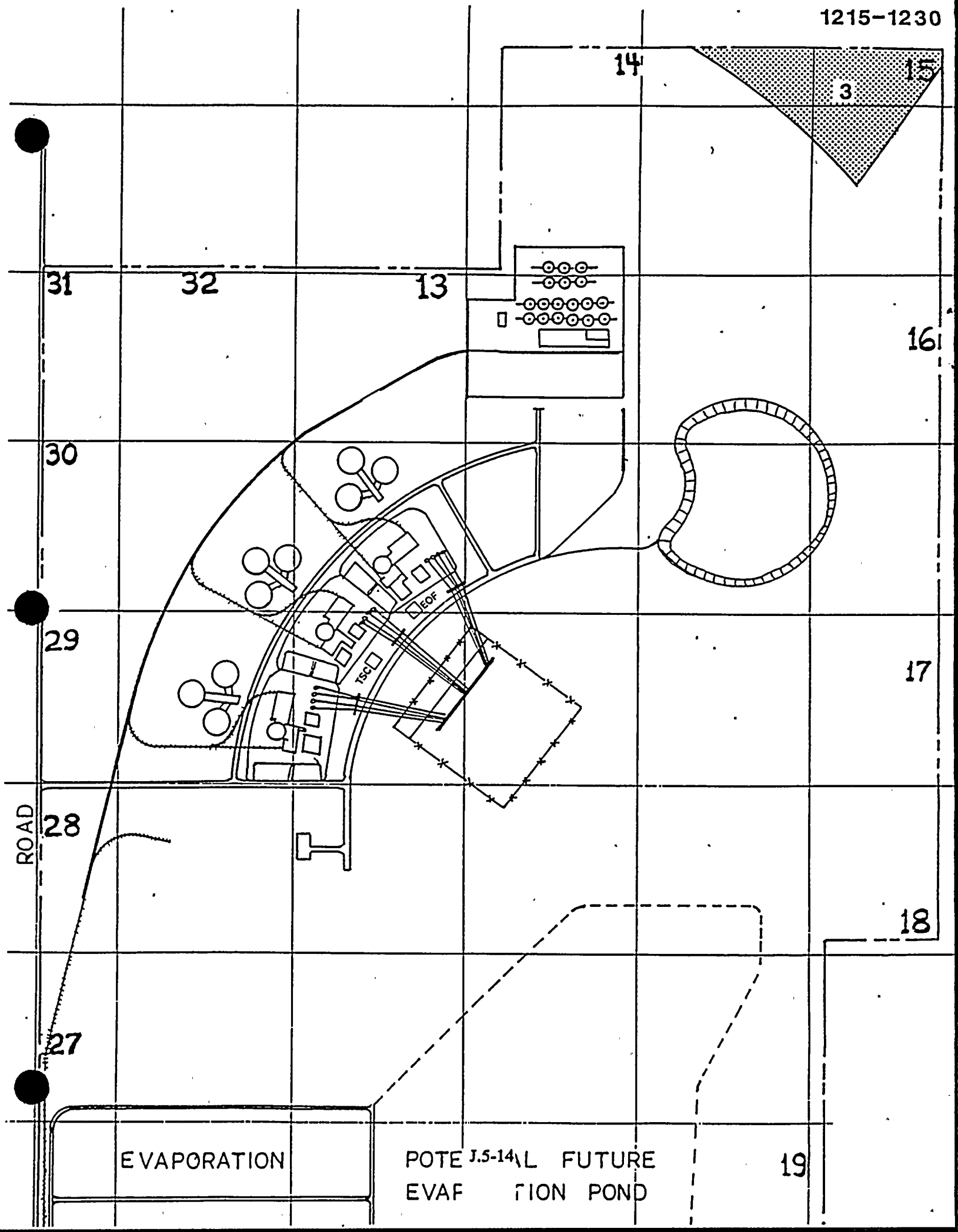
J.5-12

## ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1215-1230

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 3. Centerline | 70 | 40 | 71,516 | 1,000 | 2.15E-6 | 2,000 |
| 3. Edge of Plume | 7 | 4 | 7,152 | 100 | 2.15E-7 | 200 |


14
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EVAPORATION
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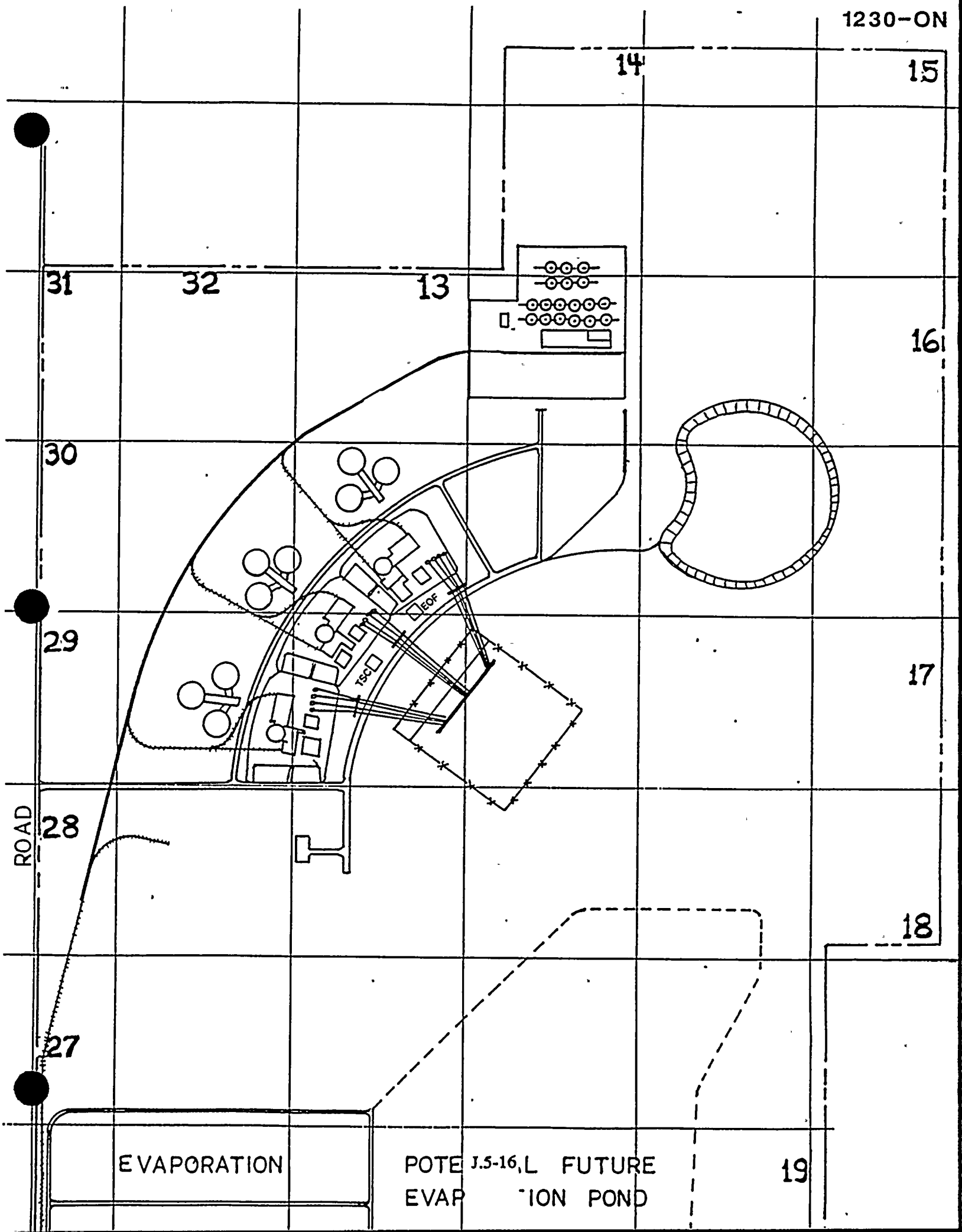
L FUTURE
EVAF
TION POND
19

ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1230-ON

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| ALL | As Read | As Read | As Read | As Read | LMD | As Read |


1230-ON
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ROAD
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EVAPORATION
POTE J.5-16,L FUTURE
EVAP ION POND
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## J.7 OFF-SITE RADIOLOGICAL MAPS AND FIELD DOSE ASSESSMENT DATA

## OFF-SITE RADIOLOGICAL MAP INFORMATION

1. Each data table is followed immediately by its corresponding map for the listed time period. Data is keyed to map locations.

2. Dose Rates indicated in net mR/hr. Background approximately 0.02-0.04 mR/hr.

3. Iodine Cartridge Count Rate assumes a sample volume of 10 $ft^3$ and E-520 detector efficiency of 0.05 cpm/dpm. Instrument background approximately 60 cpm is subtracted.

4. Abbreviations:

   a. LMD = Less Than Minimum Detectable
   b. CPM = Counts Per Minute
   c. W.O. = Window Open
   d. W.C. = Window Closed

5. Edge of Plume values are roughly 10 percent of centerline values. Controllers should interpolate between centerline and edge of plume values as appropriate.

6. Smear measurements with E-520, 100 $cm^2$

NOTE

RADIOLOGICAL MEASUREMENTS NOT INCORPORATED

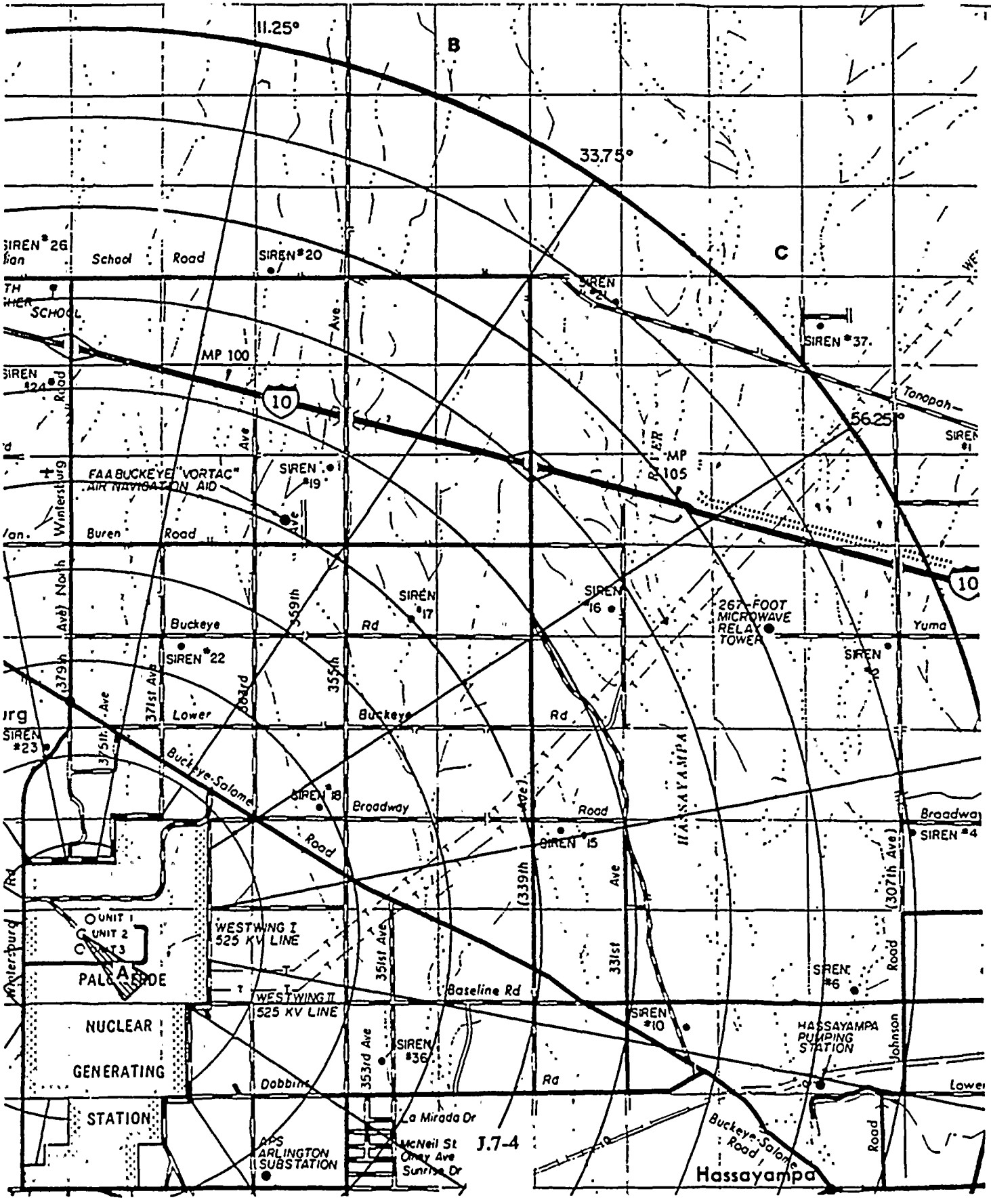
IN THIS SECTION SHOULD BE GIVEN AS READ

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1100-1115

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |


BB A B C D E F G H I J K
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
MP 100
10
Tonopah
SIREN #24
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
MP 105
Winterburg Road
Buren Road
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
Buckeye Rd
SIREN #22
Lower Buckeye Rd
SIREN #23
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
Broadway
SIREN #4
HASSAYAMPA
UNIT 1
UNIT 2
UNIT 3
PALO VERDE NUCLEAR GENERATING STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
SIREN #36
Dobbins Rd
La Mirada Dr
McNeil St
Olney Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
Lower
Johnson Road
(379th Ave)
371st Ave
(359th Ave)
355th Ave
(339th Ave)
(307th Ave)
351st Ave
331st Ave
353rd Ave

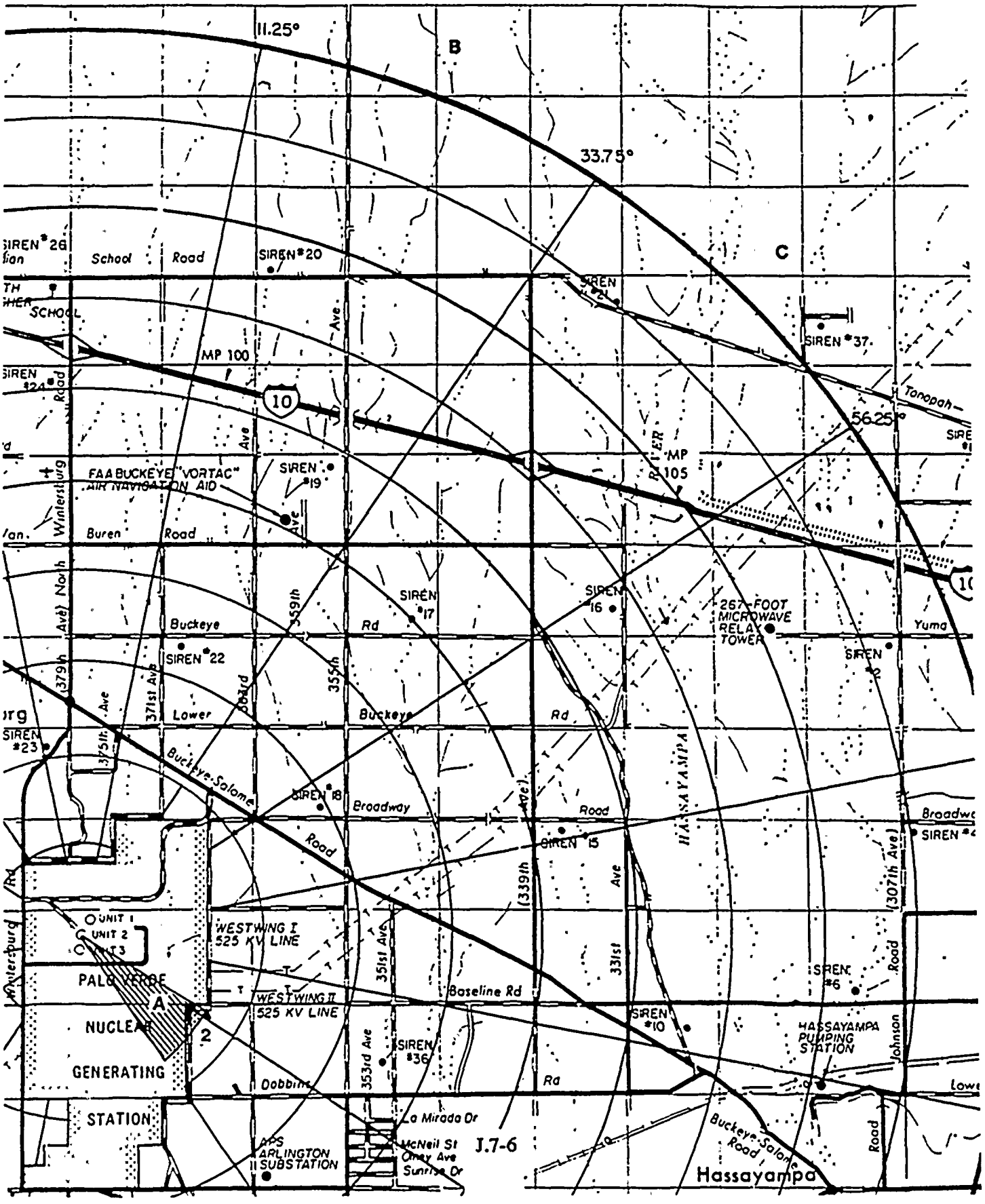
## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1115-1130

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |
| 2. Centerline | 90 | 60 | 53,858 | 808 | 1.71E-6 | 200 |
| 2. Edge of Plume | 9 | 6 | 5,386 | As Read | 1.71E-7 | As Read |

BB A B C D E F G H I J



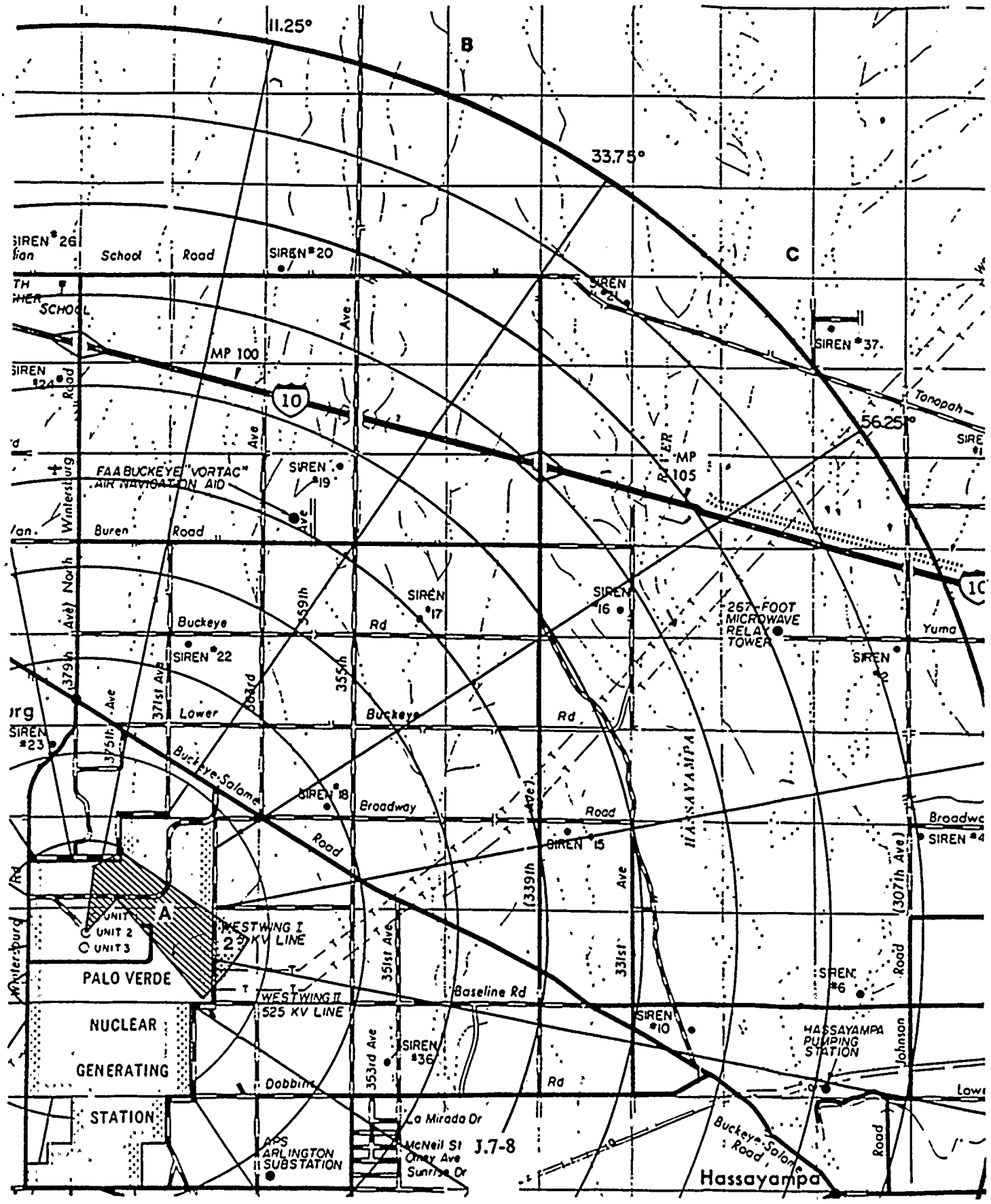

19 17 15 13 11 9 7 5 3 1 0 2 4

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1130-1145

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |
| 2. Centerline | 90 | 60 | 53,858 | 808 | 1.71E-6 | 400 |
| 2. Edge of Plume | 9 | 6 | 5,386 | As Read | 1.71E-7 | As Read |


BB A B C D E F G H I J
11.25°
33.75°
56.25°
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C
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SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SCHOOL
MP 100
10
Tonopah
MP 105
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
Buren Road
North Wintersburg Ave
379th Ave
371st Ave
375th Ave
Buckeye Rd
Lower Buckeye Rd
355th Ave
359th Ave
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #22
SIREN #23
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
339th Ave
307th Ave
SIREN #4
HASSAYAMPA RIVER
UNIT 1
UNIT 2
UNIT 3
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
PALO VERDE NUCLEAR GENERATING STATION
Baseline Rd
351st Ave
331st Ave
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
SIREN #36
353rd Ave
Dobbins Rd
La Mirada Dr
McNeil St
Omey Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
J.7-8

## OFF-SITE INSTRUMENT READINGS

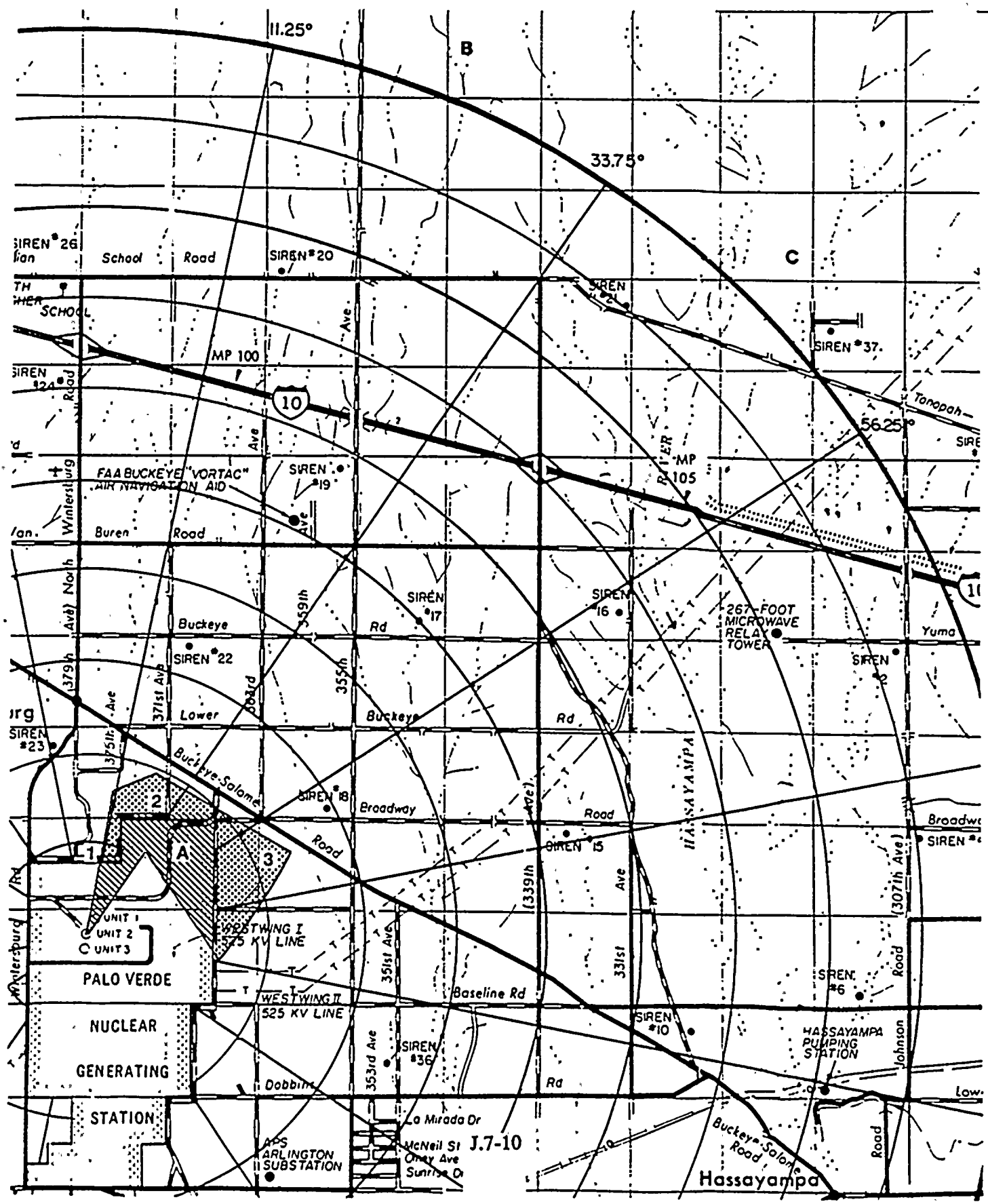
May 3, 1989 - Exercise

TIME: 1145-1200

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |
| 1. Centerline | 560 | 350 | 301,627 | 4,524 | 9.59E-6 | 500 |
| 1. Edge of Plume | 60 | 35 | 30,163 | 450 | 9.59E-7 | As Read |
| 2. Centerline | 250 | 150 | 141,991 | 2,130 | 4.52E-6 | 200 |
| 2. Edge of Plume | 25 | 15 | 14,199 | 213 | 4.52E-7 | As Read |
| 3. Centerline | 60 | 40 | 39,538 | 593 | 1.26E-6 | As Read |
| 3. Edge of Plume | 6 | 4 | 3,354 | As Read | 1.26E-7 | As Read |

1145-1200

BB A B C D E F G H I J

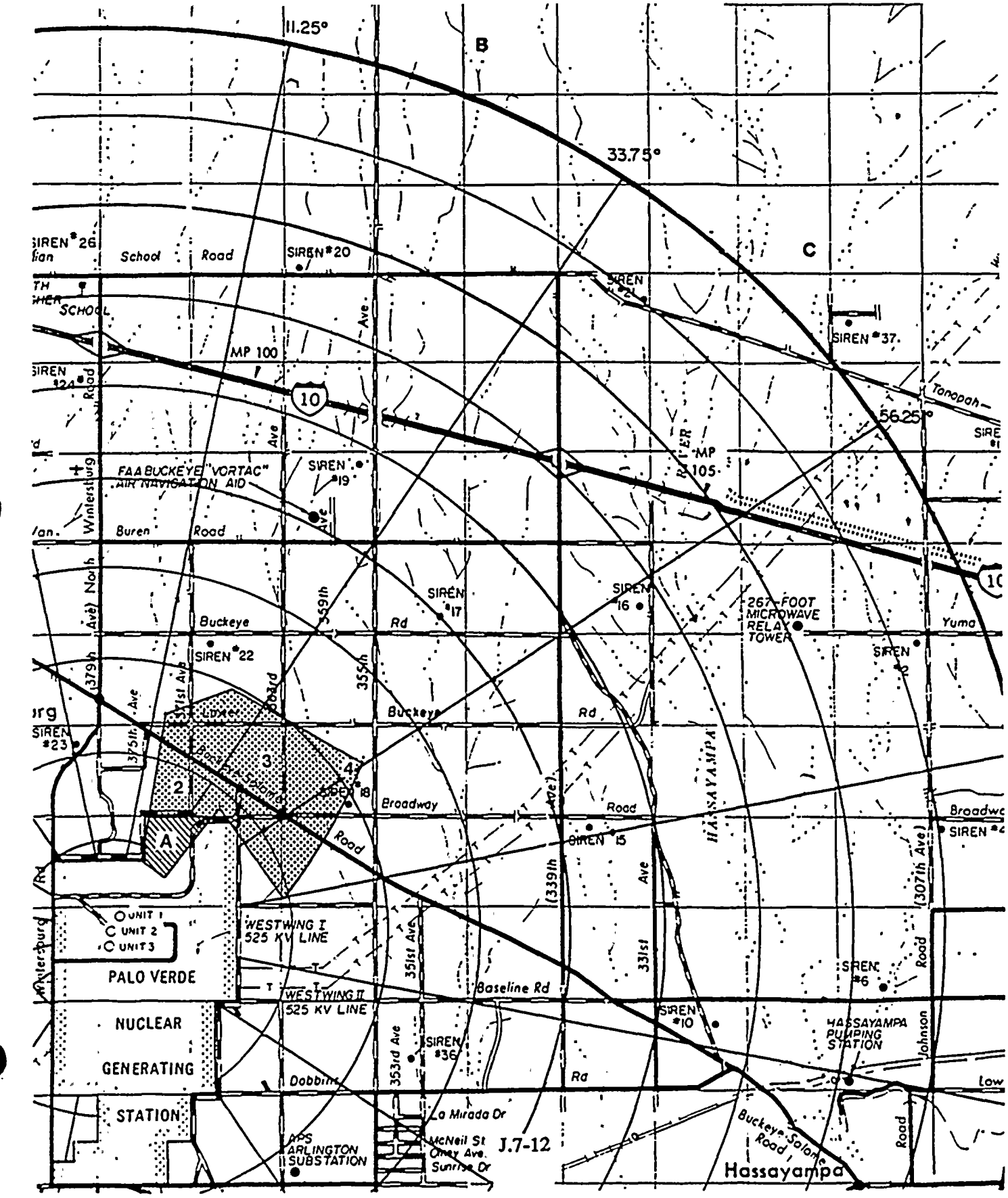


## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1200-1215

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |
| 2. Centerline | 180 | 110 | 109,363 | 1,640 | 3.48E-6 | 300 |
| 2. Edge of Plume | 18 | 10 | 10,936 | 160 | 3.48E-7 | As Read |
| 3. Centerline | 80 | 50 | 104,236 | 1,564 | 3.31E-6 | 200 |
| 3. Edge of Plume | 8 | 5 | 10,424 | 150 | 3.31E-7 | As Read |
| 4. Centerline | 30 | 20 | 25,217 | 378 | 8.02E-7 | As Read |
| 4. Edge of Plume | 3 | 2 | 2,522 | As Read | 8.02E-8 | As Read |


BB A B C D E F G H I J
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SCHOOL
MP 100
10
SIREN #24
Tonopah
MP 105
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
Buren Road
Winterburg
North Ave
Buckeye Rd
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #22
379th Ave
371st Ave
355th Ave
359th Ave
SIREN #23
375th Ave
3
4
2
A
SIREN #18
Broadway Road
SIREN #15
HASSAYAMPA
339th Ave
307th Ave
Broadway
SIREN #4
UNIT 1
UNIT 2
UNIT 3
PALO VERDE
NUCLEAR
GENERATING
STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
351st Ave
331st Ave
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
353rd Ave
SIREN #36
Dobbins Rd
La Mirada Dr
McNeil St
Omey Ave.
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
Low

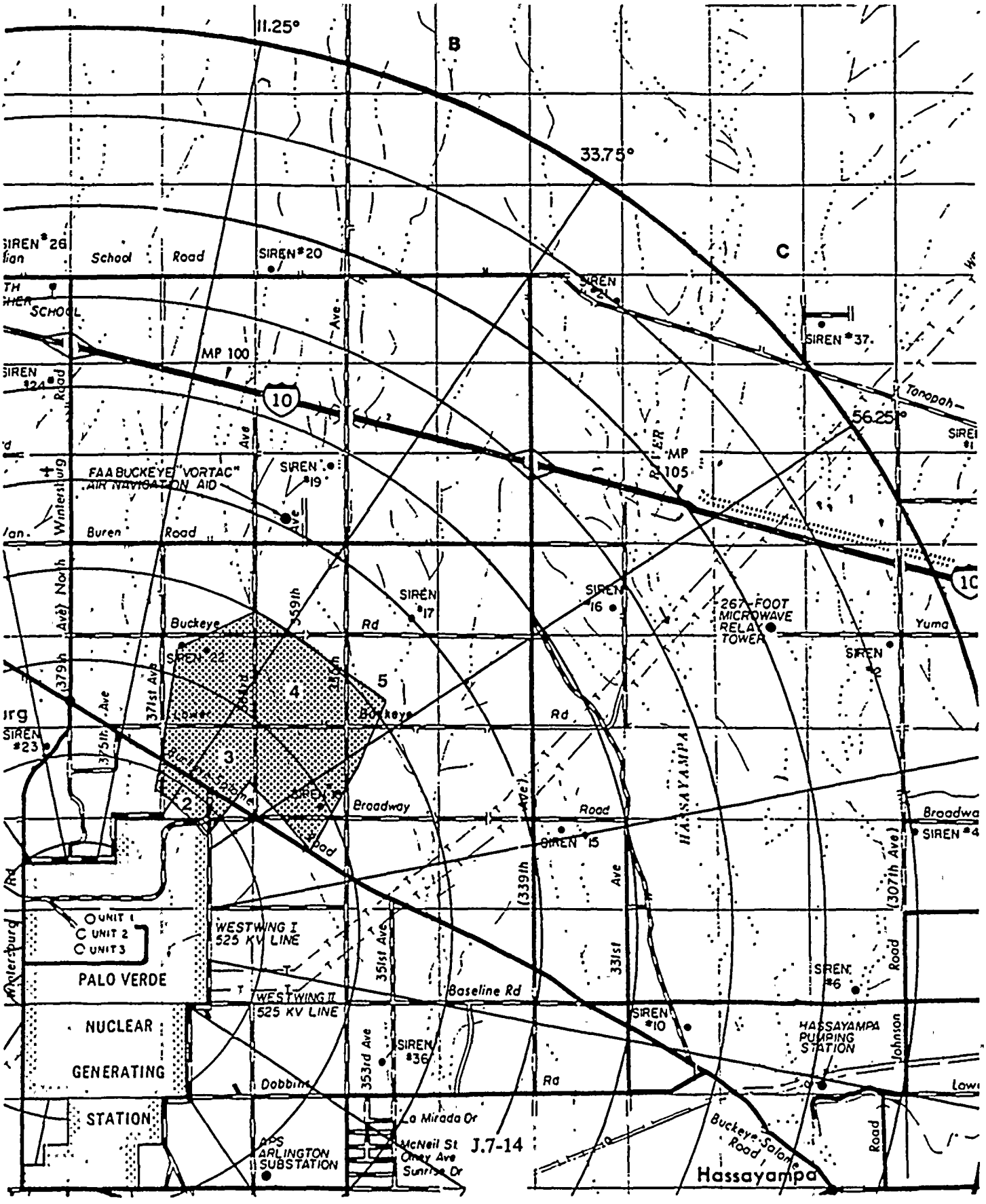
## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1215-1230

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |
| 2. Centerline | 50 | 30 | 30,357 | 455 | 9.65E-7 | 400 |
| 2. Edge of Plume | 5 | 3 | 3,036 | As Read | 9.65E-8 | As Read |
| 3. Centerline | 60 | 40 | 80,322 | 1,205 | 2.55E-6 | 300 |
| 3. Edge of Plume | 6 | 4 | 8,032 | 120 | 2.55E-7 | As Read |
| 4. Centerline | 60 | 40 | 66,481 | 997 | 2.11E-6 | As Read |
| 4. Edge of Plume | 6 | 4 | 6,648 | 100 | 2.11E-7 | As Read |
| 5. Centerline | 16 | 10 | 10,896 | 163 | 3.47E-7 | As Read |
| 5. Edge of Plume | 1.5 | 1 | 1,089 | As Read | 3.47E-8 | As Read |

1215-1230

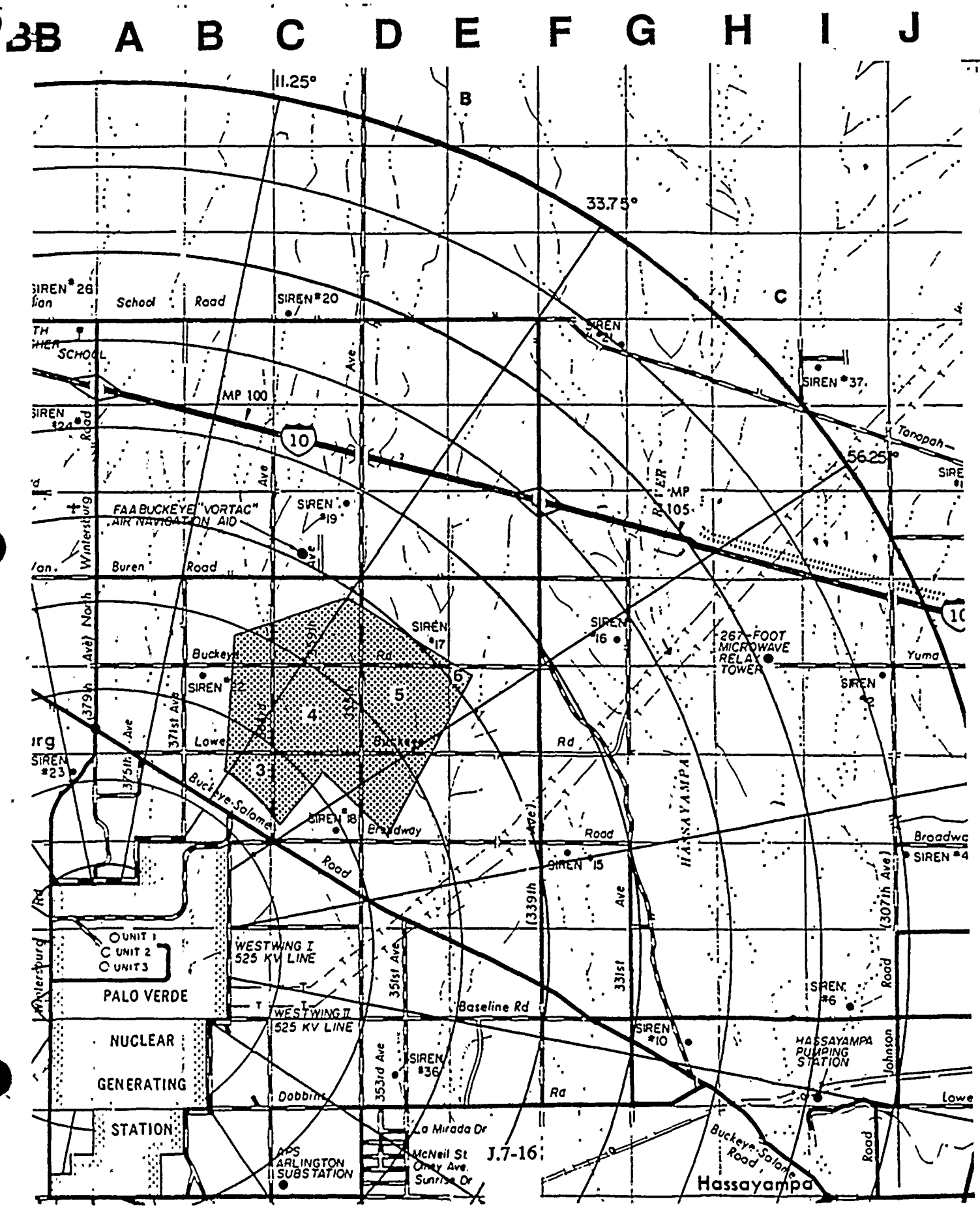

BB A B C D E F G H I J
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SCHOOL
MP 100
SIREN #24
10
Tonopah
SIREN #1
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
MP 105
Buren Road
Winterburg
North Ave
379th Ave
375th Ave
371st Ave
359th Ave
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
Buckeye
SIREN #22
Rd
4
5
3
2
Buckeye Rd
SIREN #23
Broadway Road
SIREN #4
SIREN #15
HASSAYAMPA
339th Ave
307th Ave
UNIT 1
UNIT 2
UNIT 3
WESTWING I 525 KV LINE
PALO VERDE
NUCLEAR
GENERATING
STATION
WESTWING II 525 KV LINE
351st Ave
331st Ave
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
SIREN #36
353rd Ave
Dobbins Rd
La Mirada Dr
McNeil St
Olney Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
J.7-14

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1230-1245

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| A | | See On-Site Rad Maps | | | | |
| 3. Centerline | 30 | 20 | 22,285 | 334 | 7.09E-7 | 400 |
| 3. Edge of Plume | 3 | 2 | 2,229 | As Read | 7.09E-8 | As Read |
| 4. Centerline | 40 | 30 | 51,282 | 769 | 1.63E-6 | 200 |
| 4. Edge of Plume | 4 | 3 | 5,128 | As Read | 1.63E-7 | As Read |
| 5. Centerline | 40 | 25 | 28,726 | 431 | 9.14E-7 | As Read |
| 5. Edge of Plume | 4 | 2.5 | 2,873 | As Read | 9.14E-8 | As Read |
| 6. Centerline | 10 | 6 | 9,422 | 141 | 3.00E-7 | As Read |
| 6. Edge of Plume | 1 | .5 | 942 | As Read | 3.00E-8 | As Read |


B A B C D E F G H I J K
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
MP 100
10
Tonopah
MP 105
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
Buren Road
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #22
Buckeye Rd
Lower Buckeye Rd
SIREN #23
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
HASSAYAMPA
SIREN #4
UNIT 1
UNIT 2
UNIT 3
PALO VERDE
NUCLEAR
GENERATING
STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
SIREN #36
Dobbins Rd
La Mirada Dr
APS ARLINGTON SUBSTATION
McNeil St
Omay Ave.
Sunrise Dr
Buckeye-Salome Road
Hassayampa
Lower
Johnson Road
Winterburg Road
North (379th Ave)
371st Ave
375th Ave
353rd Ave
351st Ave
339th Ave
331st Ave
307th Ave
1
2
3
4
5
6
7
9
11
13
15
17
19

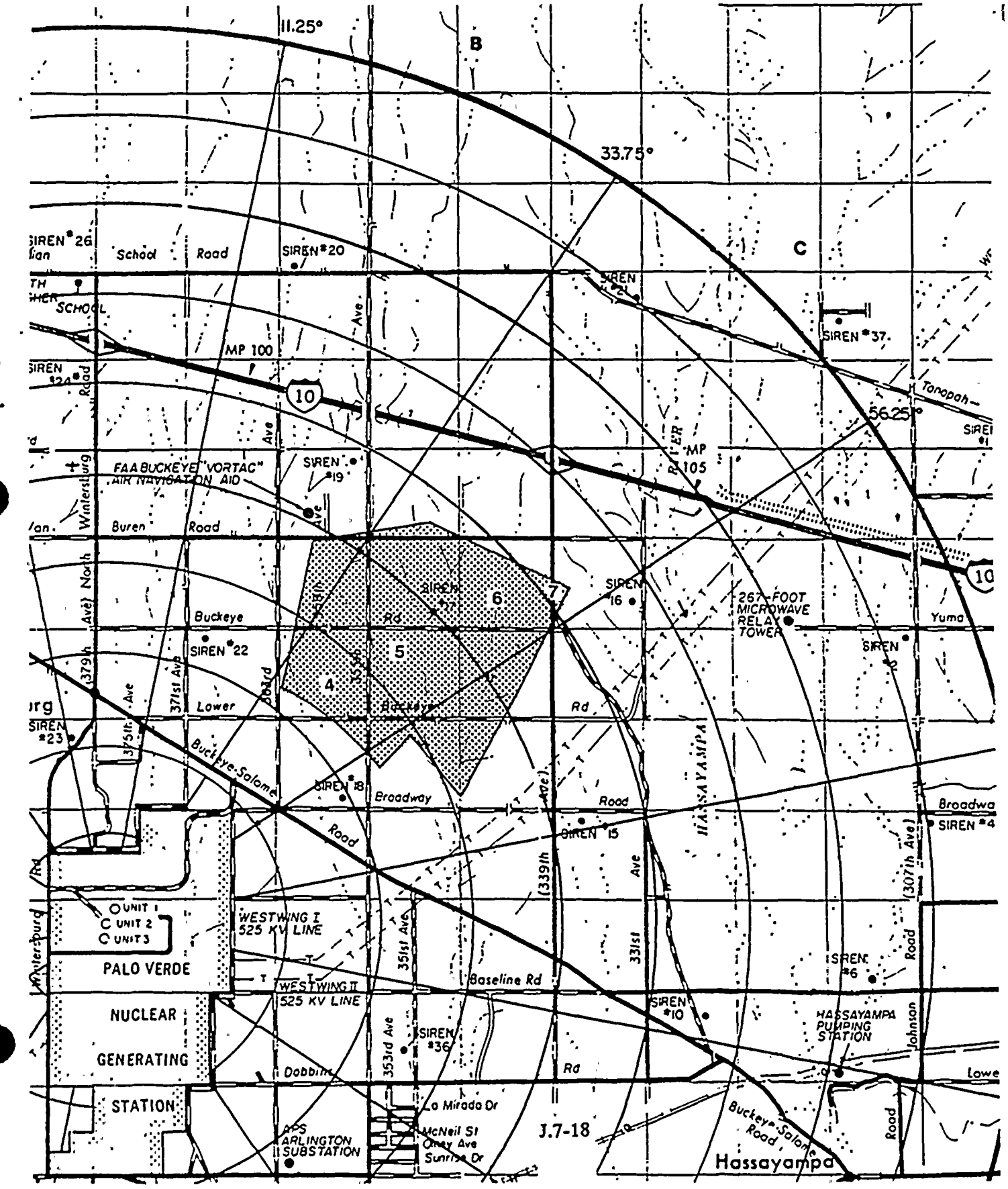
## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1245-1300

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 4. Centerline | 40 | 30 | 14,213 | 213 | 4.52E-7 | 300 |
| 4. Edge of Plume | 4 | 3 | 1,421 | As Read | 4.52E-8 | As Read |
| 5. Centerline | 30 | 15 | 22,241 | 334 | 7.07E-7 | As Read |
| 5. Edge of Plume | 3 | 1.5 | 2,224 | As Read | 7.08E-8 | As Read |
| 6. Centerline | 30 | 20 | 24,840 | 373 | 7.90E-7 | As Read |
| 6. Edge of Plume | 3 | 2 | 2,484 | As Read | 7.90E-8 | As Read |
| 7. Centerline | 6 | 4 | 7,948 | 119 | 2.53E-7 | As Read |
| 7. Edge of Plume | 0.5 | 0.4 | 794 | As Read | 2.53E-8 | As Read |

1245-1300

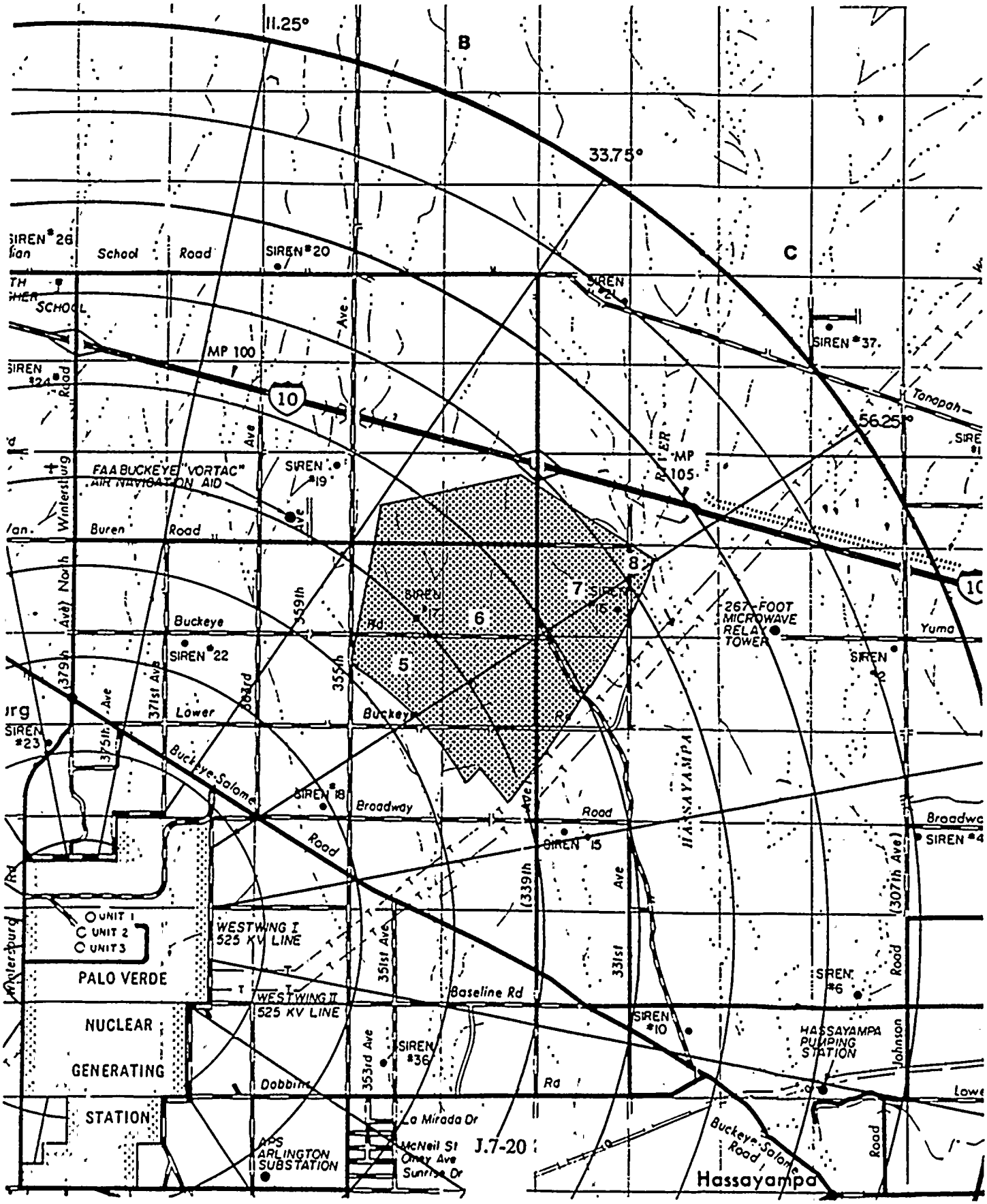

BB A B C D E F G H I J K
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
MP 100
MP 105
10
Tonopah
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
Buren Road
Winterburg
North Ave
379th Ave
371st Ave
375th Ave
Buckeye
SIREN #22
Lower
Buckeye Rd
SIREN #23
Buckeye-Salome Road
SIREN #18
Broadway
Road
SIREN #15
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #8
HASSAYAMPA
339th Ave
351st Ave
331st
307th Ave
Broadway
SIREN #4
UNIT 1
UNIT 2
UNIT 3
PALO VERDE
NUCLEAR
GENERATING
STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
SIREN #36
353rd Ave
Dobbins Rd
La Mirada Dr
McNeil St
Olney Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
Lowe
J.7-18

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1300-1315

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 5. Centerline | 9 | 5 | 6,142 | 92 | 1.95E-7 | 200 |
| 5. Edge of Plume | 0.9 | 0.5 | 614 | As Read | 1.95E-8 | As Read |
| 6. Centerline | 20 | 10 | 19,225 | 288 | 6.11E-7 | As Read |
| 6. Edge of Plume | 2 | 1 | 1,923 | As Read | 6.11E-8 | As Read |
| 7. Centerline | 25 | 15 | 20,954 | 314 | 6.66E-7 | As Read |
| 7. Edge of Plume | 2.5 | 1.5 | 2,095 | As Read | 6.66E-8 | As Read |
| 8. Centerline | 6 | 4 | 6,474 | 97 | 2.06E-7 | As Read |
| 8. Edge of Plume | 0.5 | 0.3 | 647 | As Read | 2.08E-8 | As Read |

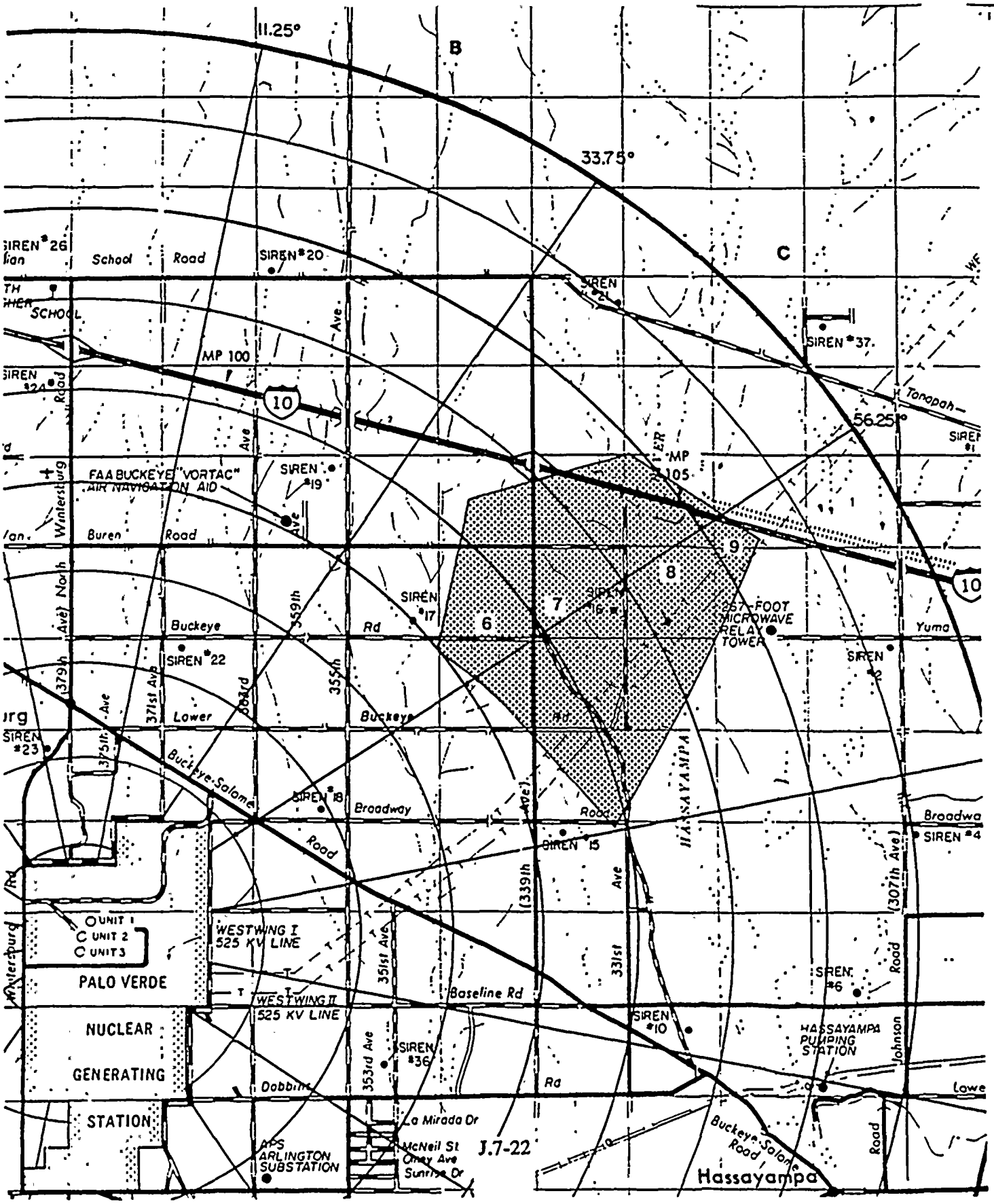

3B A B C D E F G H I J K
19 17 15 13 11 9 7 5 3 1 0 2 4
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SIREN #24
MP 100
10
Tonopah
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
MP 105
Buren Road
North (Ave)
Winterburg
379th Ave
371st Ave
Buckeye
SIREN #22
Lower
Buckeye Rd
359th Ave
355th Ave
5
6
7
8
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #2
SIREN #23
375th Ave
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
HASSAYAMPA
339th Ave
307th Ave
Broadway
SIREN #4
UNIT 1
UNIT 2
UNIT 3
PALO VERDE
NUCLEAR GENERATING STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
351st Ave
331st Ave
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
353rd Ave
SIREN #36
Dobbins Rd
La Mirada Dr
McNeil St
Olney Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1315-1330

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 6. Centerline | 6 | 4 | 5,312 | 80 | 1.69E-7 | As Read |
| 6. Edge of Plume | 0.6 | 0.4 | 531 | As Read | 1.69E-8 | As Read |
| 7. Centerline | 16 | 10 | 16,208 | 243 | 5.15E-7 | As Read |
| 7. Edge of Plume | 1.5 | 1 | 1,630 | As Read | 5.15E-8 | As Read |
| 8. Centerline | 18 | 11 | 17,088 | 256 | 5.43E-7 | As Read |
| 8. Edge of Plume | 1.8 | 1 | 1,709 | As Read | 5.43E-8 | As Read |
| 9. Centerline | 5 | 3 | 5,000 | 75 | 1.59E-7 | As Read |
| 9. Edge of Plume | 0.5 | 0.3 | 500 | As Read | 1.59E-8 | As Read |

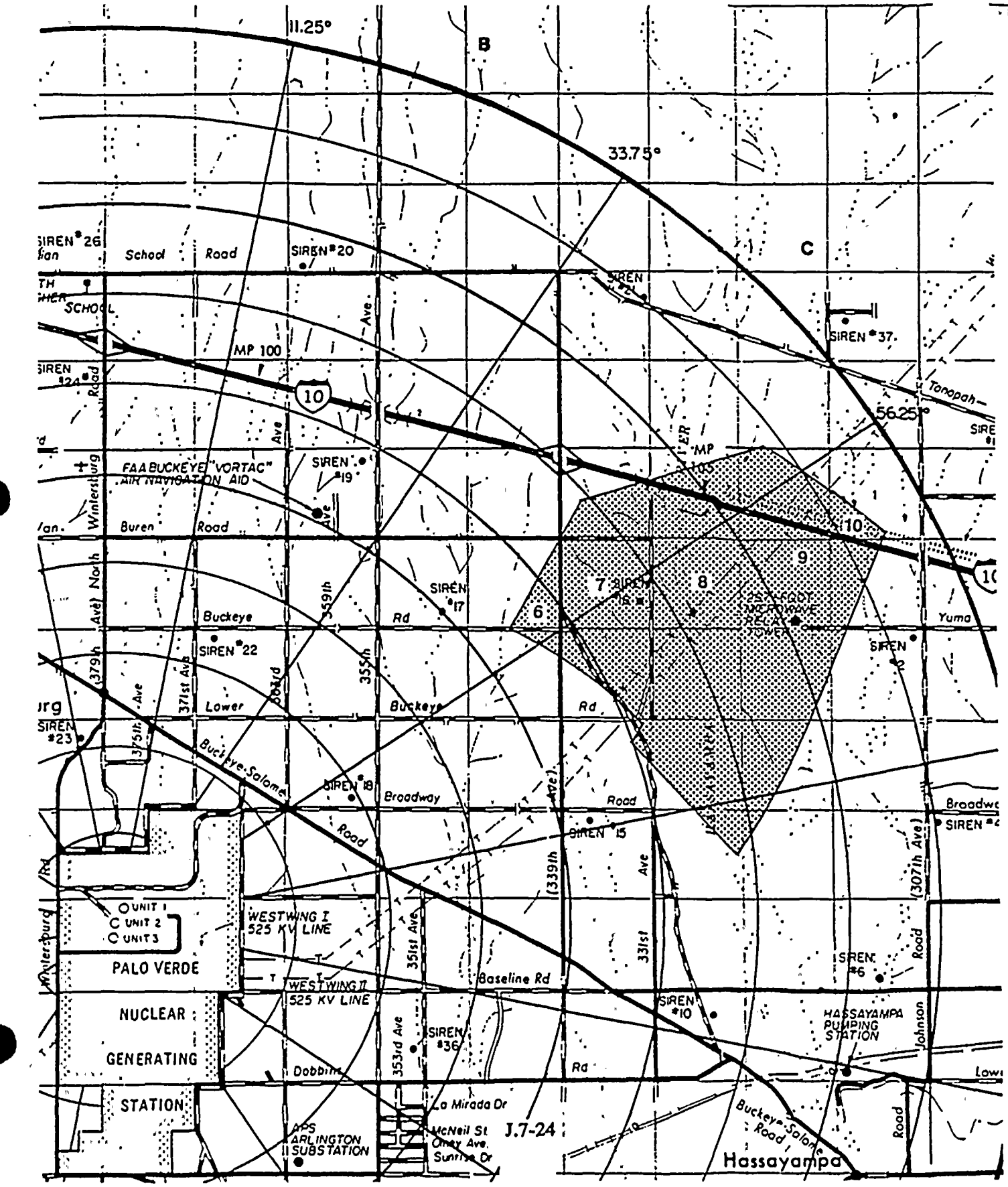

3B A B C D E F G H I J K
19 17 15 13 11 9 7 5 3 1 0 2 4
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SCHOOL
MP 100
10
SIREN #24
Tonopah
MP 105
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
Buren Road
Winterburg
North Ave
Buckeye Rd
SIREN #17
SIREN #16
6
7
8
9
257-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #22
SIREN #2
379th Ave
371st Ave
359th Ave
355th Ave
Lower Buckeye Rd
SIREN #23
375th Ave
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN 15
HASSAYAMPA
Broadway
SIREN #4
339th Ave
307th Ave
UNIT 1
UNIT 2
UNIT 3
WESTWING I 525 KV LINE
PALO VERDE
NUCLEAR GENERATING STATION
WESTWING II 525 KV LINE
351st Ave
331st Ave
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
353rd Ave
SIREN #36
Dobbins Rd
Lowe
La Mirada Dr
McNeil St
Omay Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1330-1345

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 6. Centerline | 6 | 4 | 5,312 | As Read | 1.69E-7 | As Read |
| 6. Edge of Plume | 0.6 | 0.4 | 531 | As Read | 1.69E-8 | As Read |
| 7. Centerline | 5 | 3 | 4,482 | As Read | 1.43E-7 | As Read |
| 7. Edge of Plume | 0.5 | 0.3 | 449 | As Read | 1.43E-8 | As Read |
| 8. Centerline | 12 | 8 | 13,192 | 198 | 4.20E-7 | As Read |
| 8. Edge of Plume | 1.2 | 0.8 | 1,319 | As Read | 4.20E-8 | As Read |
| 9. Centerline | 12 | 8 | 13,181 | 201 | 4.19E-7 | As Read |
| 9. Edge of Plume | 1.2 | 0.8 | 1,318 | As Read | 4.19E-8 | As Read |
| 10. Centerline | 4 | 3 | 3,526 | As Read | 1.12E-7 | As Read |
| 10. Edge of Plume | 0.4 | 0.3 | 353 | As Read | 1.12E-8 | As Read |

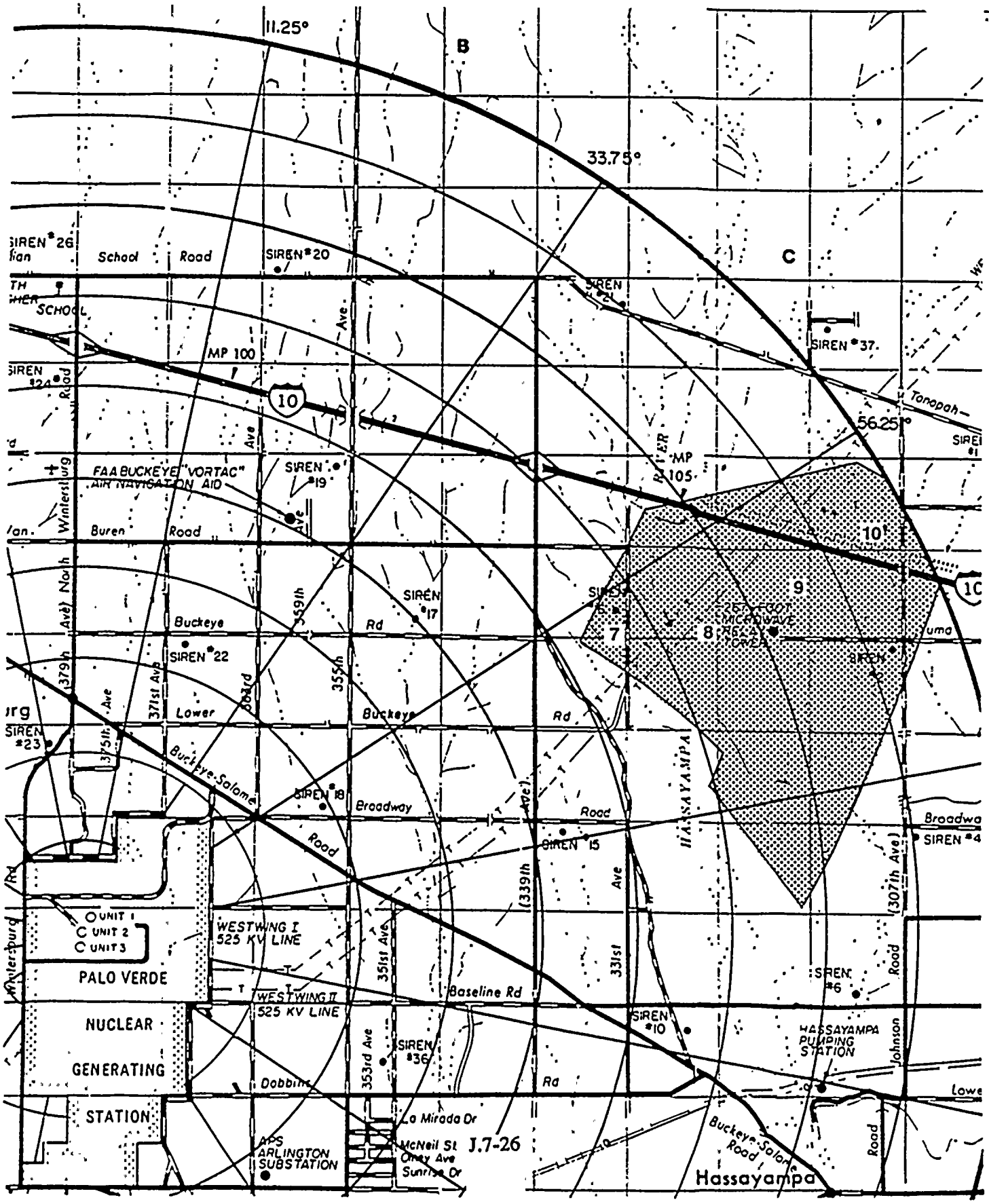

3B A B C D E F G H I J K
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SCHOOL
MP 100
10
SIREN #24
Tonopah
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
Buren Road
Winterburg
North Ave
379th Ave
371st Ave
359th Ave
355th Ave
375th Ave
SIREN #17
Buckeye Rd
SIREN #22
Lower Buckeye Rd
SIREN #23
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
339th Ave
307th Ave
Yuma
SIREN #2
6
7
8
9
10
25 FOOT MICROWAVE RELAY TOWER
UNIT 1
UNIT 2
UNIT 3
PALO VERDE
NUCLEAR
GENERATING
STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
351st Ave
331st Ave
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
353rd Ave
SIREN #36
Dobbins Rd
La Mirada Dr
McNeil St
Olney Ave.
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
J.7-24

## OFF-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1345-1400

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| 7. Centerline | 5 | 3 | 4,482 | As Read | 1.43E-7 | As Read |
| 7. Edge of Plume | 0.5 | 0.3 | 448 | As Read | 1.43E-8 | As Read |
| 8. Centerline | 12 | 8 | 13,192 | As Read | 4.20E-7 | As Read |
| 8. Edge of Plume | 1.2 | 1 | 1,319 | As Read | 4.20E-8 | As Read |
| 9. Centerline | 10 | 6 | 9,295 | As Read | 2.96E-7 | As Read |
| 9. Edge of Plume | 1 | 0.5 | 929 | As Read | 2.96E-8 | As Read |
| 10. Centerline | 4 | 3 | 3,526 | As Read | 1.12E-7 | As Read |
| 10. Edge of Plume | 0.4 | 0.3 | 353 | As Read | 1.12E-8 | As Read |

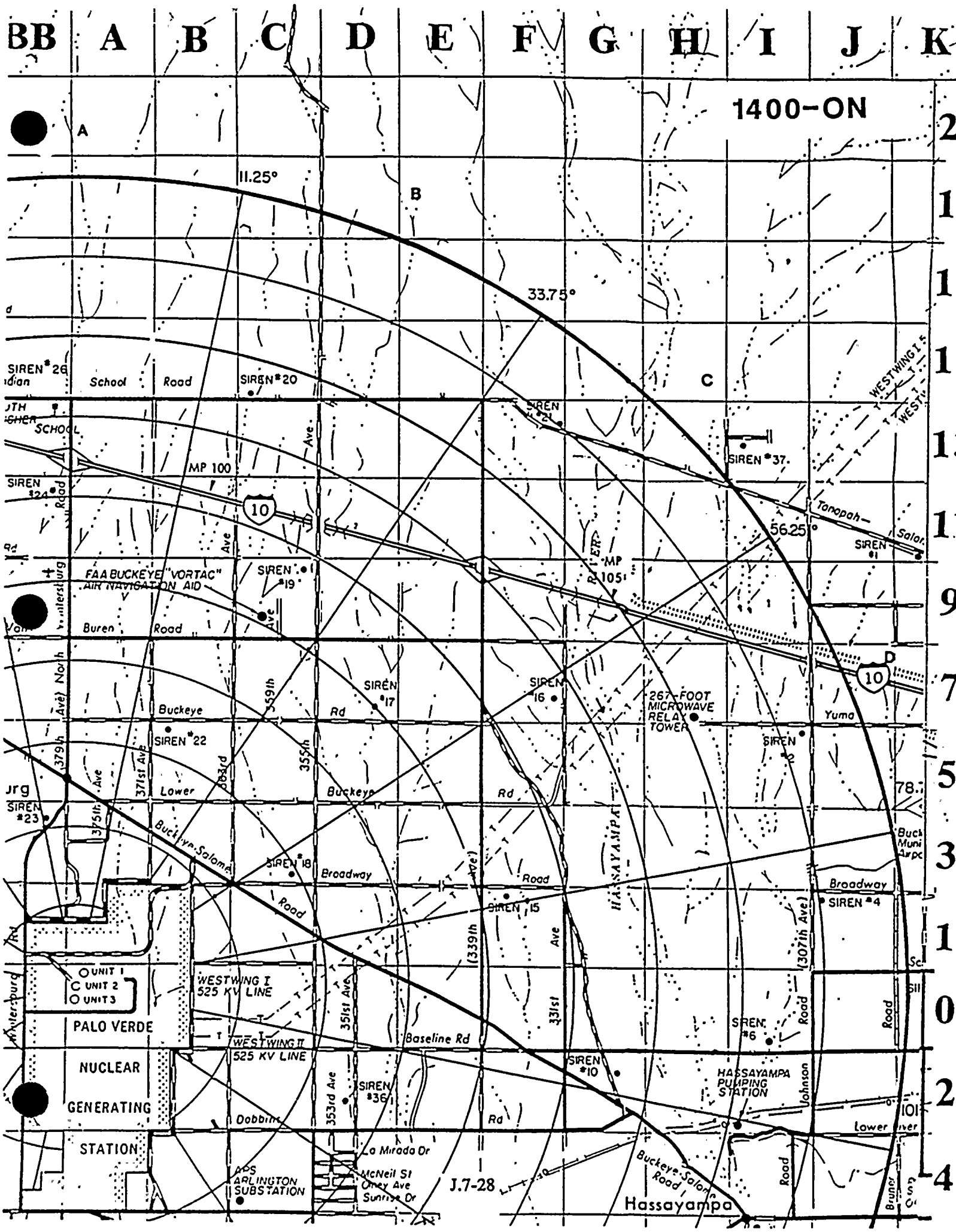

BB A B C D E F G H I J
11.25°
33.75°
56.25°
B
C
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SIREN #24
MP 100
10
Tonopah
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
MP 105
Buren Road
Winterburg
North (379th Ave)
Buckeye Rd
SIREN #17
SIREN #22
Lower Buckeye Rd
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
HASSAYAMPA
SIREN #4
Broadway
UNIT 1
UNIT 2
UNIT 3
PALO VERDE
NUCLEAR
GENERATING
STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
Johnson Road
SIREN #36
Dobbins Rd
La Mirada Dr
McNeil St
Olney Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
Lower
Yuma
9
10
7
8

## ON-SITE INSTRUMENT READINGS

May 3, 1989 - Exercise

TIME: 1400-ON

| Plume Location | Survey Meter | | Air Samples | | Iodine Calc. | Smears |
|---|---|---|---|---|---|---|
| | W.O. (mR/hr) | W.C. (mR/hr) | Cartridge (cpm) | Filter (cpm) | (uCi/cc) | (cpm) |
| ALL | As Read | As Read | As Read | As Read | LMD | As Read |


1400-ON
BB A B C D E F G H I J K
11.25°
33.75°
56.25°
SIREN #26
School Road
SIREN #20
SIREN #21
SIREN #37
SIREN #24
MP 100
10
Tonopah
SIREN #1
FAA BUCKEYE "VORTAC" AIR NAVIGATION AID
SIREN #19
MP 105
Buren Road
SIREN #17
SIREN #16
267-FOOT MICROWAVE RELAY TOWER
Yuma
SIREN #22
Buckeye Rd
Lower Buckeye Rd
SIREN #23
Buckeye-Salome Road
SIREN #18
Broadway Road
SIREN #15
HASSAYAMPA
Broadway
SIREN #4
UNIT 1
UNIT 2
UNIT 3
PALO VERDE NUCLEAR GENERATING STATION
WESTWING I 525 KV LINE
WESTWING II 525 KV LINE
Baseline Rd
SIREN #6
SIREN #10
HASSAYAMPA PUMPING STATION
SIREN #36
Dobbins Rd
Lower River
La Mirada Dr
McNeil St
Olney Ave
Sunrise Dr
APS ARLINGTON SUBSTATION
Buckeye-Salome Road
Hassayampa
J.7-28

# APPENDIX K

# CHEMISTRY DATA

CHEMISTRY DATA

Type of Sample: RCS

Sample Time: Initial Conditions

| Isotope | Activity Concentration (uCi/g) |
|---|---|
| Iodines: | |
| I-131 | 3.75E-01 |
| I-132 | 2.00E-01 |
| I-133 | 4.38E-01 |
| I-135 | 3.60E-01 |
| Noble Gases: | |
| Kr-87 | 5.00E-03 |
| Xe-131m | 2.80E-04 |
| Xe-133 | 4.00E-01 |
| Particulates: | |
| Rb-88 | 8.12E-03 |
| Sr-89 | 4.10E-05 |
| Te-129 | 6.40E-05 |
| Te-132 | 4.40E-05 |
| Cs-134 | 1.60E-04 |
| Ba-140 | 7.60E-05 |
| La-140 | 1.60E-05 |
| La-142 | 5.60E-05 |
| Pr-144 | 3.60E-05 |

CHEMISTRY DATA

Type of Sample: RCS PASS

Sample Time: 1040-1100

| Isotope | Activity Concentration (uCi/g) |
|---|---|
| Iodines: | |
| I-131 | 2.64E+04 |
| I-132 | 1.45E+04 |
| I-133 | 3.96E+04 |
| I-135 | 2.66E+04 |
| Noble Gases: | |
| Kr-87 | 3.65E+03 |
| Xe-131m | 1.90E+02 |
| Xe-133 | 5.29E+04 |
| Particulates: | |
| Rb-88 | 6.55E+02 |
| Sr-89 | 1.38E+04 |
| Te-129 | 2.21E+03 |
| Te-132 | 2.04E+04 |
| Cs-134 | 2.65E+03 |
| Ba-140 | 2.49E+04 |
| La-140 | 2.59E+04 |
| La-142 | 1.81E+04 |
| Pr-144 | 1.07E+03 |

CHEMISTRY DATA

Type of Sample: RCS PASS

Sample Time: 1100-1130

| Isotope | Activity Concentration (uCi/g) |
|---|---|
| Iodines: | |
| I-131 | 1.46E+04 |
| I-132 | 7.27E+03 |
| I-133 | 2.18E+04 |
| I-135 | 1.43E+04 |
| Noble Gases: | |
| Kr-87 | 1.69E+03 |
| Xe-131m | 1.05E+02 |
| Xe-133 | 2.93E+04 |
| Particulates: | |
| Rb-88 | 1.67E+02 |
| Sr-89 | 7.68E+03 |
| Te-129 | 9.99E+02 |
| Te-132 | 1.13E+04 |
| Cs-134 | 1.47E+03 |
| Ba-140 | 1.39E+04 |
| La-140 | 1.43E+04 |
| La-142 | 8.52E+03 |
| Pr-144 | 2.66E+02 |

CHEMISTRY DATA

Type of Sample: RCS

Sample Time: 1130 ON

| Isotope | Activity Concentration (uCi/g) |
|---|---|
| Iodines: | |
| I-131 | 1.75E+03 |
| I-132 | 7.50E+02 |
| I-133 | 2.57E+03 |
| I-135 | 1.62E+03 |
| Noble Gases: | |
| Kr-87 | 1.54E+02 |
| Xe-131m | 1.26E+01 |
| Xe-133 | 3.51E+03 |
| Particulates: | |
| Rb-88 | 6.24E+00 |
| Sr-89 | 9.22E+02 |
| Te-129 | 8.79E+01 |
| Te-132 | 1.35E+03 |
| Cs-134 | 1.77E+02 |
| Ba-140 | 1.66E+03 |
| La-140 | 1.71E+03 |
| La-142 | 7.97E+02 |
| Pr-144 | 9.57E+00 |

CHEMISTRY DATA

Type of Sample: Containment Air PASS

Sample Time: 1045-1115

| Isotope | Activity Concentration (uCi/cc) |
|---|---|
| Iodines: | |
| I-131 | 1.08E+01 |
| I-132 | 3.79E+00 |
| I-133 | 1.66E+01 |
| I-135 | 9.35E+00 |
| Noble Gases: | |
| Kr-87 | 4.41E+00 |
| Xe-131m | 5.19E-01 |
| Xe-133 | 1.44E+02 |

CHEMISTRY DATA

Type of Sample: Containment Air PASS

Sample Time: 1115 ON

| Isotope | Activity Concentration (uCi/cc) |
|---|---|
| Iodines: | |
| I-131 | 2.43E+01 |
| I-132 | 7.33E+00 |
| I-133 | 3.44E+01 |
| I-135 | 2.00E+01 |
| Noble Gases: | |
| Kr-87 | 7.56E+00 |
| Xe-131m | 1.17E+00 |
| Xe-133 | 3.23E+02 |

CHEMISTRY DATA

Type of Sample: Containment Sump

Sample Time: 1100-1130

| Isotope | Activity Concentration (uCi/g) |
|---|---|
| Iodines: | |
| I-131 | 5.28E+04 |
| I-132 | 2.90E+04 |
| I-133 | 7.94E+04 |
| I-135 | 5.33E+04 |
| Particulates: | |
| Rb-88 | 1.73E+03 |
| Sr-89 | 3.66E+04 |
| Te-129 | 5.85E+03 |
| Te-132 | 5.39E+04 |
| Cs-134 | 7.00E+03 |
| Ba-140 | 6.60E+04 |
| La-140 | 6.86E+04 |
| La-142 | 4.79E+04 |
| Pr-144 | 2.82E+03 |

CHEMISTRY DATA

Type of Sample: Containment Sump

Sample Time: After 1130

| Isotope | Activity Concentration (uCi/g) |
|---|---|
| Iodines: | |
| I-131 | 1.18E+05 |
| I-132 | 3.57E+04 |
| I-133 | 1.67E+05 |
| I-135 | 9.73E+04 |
| Particulates: | |
| Rb-88 | 3.65E+01 |
| Sr-89 | 8.23E+04 |
| Te-129 | 3.81E+03 |
| Te-132 | 1.19E+05 |
| Cs-134 | 1.58E+04 |
| Ba-140 | 1.48E+04 |
| La-140 | 1.49E+05 |
| La-142 | 3.98E+04 |
| Pr-144 | 5.16E+01 |

# APPENDIX L

# METEOROLOGICAL DATA

# METEOROLOGICAL DATA

-- NOTE --

This Appendix includes a summary of meteorological data for the entire scenario. During the Drill, individual data sheets will be provided at 15-minute intervals on ERFDADS terminals in the following locations:

- Control Room (Simulator)
- Technical Support Center
- Emergency Operations Facility
- Corporate Emergency Center
- Nuclear Administration

# METEOROLOGY DATA

# WEATHER FORECAST

## 12-Hour Forecast

Today will be mostly sunny with high temperatures in the mid-to-upper 80's. Mostly clear tonight with lows in the low-to-mid 60's. Winds will range from three to five miles per hour, and are expected to be from the northwest in the early morning hours becoming predominantly westerly during the afternoon.

# METEOROLOGICAL DATA SUMMARY

| REAL TIME<br>ELAPSED TIME | 07:30<br>00:00 | 07:45<br>00:15 | 08:00<br>00:30 | 08:15<br>00:45 | 08:30<br>01:00 | 08:45<br>01:15 | 09:00<br>01:30 |
|---|---|---|---|---|---|---|---|
| PARAMETER: | | | | | | | |
| 200' Wind Speed (WS200) | 3.3 | 3.1 | 3.0 | 3.0 | 3.1 | 3.0 | 3.2 |
| 200' Wind Direction (WD200) | 315 | 315 | 315 | 315 | 313 | 315 | 315 |
| 35' Wind Speed (WS35) | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 | 2.9 | 3.0 |
| 35' Wind Direction (WD35) | 313 | 313 | 313 | 313 | 311 | 313 | 313 |
| Delta Temperature (DT) | -0.61 | -0.61 | -0.61 | -0.74 | -0.74 | -0.74 | -0.81 |
| Temperature (T) | 69.3 | 70.5 | 71.6 | 72.6 | 73.6 | 74.6 | 75.6 |
| Dewpoint (D) | 46.8 | 46.7 | 46.6 | 46.4 | 46.3 | 46.1 | 45.9 |
| Stability Class | D | D | D | D | D | D | D |

# METEOROLOGICAL DATA SUMMARY

| REAL TIME<br>ELAPSED TIME | 09:15<br>01:45 | 09:30<br>02:00 | 09:45<br>02:15 | 10:00<br>02:30 | 10:15<br>02:45 | 10:30<br>03:00 | 10:45<br>03:15 |
|---|---|---|---|---|---|---|---|
| PARAMETER: | | | | | | | |
| 200' Wind Speed (WS200) | 3.2 | 3.1 | 3.4 | 3.2 | 3.2 | 3.6 | 3.4 |
| 200' Wind Direction (WD200) | 315 | 315 | 315 | 313 | 313 | 315 | 315 |
| 35' Wind Speed (WS35) | 3.0 | 2.9 | 3.2 | 2.9 | 2.9 | 3.1 | 3.1 |
| 35' Wind Direction (WD35) | 313 | 313 | 313 | 311 | 311 | 313 | 313 |
| Delta Temperature (DT) | -0.85 | -0.94 | -1.05 | -1.15 | -1.25 | -1.30 | -1.35 |
| Temperature (T) | 76.4 | 77.3 | 78.2 | 79.0 | 79.6 | 80.3 | 81.1 |
| Dewpoint (D) | 45.7 | 45.5 | 45.2 | 45.0 | 44.8 | 44.6 | 44.3 |
| Stability Class | D | D | D | D | D | D | D |

# METEOROLOGICAL DATA SUMMARY

| REAL TIME<br>ELAPSED TIME | 11:00<br>03:30 | 11:15<br>03:45 | 11:30<br>04:00 | 11:45<br>04:15 | 12:00<br>04:30 | 12:15<br>04:45 | 12:30<br>05:00 |
|---|---|---|---|---|---|---|---|
| PARAMETER: | | | | | | | |
| 200' Wind Speed (WS200) | 3.2 | 3.2 | 2.8 | 3.2 | 3.2 | 3.4 | 3.2 |
| 200' Wind Direction (WD200) | 315 | 315 | 205 | 205 | 216 | 227 | 238 |
| 35' Wind Speed (WS35) | 3.0 | 3.0 | 2.6 | 3.0 | 3.0 | 3.2 | 3.0 |
| 35' Wind Direction (WD35) | 313 | 313 | 203 | 203 | 214 | 225 | 236 |
| Delta Temperature (DT) | -1.41 | -1.41 | -1.42 | -1.45 | -1.45 | -1.45 | -1.45 |
| Temperature (T) | 81.8 | 82.3 | 82.9 | 83.5 | 84.1 | 84.6 | 85.1 |
| Dewpoint (D) | 44.0 | 43.8 | 43.6 | 43.3 | 43.0 | 42.8 | 42.5 |
| Stability Class | C | C | C | C | C | C | C |

# METEOROLOGICAL DATA SUMMARY

| REAL TIME<br>ELAPSED TIME | 12:45<br>05:15 | 13:00<br>05:30 | 13:15<br>05:45 | 13:30<br>06:00 | 13:45<br>06:15 | 14:00<br>06:30 | |
|---|---|---|---|---|---|---|---|
| PARAMETER: | | | | | | | |
| 200' Wind Speed (WS200) | 3.6 | 4.2 | 4.2 | 4.2 | 4.2 | 4.2 | |
| 200' Wind Direction (WD200) | 250 | 261 | 272 | 283 | 283 | 283 | |
| 35' Wind Speed (WS35) | 3.4 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| 35' Wind Direction (WD35) | 248 | 259 | 270 | 281 | 281 | 281 | |
| Delta Temperature (DT) | -1.45 | -1.45 | -1.45 | -1.45 | -1.45 | -1.45 | |
| Temperature (T) | 85.1 | 85.1 | 85.1 | 85.1 | 85.2 | 85.2 | |
| Dewpoint (D) | 42.5 | 42.5 | 42.5 | 42.4 | 42.4 | 42.3 | |
| Stability Class | C | C | C | C | C | C | |

Meteorological Data Sheets

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 07:30
ELAPSED TIME 00:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.3 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.61 |
| Temperature (T) | Deg. F | 69.3 |
| Dewpoint (D) | Deg. F | 46.8 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 07:45
ELAPSED TIME 00:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.1 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.61 |
| Temperature (T) | Deg. F | 70.5 |
| Dewpoint (D) | Deg. F | 46.7 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 08:00
ELAPSED TIME 00:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.0 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.61 |
| Temperature (T) | Deg. F | 71.6 |
| Dewpoint (D) | Deg. F | 46.6 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 08:15
ELAPSED TIME 00:45

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.0 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.74 |
| Temperature (T) | Deg. F | 72.6 |
| Dewpoint (D) | Deg. F | 46.4 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 08:30
ELAPSED TIME 01:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.1 |
| 200' Wind Direction (WD200) | Deg (From) | 313 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 311 |
| Delta Temperature (DT) | Deg. F | -0.74 |
| Temperature (T) | Deg. F | 73.6 |
| Dewpoint (D) | Deg. F | 46.3 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 08:45
ELAPSED TIME 01:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.0 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.74 |
| Temperature (T) | Deg. F | 74.6 |
| Dewpoint (D) | Deg. F | 46.1 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 09:00
ELAPSED TIME 01:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.81 |
| Temperature (T) | Deg. F | 75.6 |
| Dewpoint (D) | Deg. F | 45.9 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 09:15
ELAPSED TIME 01:45

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.85 |
| Temperature (T) | Deg. F | 76.4 |
| Dewpoint (D) | Deg. F | 45.7 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 09:30
ELAPSED TIME 02:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.1 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -0.94 |
| Temperature (T) | Deg. F | 77.3 |
| Dewpoint (D) | Deg. F | 45.5 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 09:45
ELAPSED TIME 02:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.4 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.2 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -1.05 |
| Temperature (T) | Deg. F | 78.2 |
| Dewpoint (D) | Deg. F | 45.2 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 10:00
ELAPSED TIME 02:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 313 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 311 |
| Delta Temperature (DT) | Deg. F | -1.15 |
| Temperature (T) | Deg. F | 79.0 |
| Dewpoint (D) | Deg. F | 45.0 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 10:15
ELAPSED TIME 02:45

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 313 |
| 35' Wind Speed (WS35) | mph | 2.9 |
| 35' Wind Direction (WD35) | Deg (From) | 311 |
| Delta Temperature (DT) | Deg. F | -1.25 |
| Temperature (T) | Deg. F | 79.6 |
| Dewpoint (D) | Deg. F | 44.8 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 10:30
ELAPSED TIME 03:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.6 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.1 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -1.30 |
| Temperature (T) | Deg. F | 80.3 |
| Dewpoint (D) | Deg. F | 44.6 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 10:45
ELAPSED TIME 03:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.4 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.1 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -1.35 |
| Temperature (T) | Deg. F | 81.1 |
| Dewpoint (D) | Deg. F | 44.3 |
| Stability Class | | D |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 11:00
ELAPSED TIME 03:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -1.41 |
| Temperature (T) | Deg. F | 81.8 |
| Dewpoint (D) | Deg. F | 44.0 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 11:15
ELAPSED TIME 03:45

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 315 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 313 |
| Delta Temperature (DT) | Deg. F | -1.41 |
| Temperature (T) | Deg. F | 82.3 |
| Dewpoint (D) | Deg. F | 43.8 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 11:30
ELAPSED TIME 04:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 2.8 |
| 200' Wind Direction (WD200) | Deg (From) | 205 |
| 35' Wind Speed (WS35) | mph | 2.6 |
| 35' Wind Direction (WD35) | Deg (From) | 203 |
| Delta Temperature (DT) | Deg. F | -1.42 |
| Temperature (T) | Deg. F | 82.9 |
| Dewpoint (D) | Deg. F | 43.6 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 11:45
ELAPSED TIME 04:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 205 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 203 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 83.5 |
| Dewpoint (D) | Deg. F | 43.3 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 12:00
ELAPSED TIME 04:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 216 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 214 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 84.1 |
| Dewpoint (D) | Deg. F | 43.0 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 12:15
ELAPSED TIME 04:45

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.4 |
| 200' Wind Direction (WD200) | Deg (From) | 227 |
| 35' Wind Speed (WS35) | mph | 3.2 |
| 35' Wind Direction (WD35) | Deg (From) | 225 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 84.6 |
| Dewpoint (D) | Deg. F | 42.8 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 12:30
ELAPSED TIME 05:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.2 |
| 200' Wind Direction (WD200) | Deg (From) | 238 |
| 35' Wind Speed (WS35) | mph | 3.0 |
| 35' Wind Direction (WD35) | Deg (From) | 236 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.1 |
| Dewpoint (D) | Deg. F | 42.5 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 12:45
ELAPSED TIME 05:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 3.6 |
| 200' Wind Direction (WD200) | Deg (From) | 250 |
| 35' Wind Speed (WS35) | mph | 3.4 |
| 35' Wind Direction (WD35) | Deg (From) | 248 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.1 |
| Dewpoint (D) | Deg. F | 42.5 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 13:00
ELAPSED TIME 05:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 4.2 |
| 200' Wind Direction (WD200) | Deg (From) | 261 |
| 35' Wind Speed (WS35) | mph | 4.0 |
| 35' Wind Direction (WD35) | Deg (From) | 259 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.1 |
| Dewpoint (D) | Deg. F | 42.5 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 13:15
ELAPSED TIME 05:45

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 4.2 |
| 200' Wind Direction (WD200) | Deg (From) | 272 |
| 35' Wind Speed (WS35) | mph | 4.0 |
| 35' Wind Direction (WD35) | Deg (From) | 270 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.1 |
| Dewpoint (D) | Deg. F | 42.5 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 13:30
ELAPSED TIME 06:00

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 4.2 |
| 200' Wind Direction (WD200) | Deg (From) | 283 |
| 35' Wind Speed (WS35) | mph | 4.0 |
| 35' Wind Direction (WD35) | Deg (From) | 281 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.1 |
| Dewpoint (D) | Deg. F | 42.4 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 13:45
ELAPSED TIME 06:15

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 4.2 |
| 200' Wind Direction (WD200) | Deg (From) | 283 |
| 35' Wind Speed (WS35) | mph | 4.0 |
| 35' Wind Direction (WD35) | Deg (From) | 281 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.2 |
| Dewpoint (D) | Deg. F | 42.4 |
| Stability Class | | C |

PALO VERDE NUCLEAR GENERATING STATION
1989 EMERGENCY PREPAREDNESS EXERCISE

METEOROLOGICAL DATA SUMMARY

REAL TIME 14:00
ELAPSED TIME 06:30

| PARAMETER | UNITS | VALUE |
|---|---|---|
| 200' Wind Speed (WS200) | mph | 4.2 |
| 200' Wind Direction (WD200) | Deg (From) | 283 |
| 35' Wind Speed (WS35) | mph | 4.0 |
| 35' Wind Direction (WD35) | Deg (From) | 281 |
| Delta Temperature (DT) | Deg. F | -1.45 |
| Temperature (T) | Deg. F | 85.2 |
| Dewpoint (D) | Deg. F | 42.3 |
| Stability Class | | C |

# APPENDIX L.4

## NATIONAL WEATHER SERVICE (NWS)

## FORECAST AND METEOROLOGICAL DATA

.....METEOROLOGICAL DATA FOR PVNGS EXERCISE, WEDNESDAY, MAY 3, 1989.....

| DRILL TIME | 35' WND (DEG/MPH) | TEMP (DEG F) | DWPT (DEG F) | DT (DEG F) | STBLTY CLASS | 200' WND (DEG/MPH) |
|---|---|---|---|---|---|---|
| 0730 | 313/3.0 | 69.3 | 46.8 | -.61 | D | 315/3.3 |
| 0745 | 313/3.0 | 70.5 | 46.7 | -.61 | D | 315/3.1 |
| 0800 | 313/2.9 | 71.6 | 46.6 | -.61 | D | 315/3.0 |
| 0815 | 313/2.9 | 72.6 | 46.4 | -.74 | D | 315/3.0 |
| 0830 | 311/2.9 | 73.6 | 46.3 | -.74 | D | 313/3.1 |
| 0845 | 313/2.9 | 74.6 | 46.1 | -.74 | D | 315/3.0 |
| 0900 | 313/3.0 | 75.6 | 45.9 | -.81 | D | 315/3.2 |
| 0915 | 313/3.0 | 76.4 | 45.7 | -.85 | D | 315/3.2 |
| 0930 | 313/2.9 | 77.3 | 45.5 | -.94 | D | 315/3.1 |
| 0945 | 313/3.2 | 78.2 | 45.2 | -1.05 | D | 315/3.4 |
| 1000 | 311/2.9 | 79.0 | 45.0 | -1.15 | D | 313/3.2 |
| 1015 | 311/2.9 | 79.6 | 44.8 | -1.25 | D | 313/3.2 |
| 1030 | 313/3.1 | 80.3 | 44.6 | -1.30 | D | 313/3.6 |
| 1045 | 313/3.1 | 81.1 | 44.3 | -1.35 | D | 315/3.4 |
| 1100 | 313/3.0 | 81.8 | 44.0 | -1.41 | C | 315/3.2 |
| 1115 | 313/3.0 | 82.3 | 43.8 | -1.41 | C | 315/3.2 |
| 1130 | 203/2.6 | 82.9 | 43.6 | -1.42 | C | 205/2.8 |
| 1145 | 203/3.0 | 83.5 | 43.3 | -1.45 | C | 205/3.2 |
| 1200 | 214/3.0 | 84.1 | 43.0 | -1.45 | C | 216/3.2 |
| 1215 | 225/3.2 | 84.6 | 42.8 | -1.45 | C | 227/3.4 |
| 1230 | 236/3.0 | 85.1 | 42.5 | -1.45 | C | 238/3.2 |
| 1245 | 248/3.4 | 85.1 | 42.5 | -1.45 | C | 250/3.6 |
| 1300 | 259/4.0 | 85.1 | 42.5 | -1.45 | C | 261/4.2 |
| 1315 | 270/4.0 | 85.1 | 42.5 | -1.45 | C | 272/4.2 |
| 1330 | 281/4.0 | 85.1 | 42.4 | -1.45 | C | 283/4.2 |
| 1345 | 281/4.0 | 85.2 | 42.3 | -1.45 | C | 283/4.2 |
| 1400 | 281/4.0 | 85.2 | 42.3 | -1.45 | C | 283/4.2 |

NORTHWEST

SSW-SW

WSW-W

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C

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SSW-SW

WSW-W

.....GENERAL WEATHER SCENARIO FOR MAY 1989 PVNGS EXERCISE.....

SYNOPSIS.....

AN UPPER LEVEL LOW PRESSURE SYSTEM HAS BEEN DEVELOPING ALONG THE WEST COAST SINCE YESTERDAY. A SURFACE LOW PRESSURE CENTER WAS LOCATED OVER NORTHWEST ARIZONA EARLY THIS MORNING. THE UPPER LEVEL AND SURFACE LOWS WERE MOVING QUICKLY EAST.

A WEAK PACIFIC FRONT TRAILED SOUTH FROM THE NORTHWEST ARIZONA SURFACE LOW THROUGH CENTRAL ARIZONA AND THE GREATER PHOENIX AREA EARLY THIS MORNING. ANOTHER PACIFIC FRONT WAS MOVING RAPIDLY EAST THROUGH SOUTHERN CALIFORNIA. THE SOUTHERN CALIFORNIA PACIFIC FRONT IS EXPECTED TO ARRIVE IN THE GREATER PHOENIX AREA IN THE EARLY AFTERNOON. IT WILL MOVE FARTHER EAST TO ARIZONA'S EASTERN BORDER BY LATE IN THE DAY.

MOST OF THE WEATHER ACTIVITY ASSOCIATED WITH THE PACIFIC FRONTS WAS TAKING PLACE WELL NORTH OF THE GREATER PHOENIX AREA EARLY THIS MORNING. THE STORMY CONDITIONS ARE EXPECTED TO REMAIN NORTH OF PHOENIX DURING TODAY.

WEATHER FORECAST.....

TODAY...MOSTLY SUNNY. HIGH IN THE MIDDLE TO UPPER 80S. NORTHWEST WINDS 3 TO 5 MPH...BUT BECOMING SOUTH SOUTHWEST WINDS 3 TO 5 MPH JUST BEFORE NOONTIME. WINDS BECOMING MAINLY WESTERLY 3 TO 5 MPH DURING THE AFTERNOON.

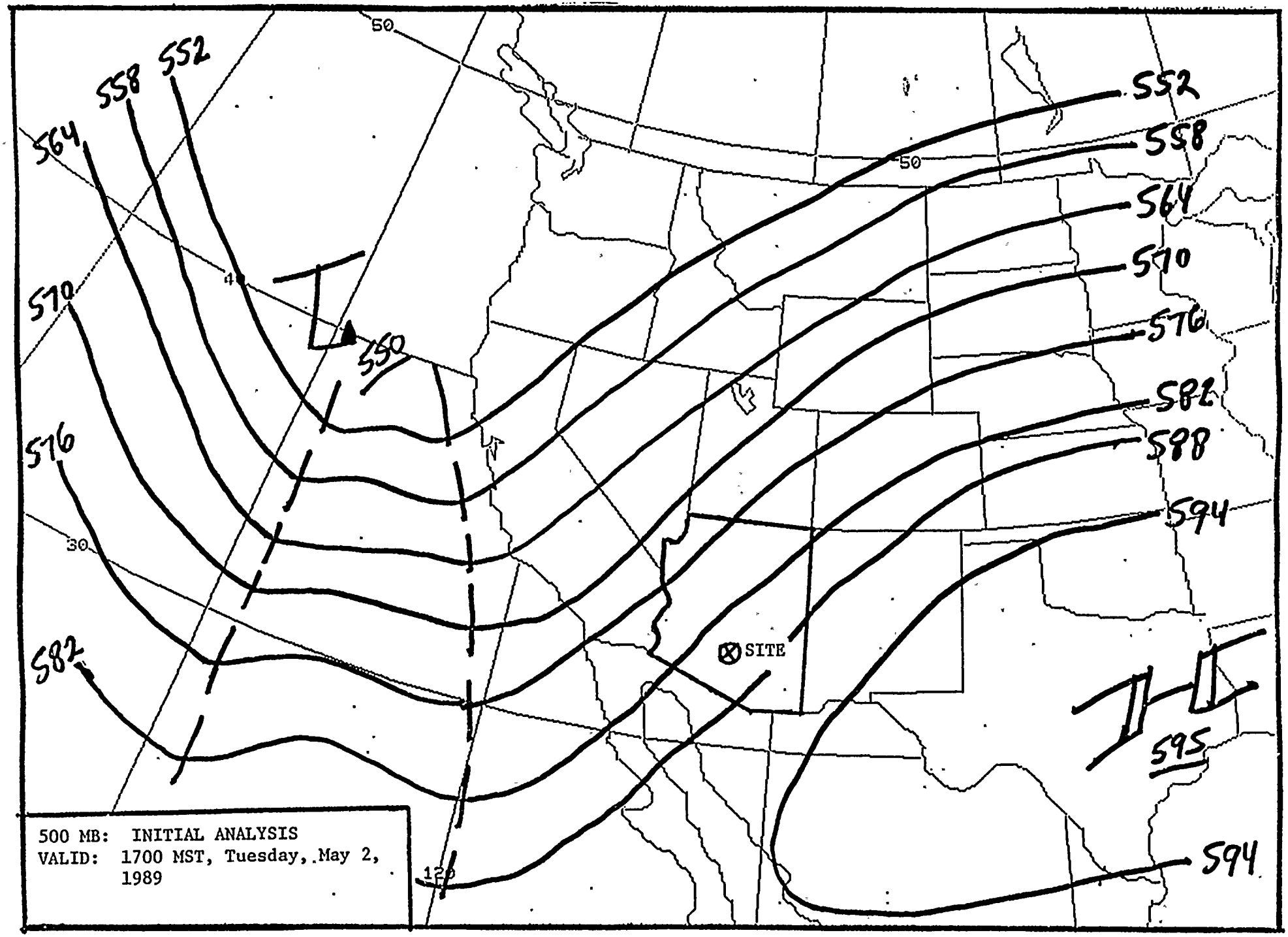
TONIGHT...MOSTLY CLEAR. LOW IN THE LOWER TO MIDDLE 60S. MAINLY CALM WINDS DURING THE NIGHT.

.....CHARTS AVAILABLE TO EMERGENCY OPERATIONS CENTER METEOROLOGIST (EOCMET) FOR MAY 1989 PVNGS EXERCISE.....

NOTE... ASSUME ALL PROGNOSIS ARE PERFECT PROGNOSIS. ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS ON ALL SURFACE CHARTS.

NOTE... * INDICATES CHARTS INITIALLY GIVEN TO EOCMET.
** INDICATES CHARTS THAT CAN BE REQUESTED BY EOCMET.

| .....VALID TIME OF CHART..... | ....VALID DAY OF CHART.... |
|---|---|
| * 1700 MST...500 MB (INITIAL ANALYSIS), | MAY 2 - (DAY BEFORE DRILL) |
| * 1700 MST...700 MB (INITIAL ANALYSIS), | MAY 2 - (DAY BEFORE DRILL) |
| * 1700 MST...SURFACE (INITIAL ANALYSIS), | MAY 2 - (DAY BEFORE DRILL) |
| * 2300 MST...SURFACE (6 HOUR PROGNOSIS), | MAY 2 - (DAY BEFORE DRILL) |
| * 2300 MST...RADAR SUMMARY CHART, | MAY 2 - (DAY BEFORE DRILL) |
| * 0500 MST...500 MB (12 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| * 0500 MST...700 MB (12 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| * 0500 MST...SURFACE (12 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| * 0500 MST...RADAR SUMMARY CHART, | MAY 3 - (DRILL DAY) |
| * 0800 MST...SURFACE (15 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| * 0800 MST...RADAR SUMMARY CHART, | MAY 3 - (DRILL DAY) |
| ** 1000 MST...PHOENIX LOCAL WARNING RADAR, | MAY 3 - (DRILL DAY) |
| ** 1100 MST...SURFACE (18 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| ** 1100 MST...RADAR SUMMARY CHART, | MAY 3 - (DRILL DAY) |
| ** 1700 MST...500 MB (24 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| ** 1700 MST...700 MB (24 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| ** 1700 MST...SURFACE (24 HOUR PROGNOSIS), | MAY 3 - (DRILL DAY) |
| ** 1700 MST...RADAR SUMMARY CHART, | MAY 3 - (DRILL DAY) |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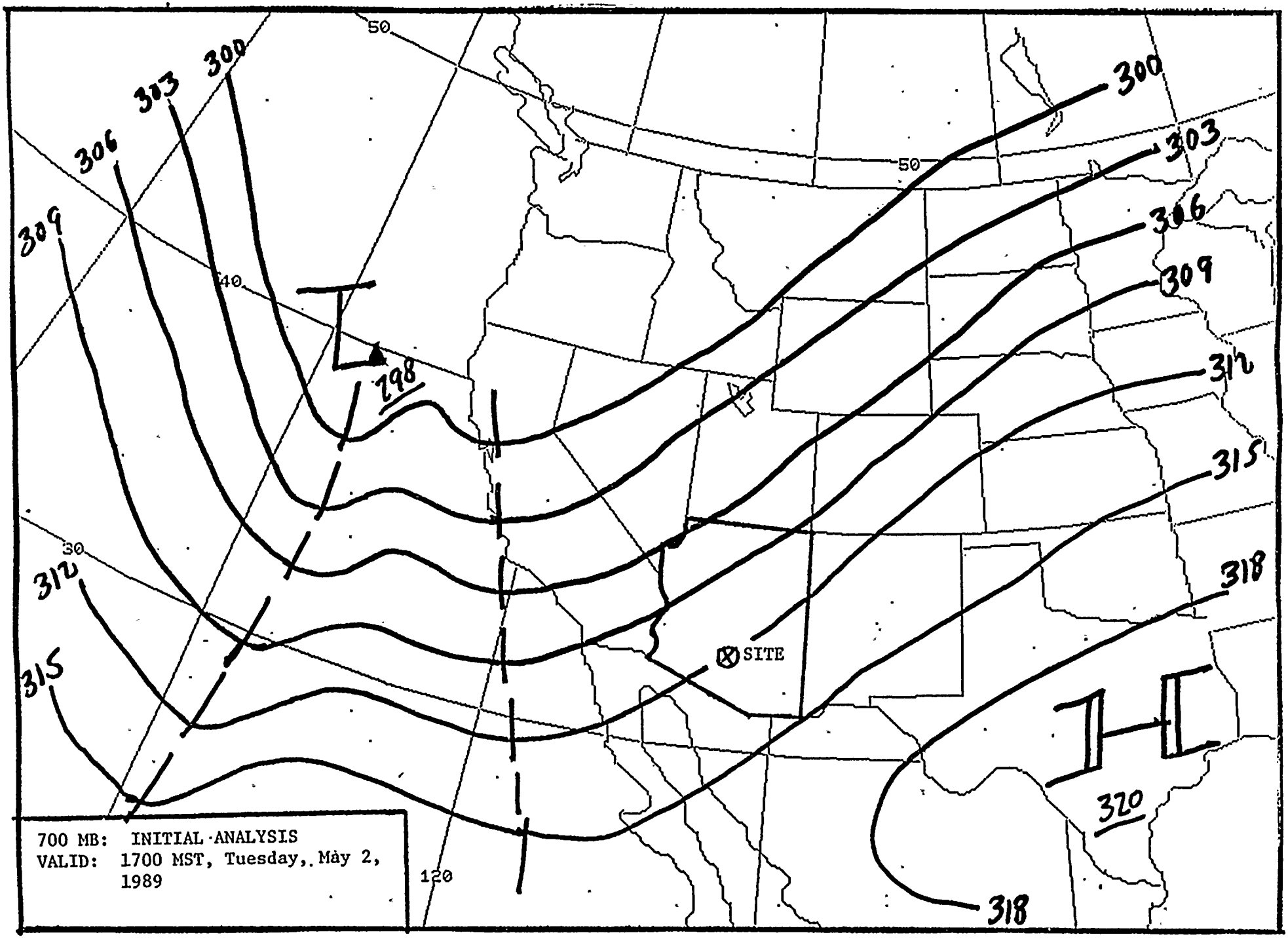
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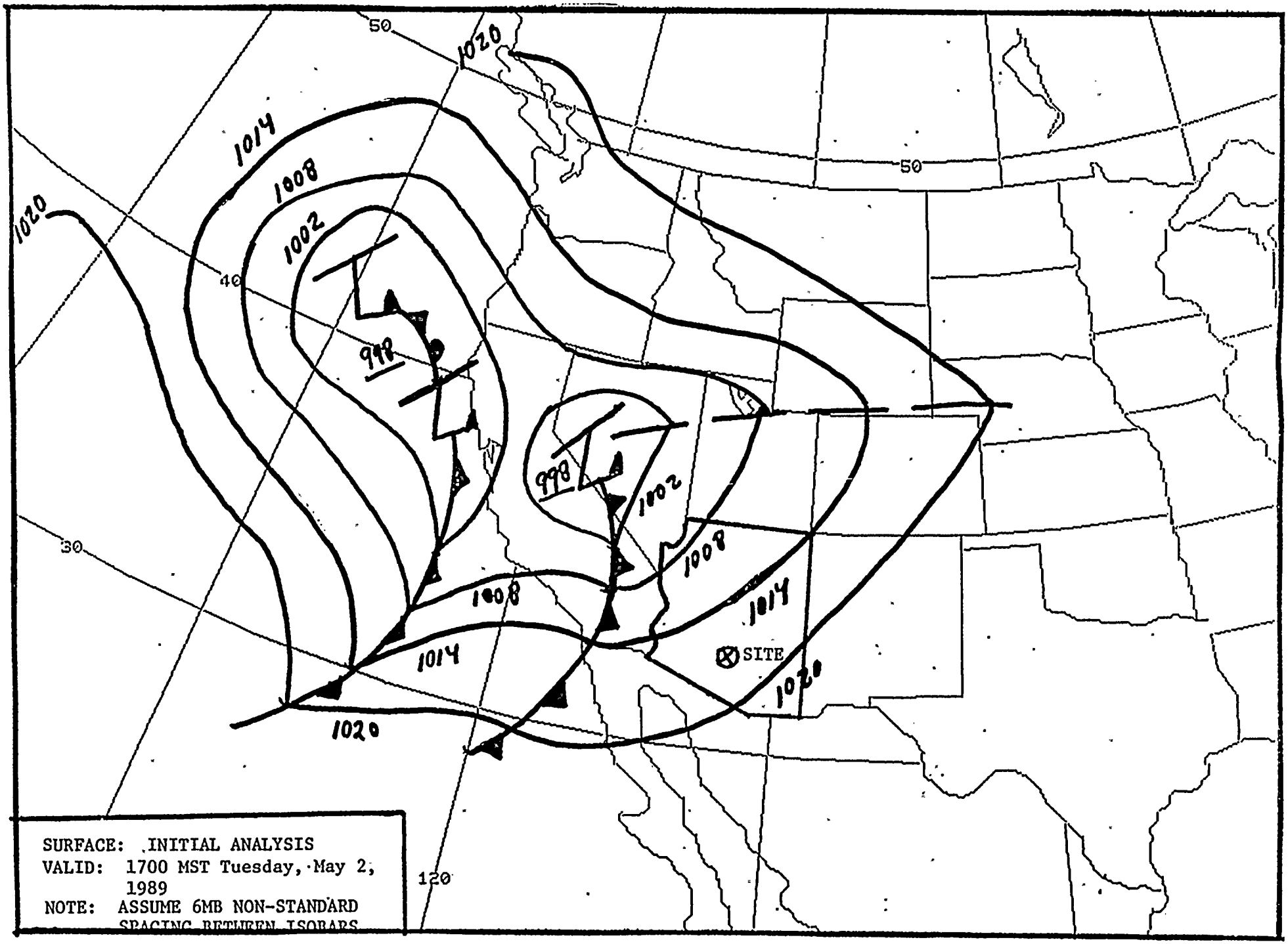
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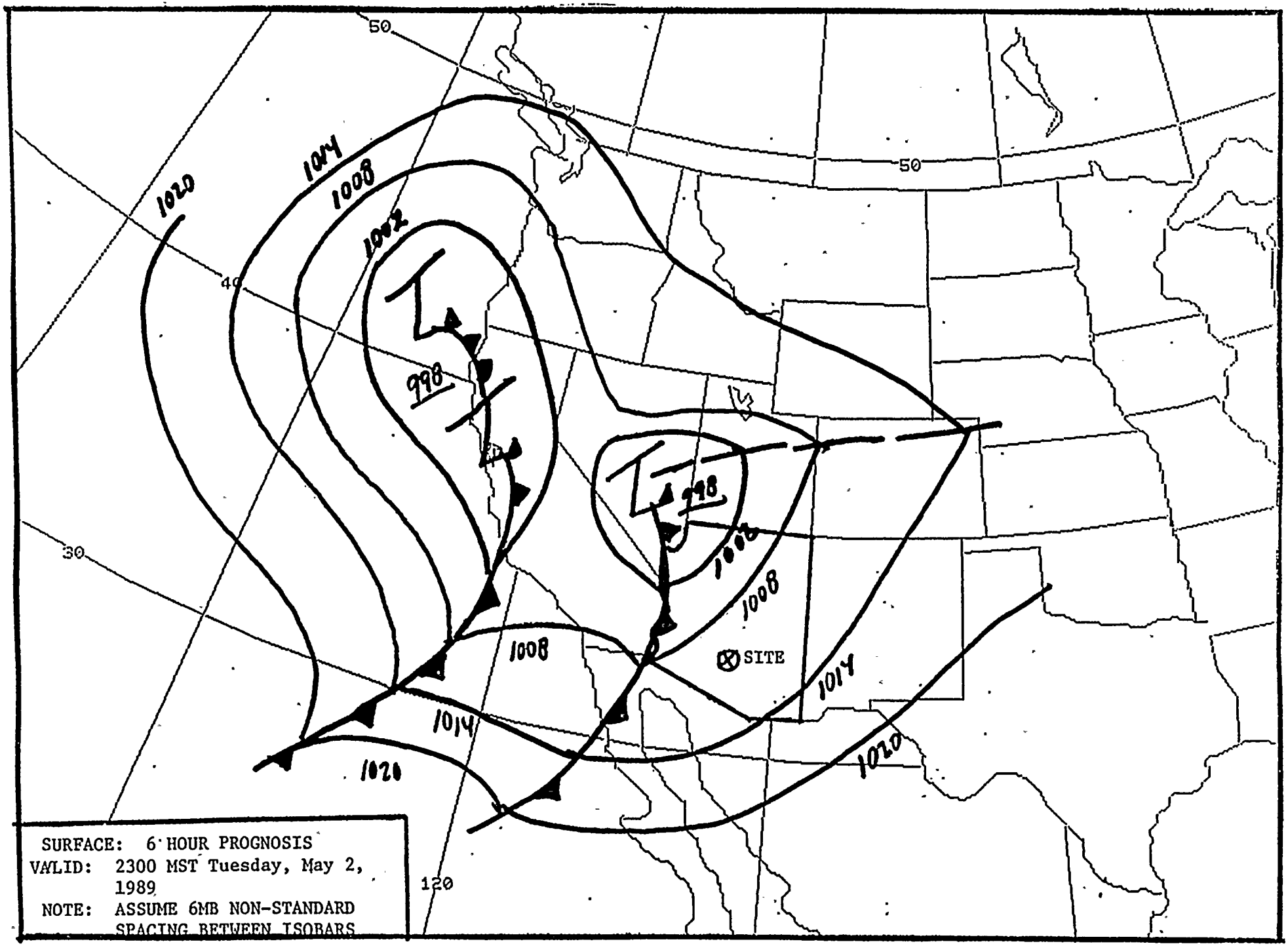
SURFACE: INITIAL ANALYSIS
VALID: 1700 MST Tuesday, May 2, 1989
NOTE: ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS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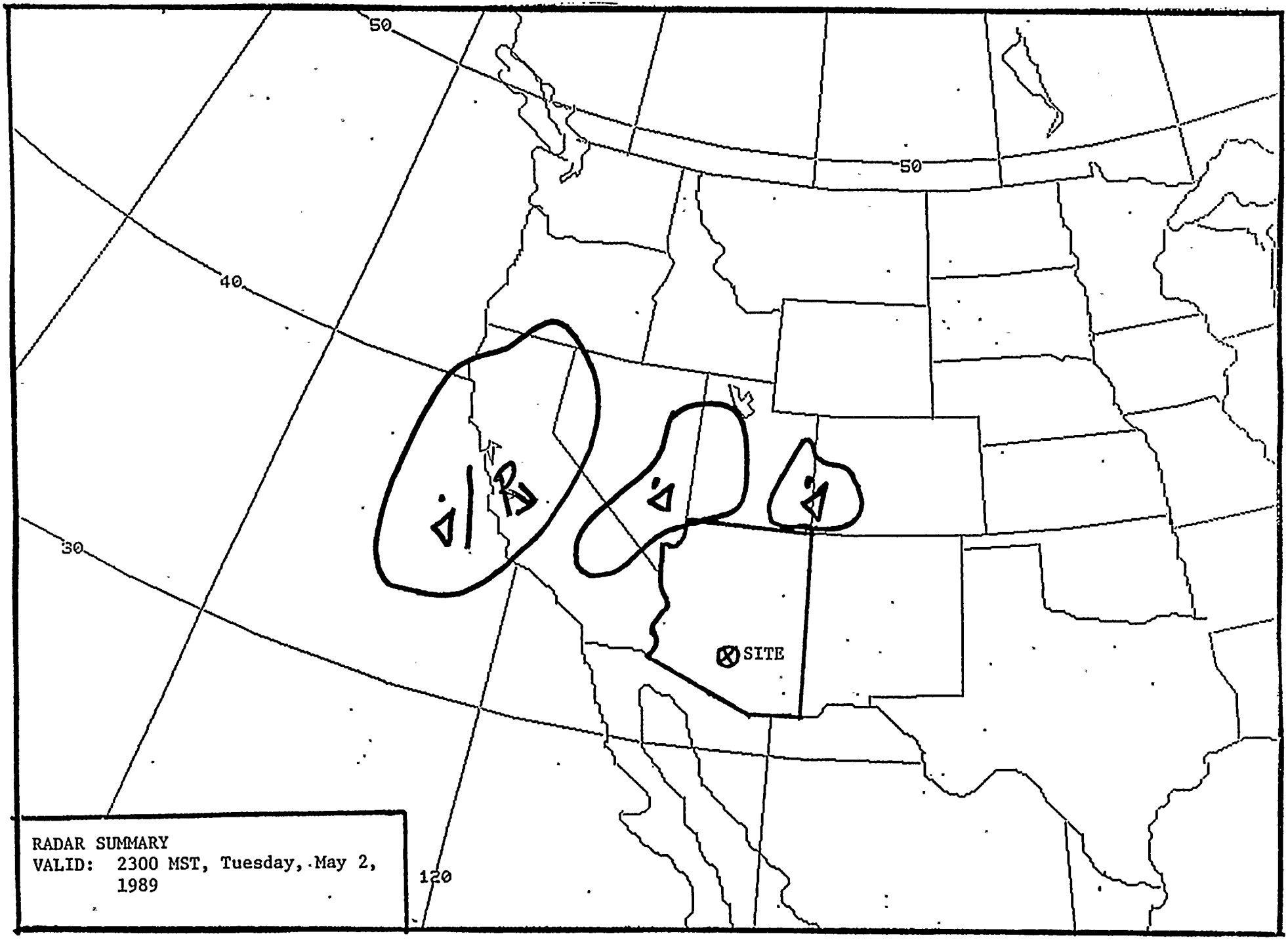
VALID: 2300 MST Tuesday, May 2, 1989
NOTE: ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS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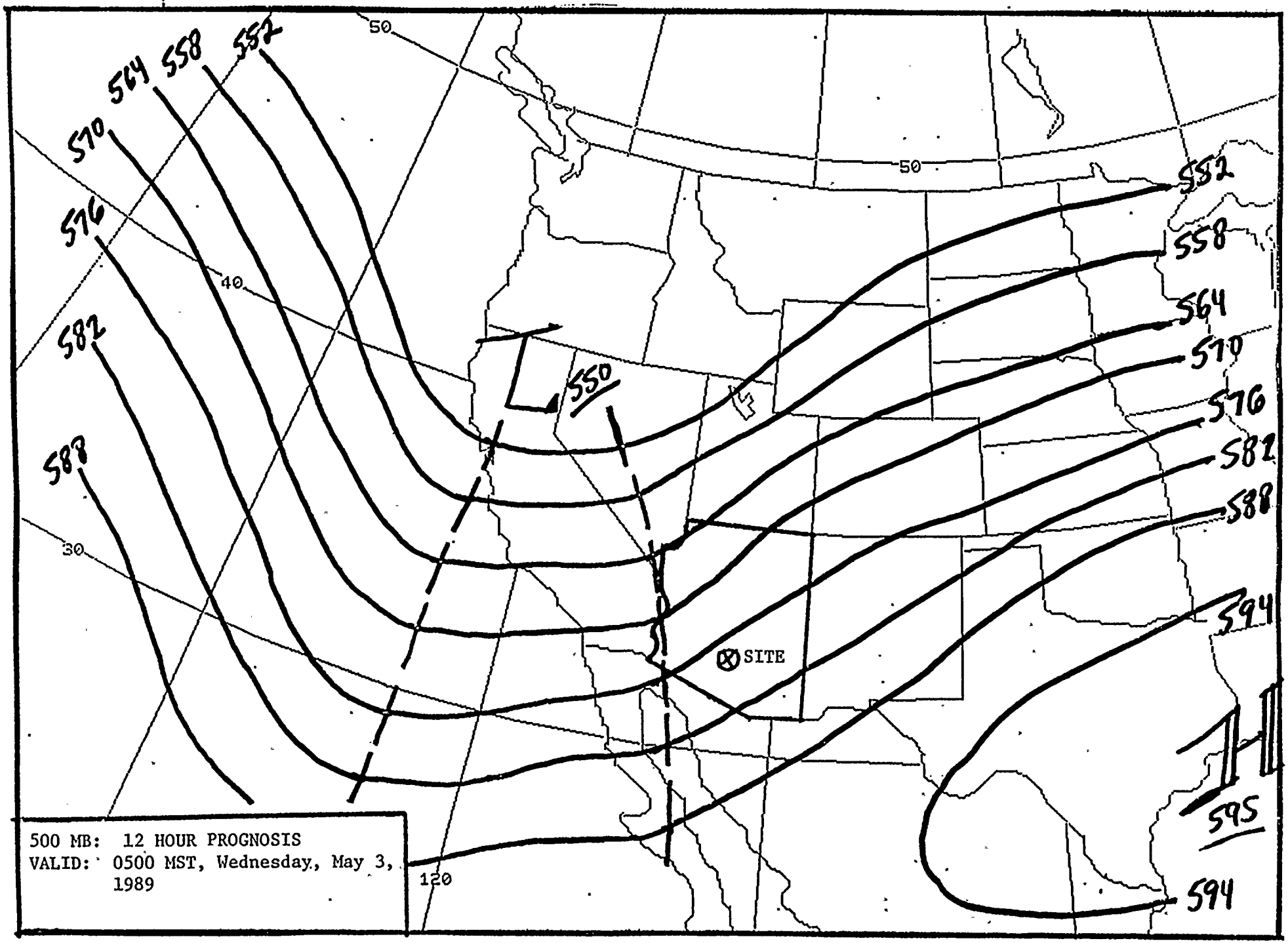
RADAR SUMMARY
VALID: 2300 MST, Tuesday, May 2, 1989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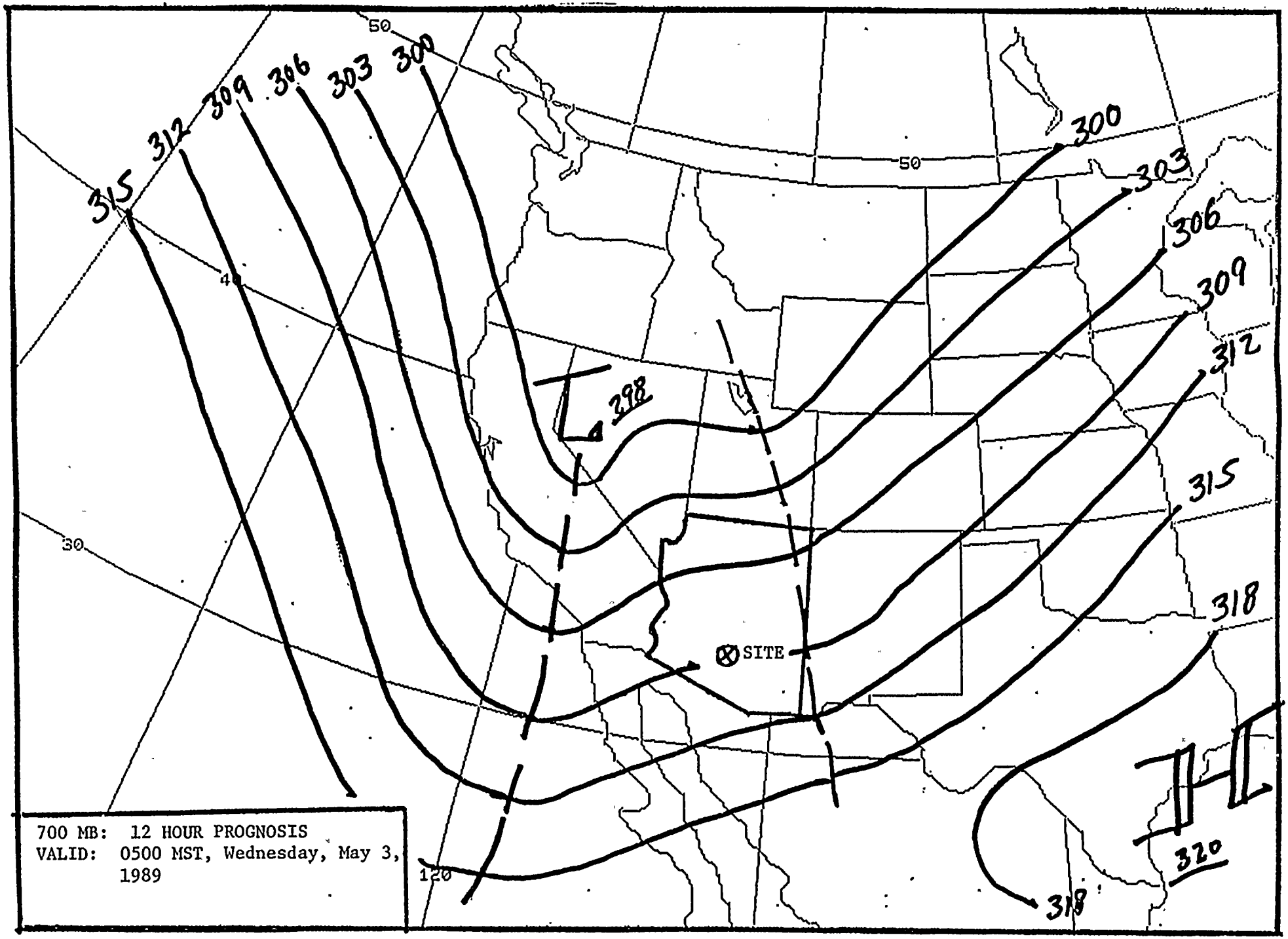
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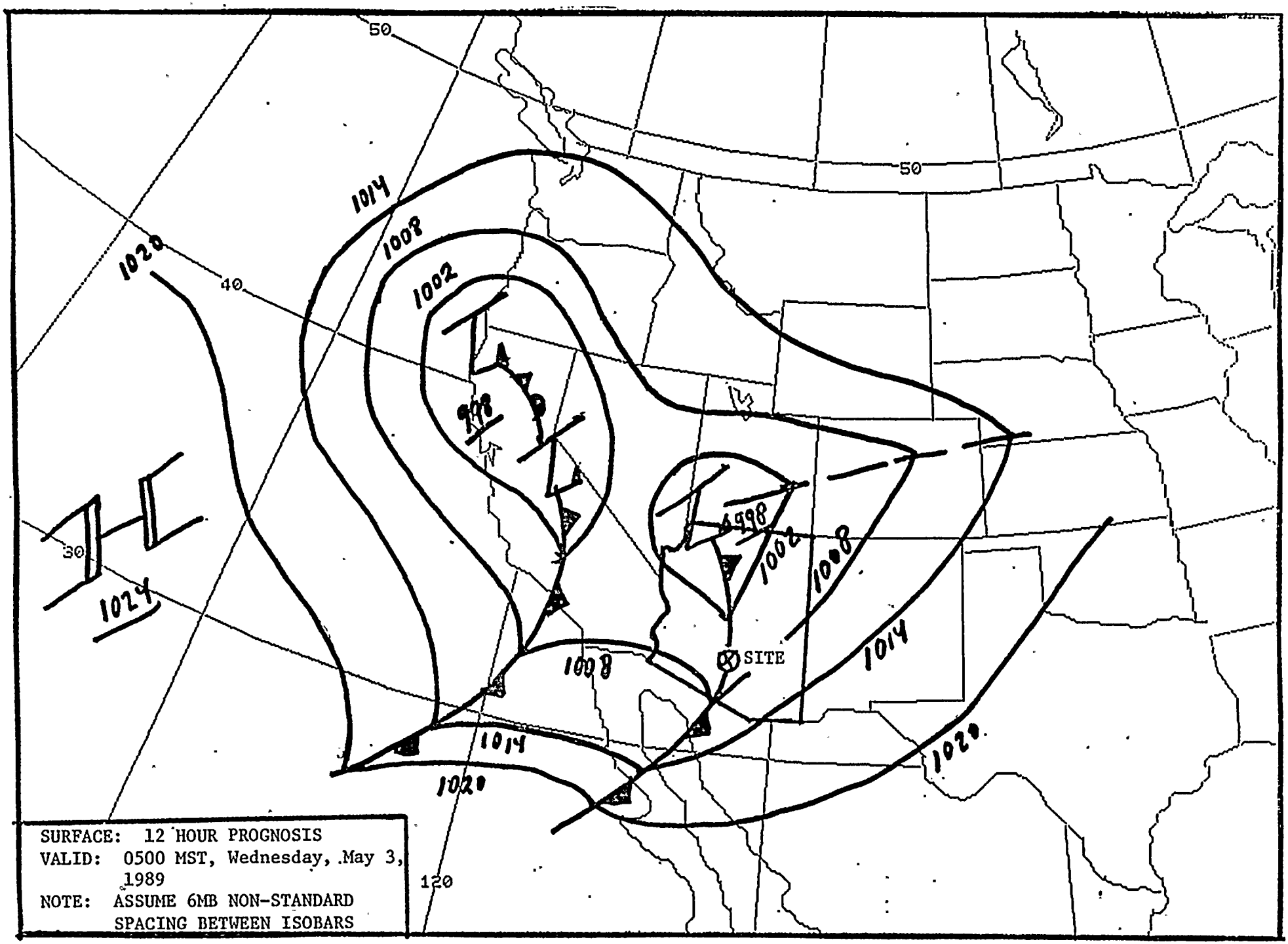
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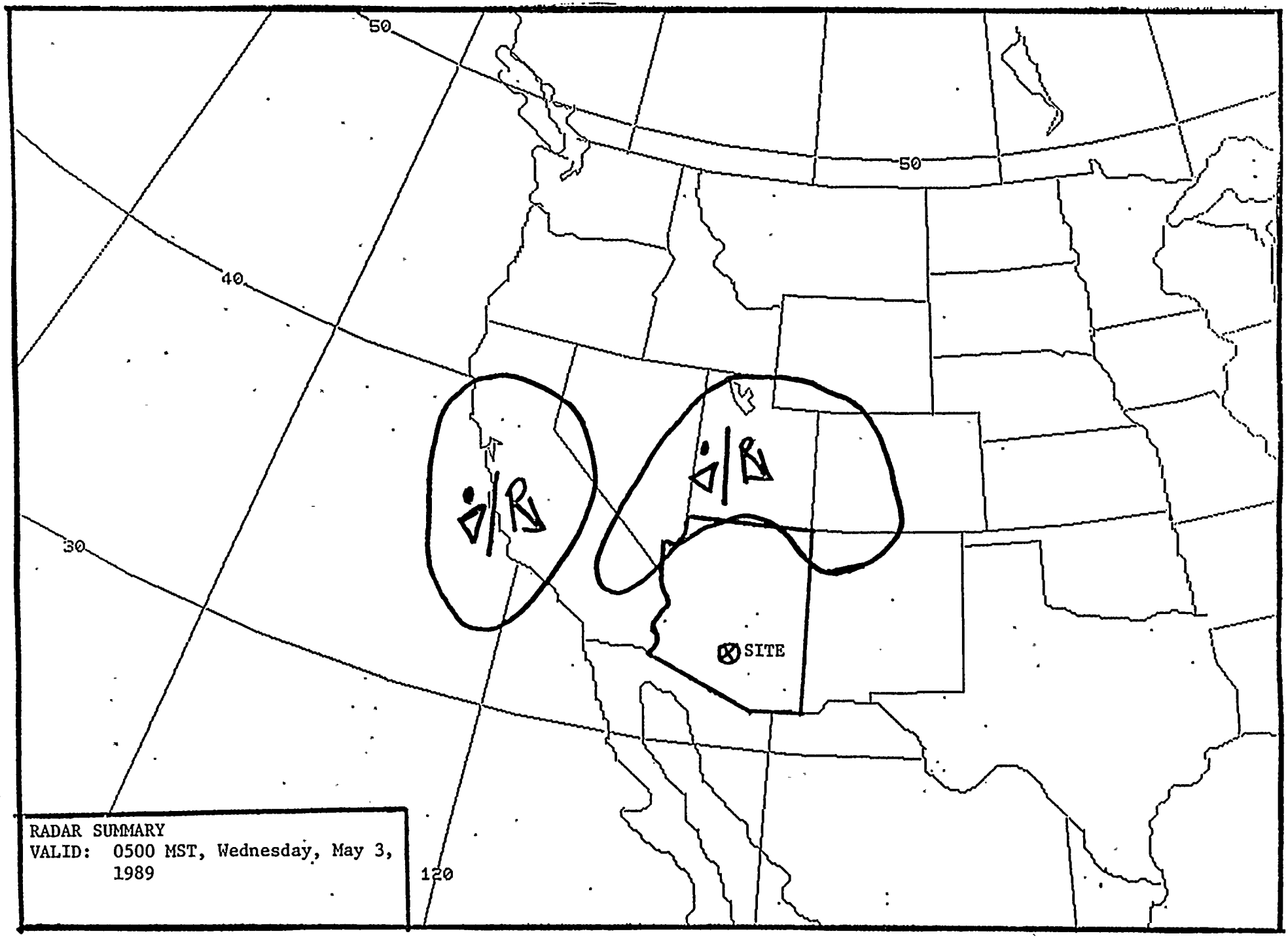
SURFACE: 12 HOUR PROGNOSIS
VALID: 0500 MST, Wednesday, May 3, 1989
NOTE: ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS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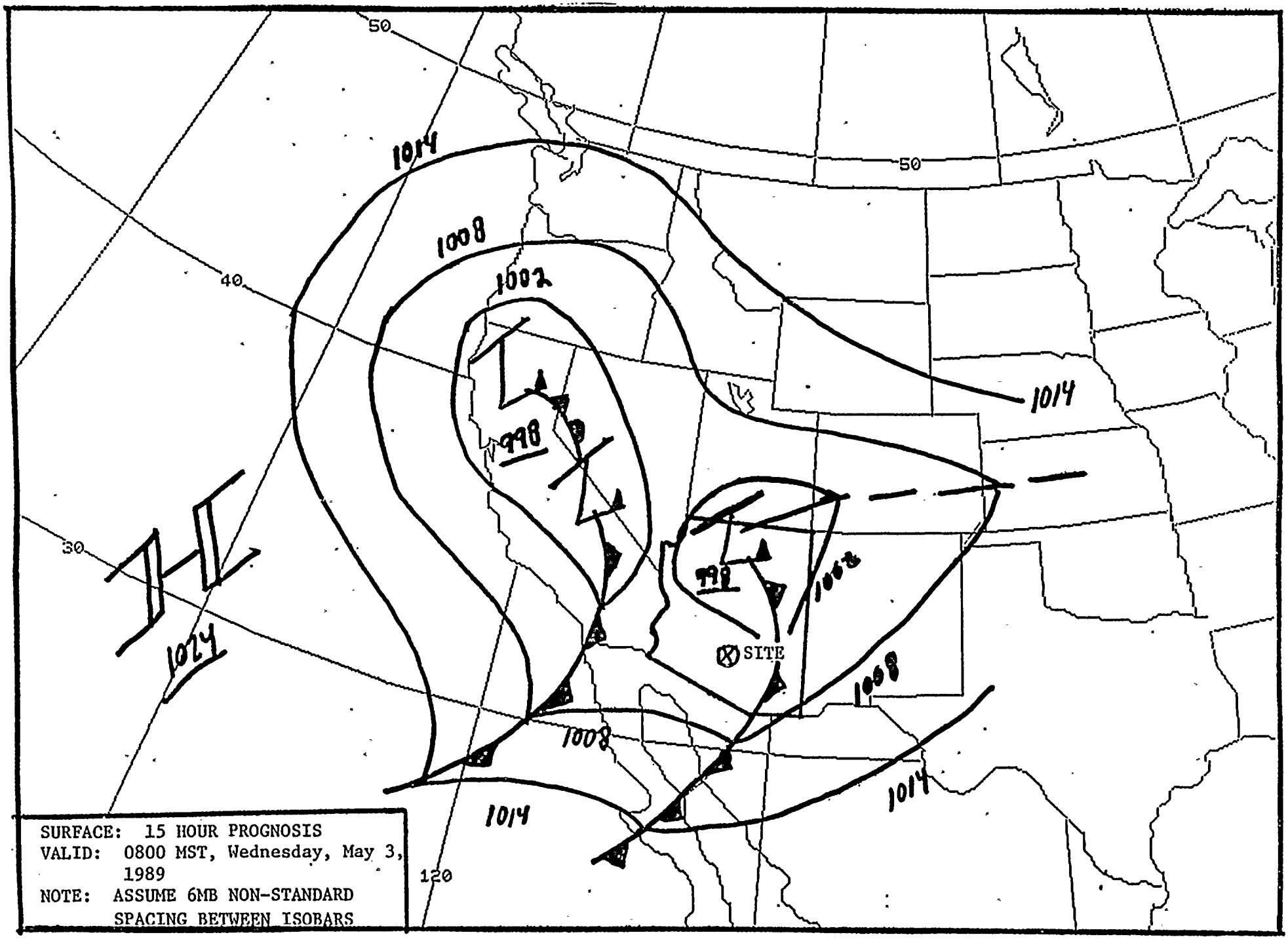
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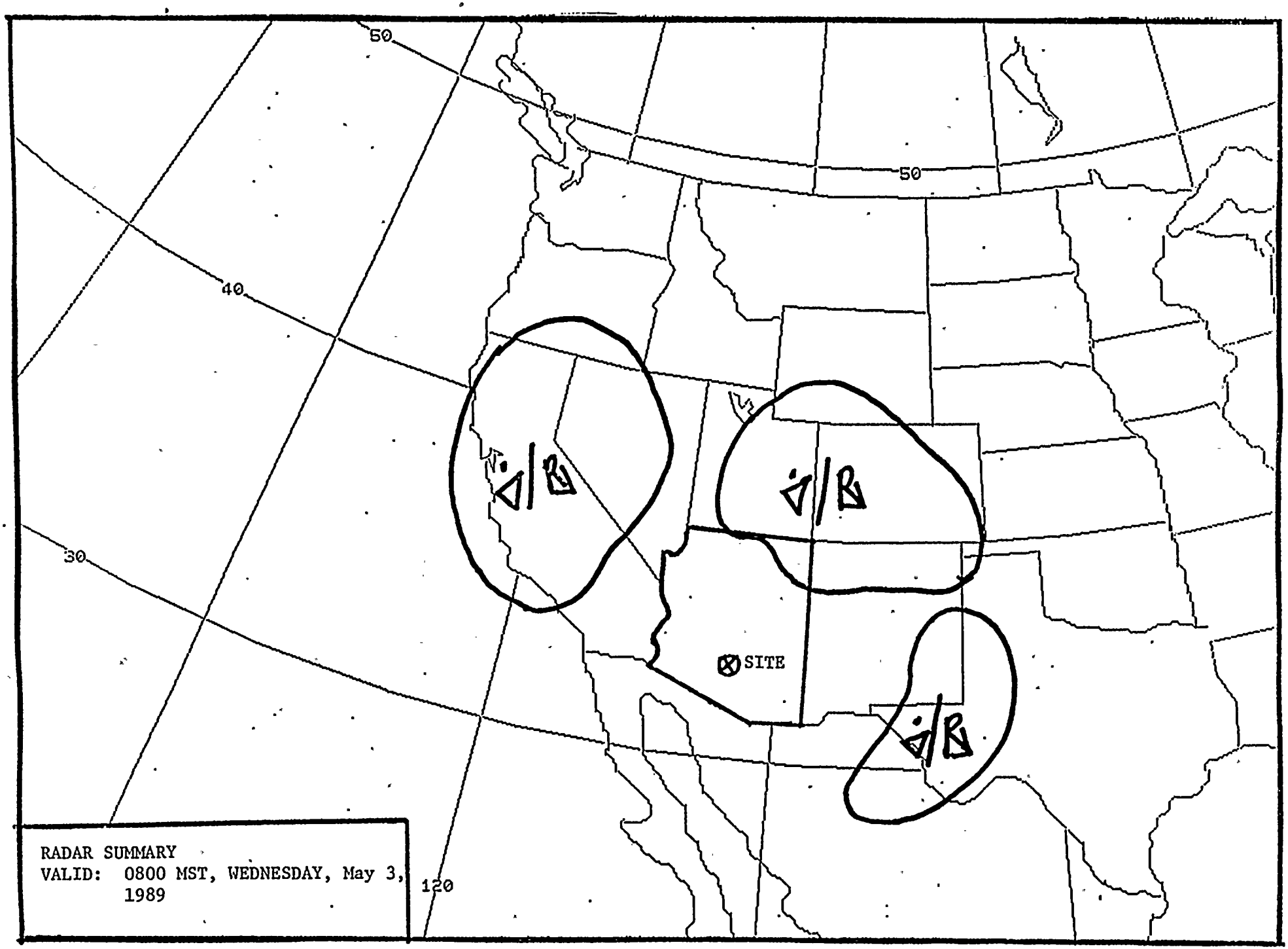
SURFACE: 15 HOUR PROGNOSIS
VALID: 0800 MST, Wednesday, May 3, 1989
NOTE: ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS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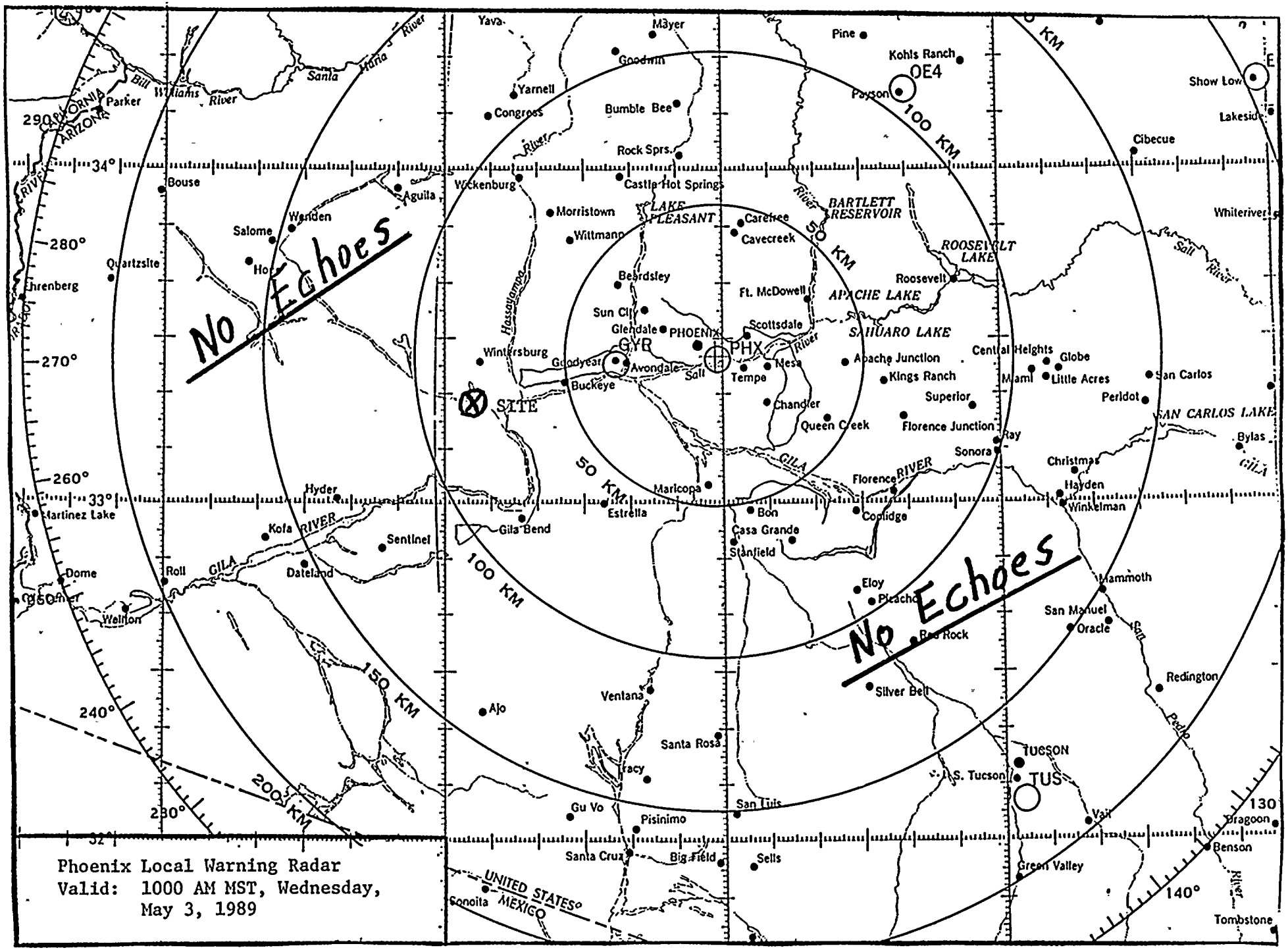
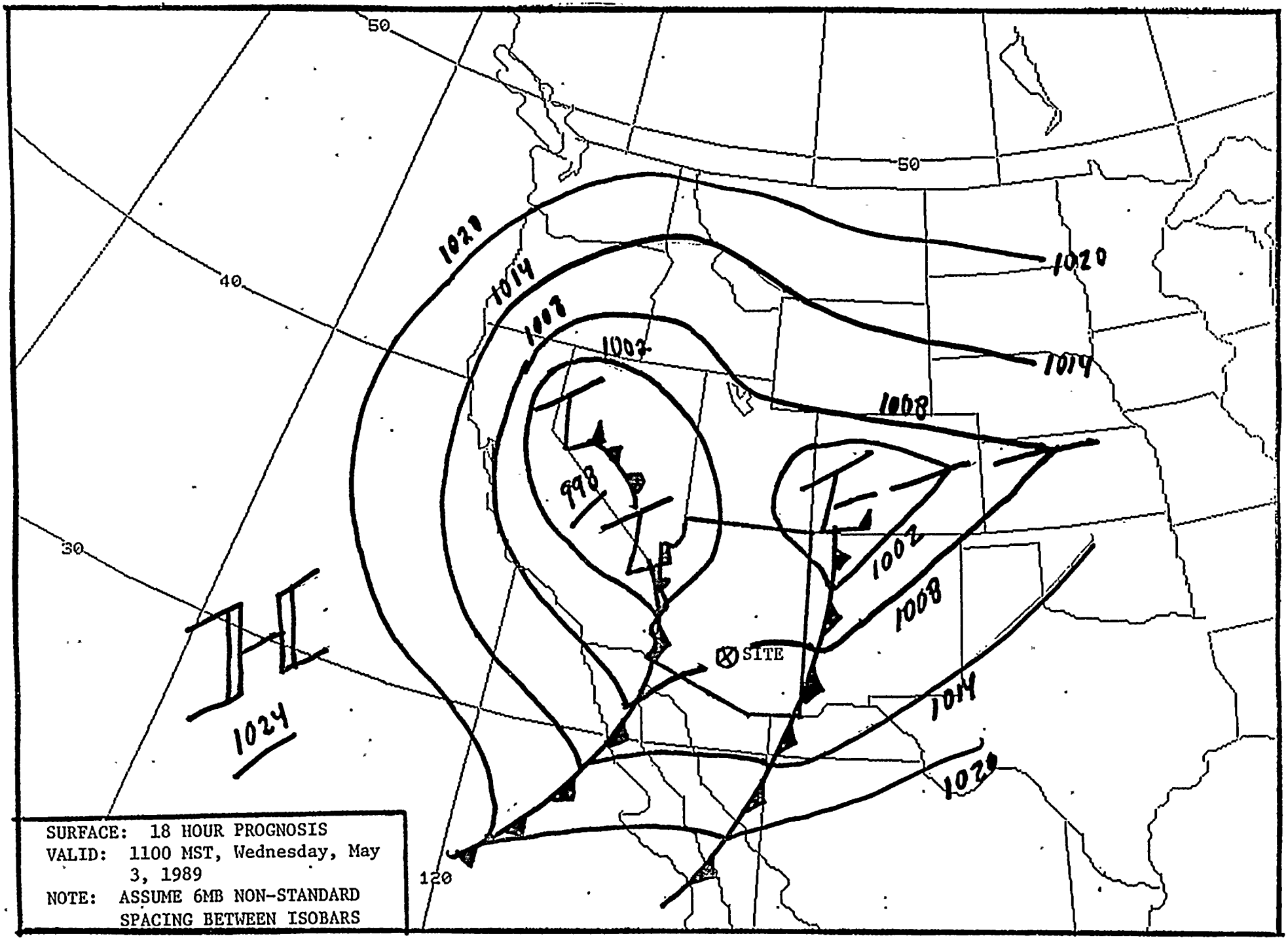
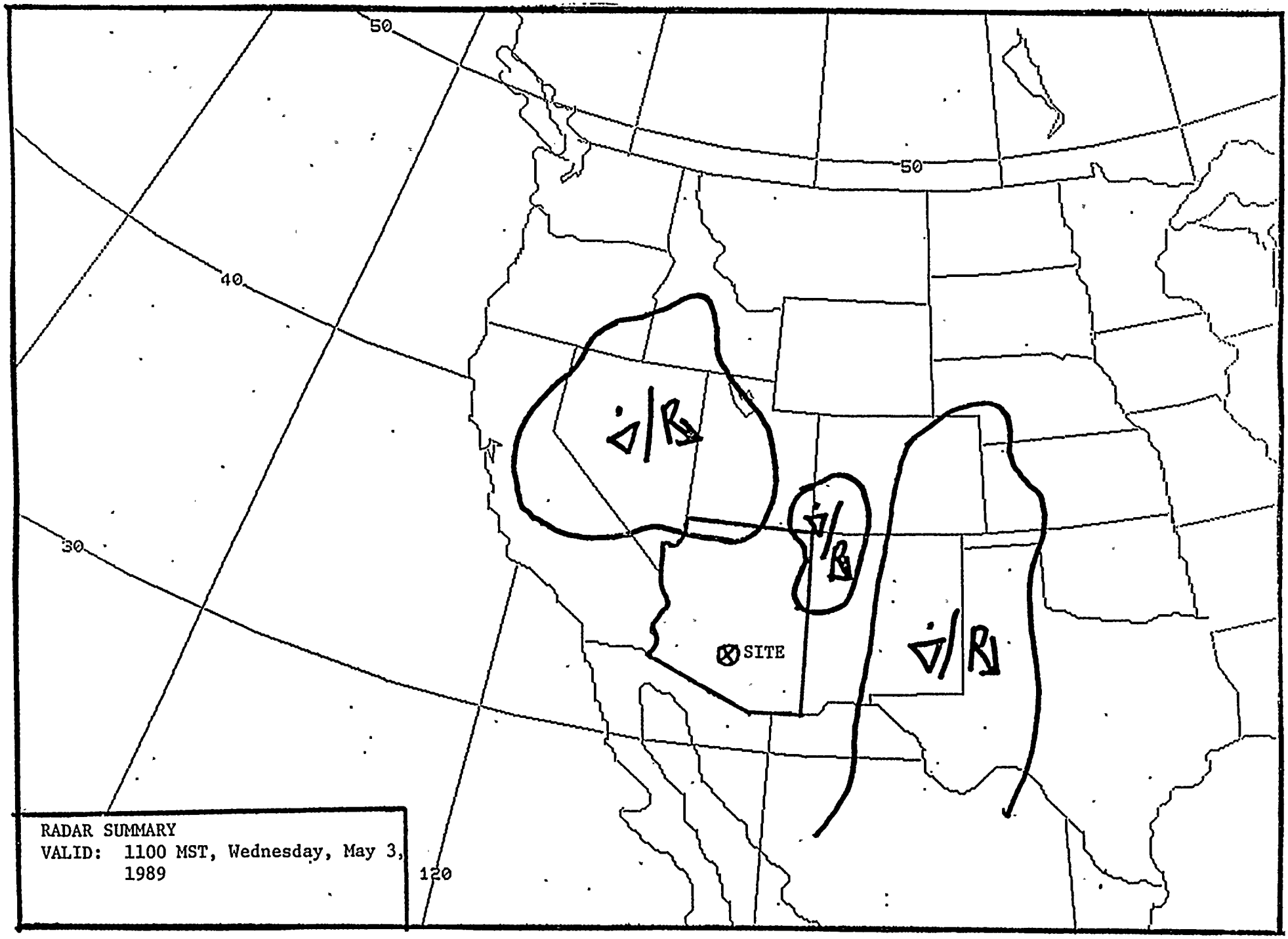
RADAR SUMMARY
VALID: 0800 MST, WEDNESDAY, May 3, 1989




Phoenix Local Warning Radar
Valid: 1000 AM MST, Wednesday,
May 3, 1989




SURFACE: 18 HOUR PROGNOSIS
VALID: 1100 MST, Wednesday, May 3, 1989
NOTE: ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS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RADAR SUMMARY
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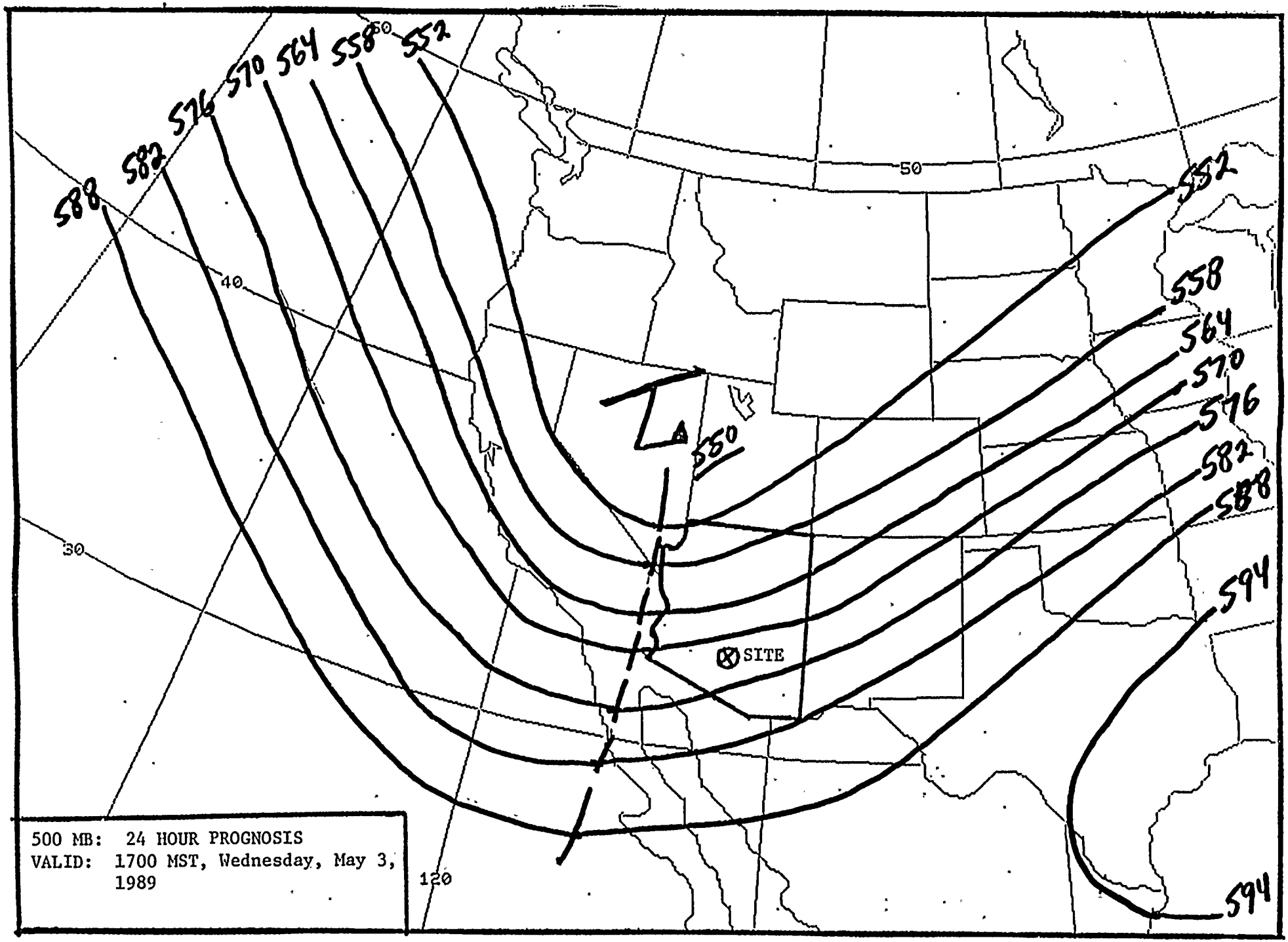
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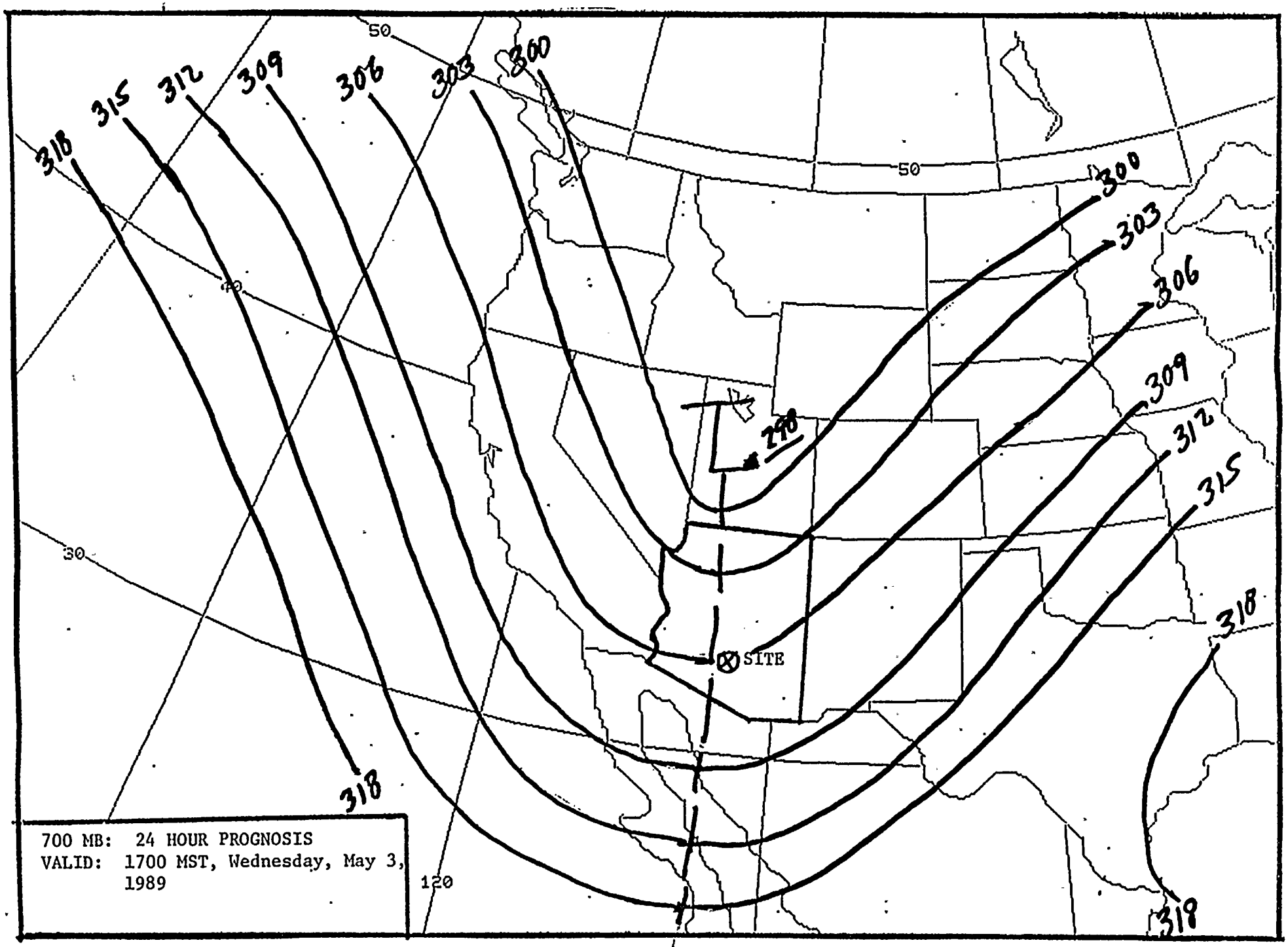
500 MB: 24 HOUR PROGNOSIS
VALID: 1700 MST, Wednesday, May 3, 1989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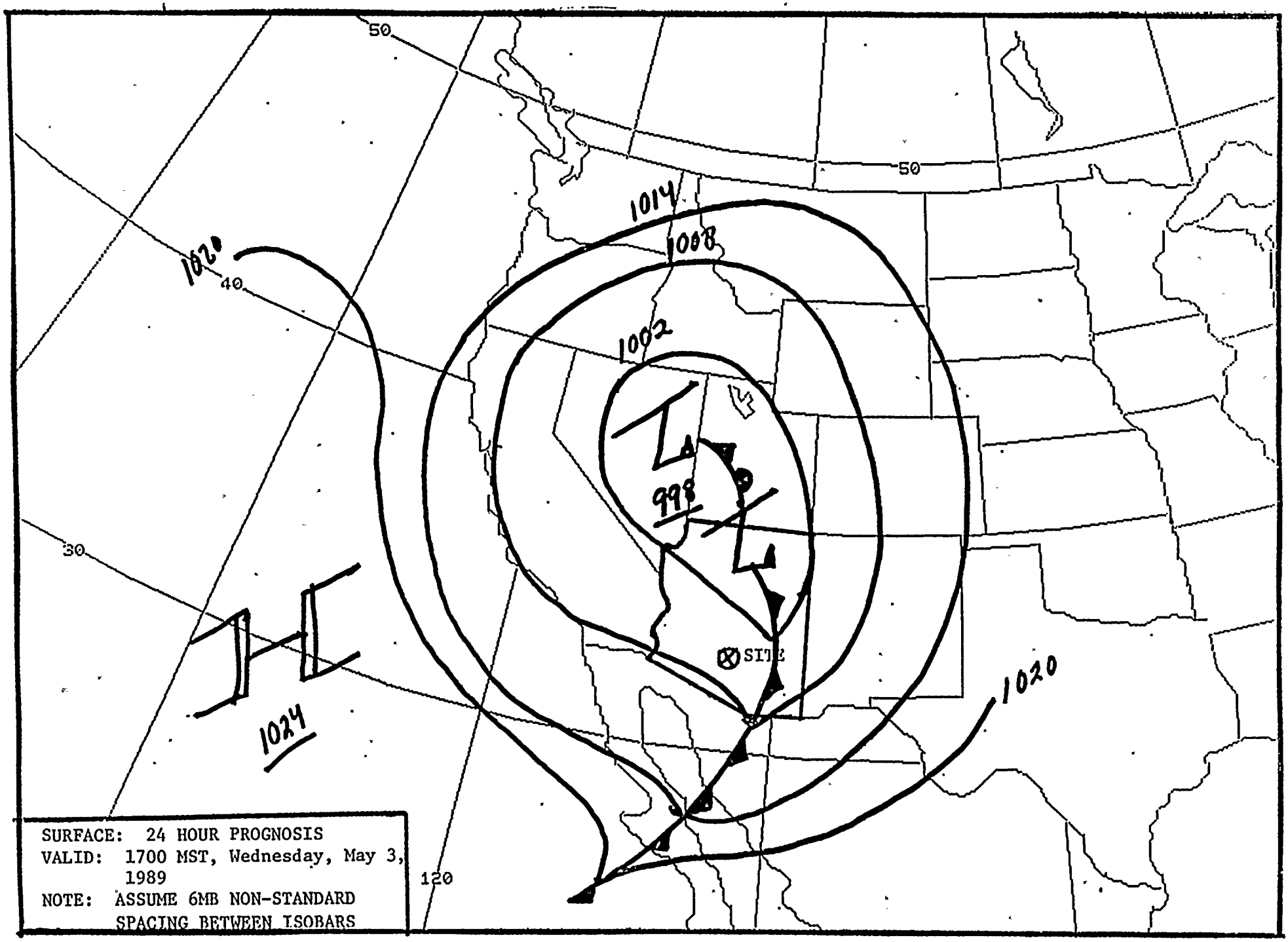
700 MB: 24 HOUR PROGNOSIS
VALID: 1700 MST, Wednesday, May 3, 1989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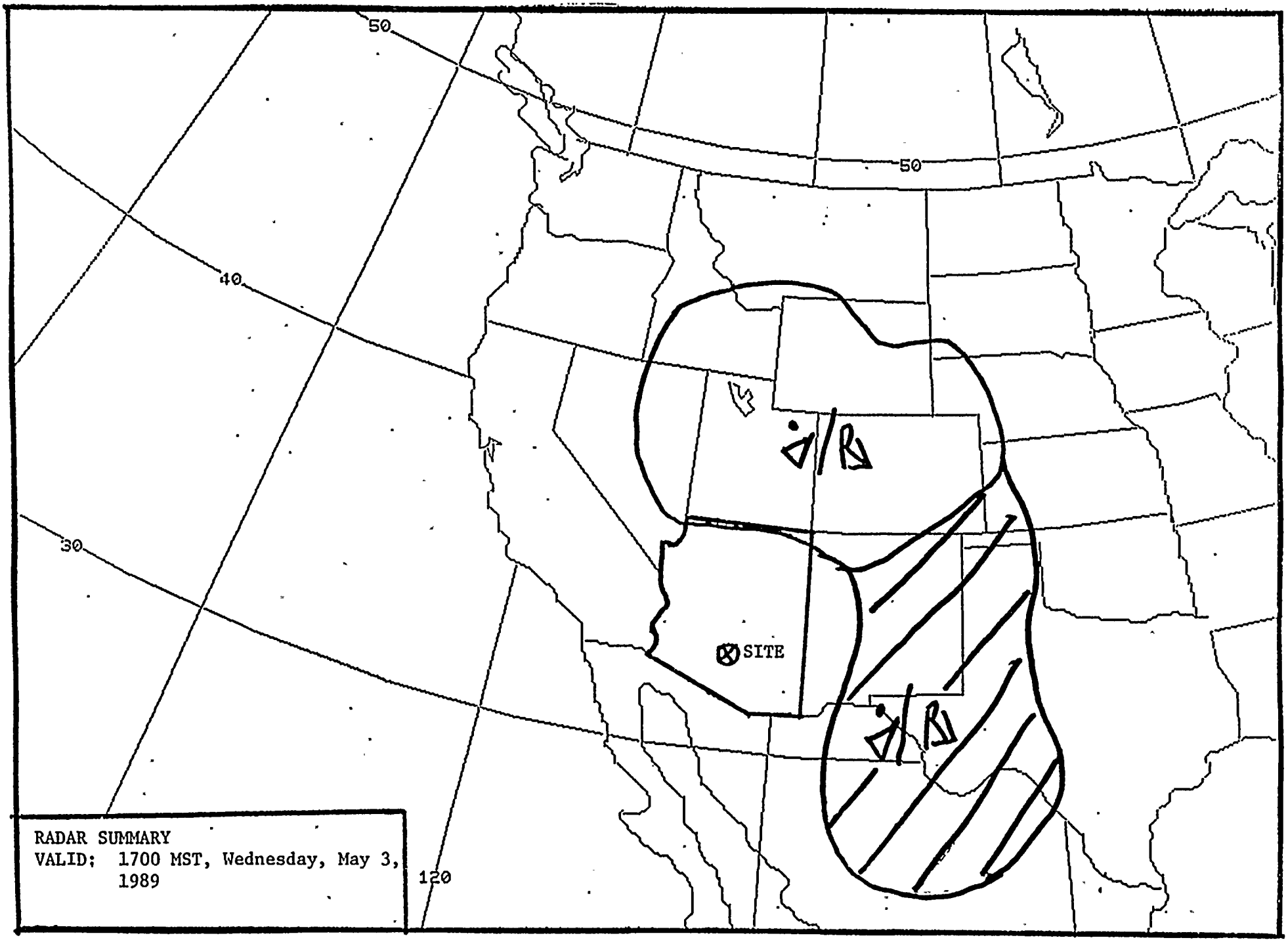
SURFACE: 24 HOUR PROGNOSIS
VALID: 1700 MST, Wednesday, May 3, 1989
NOTE: ASSUME 6MB NON-STANDARD SPACING BETWEEN ISOBARS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RADAR SUMMARY
VALID: 1700 MST, Wednesday, May 3, 1989

# APPENDIX M

## EXERCISE MEDICAL EMERGENCY DATA

# APPENDIX M

## EXERCISE MEDICAL EMERGENCY DATA

-- NOTE --

This Appendix contains data on the simulated contaminated injury including: onsite, transport and the participating offsite treatment facility (Maryvale Samaritan Hospital).

CONTENTS | PAGE

# EXERCISE MEDICAL EMERGENCY CONTROLLER GUIDE

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| GENERAL SCENARIO:<br>Two Auxiliary Operators are simulated to have been handling spent fuel in the Unit 2 Fuel Bldg when a sudden and unexpected bridge movement occurred on the Spent Fuel Handling Machine. This sudden movement had broken a spent fuel bundle and released radioactivity to the Fuel Bldg. Victim #1 fell on the bridge when it lurched- gashing the left forearm, right cheek and banging his head. Victim #2 slipped when jumping off the Spent Fuel Handling Machine to evacuate the building, severely fracturing the left lower leg. Victim #1 dragged Victim #2 out of the U2 Fuel Bldg into the U2 Aux Bldg 140' West Wrap Room and subsequently collapsed from blood loss/mild shock. The two volunteer victims will be staged and moulaged in the Aux Bldg 140' West Wrap outside the double doors to the Fuel Bldg.<br><br>Note: Initial medical information (non-EMT) for both victims is supplied by Message #7 of Appendix B. The remainder of the Medical Emergency data is provided from this Appendix. | Medical Emergency Scene:<br>(Unit 2 Aux Bldg 140' West Wrap Room Outside the Fuel Bldg Doors)<br><br>The Security Controller at the scene (C-6a) should initiate the drill by opening the Fuel Bldg vital access door without ACAD carding in order to cause an alarm in the Central Alarm Station (CAS). When a roving Security Officer is dispatched to respond to the door alarm, the Officer will find the simulated victims and the Medical Emergency will begin. |
| Medical Emergency Initiation:<br><br>Both victims are wearing protective clothing (Skullcaps, coveralls, gloves and shoecovers).<br><br>Victim #1:<br>Semi-conscious<br>Bleeding profusely from:<br>4" gash inside left forearm<br>2" gash on right cheek<br><br>Victim #2:<br>Conscious<br>Open fracture of the left lower leg.<br>Leg fracture is bleeding heavily<br>In extreme pain | Security Officer:<br>Radio in the situation. Establish and maintain Fuel Bldg vital access. Take initial first aid steps.<br><br>CAS:<br>Report the situation to The Security Shift Captain, (SSC). Follow procedure # 14AC-OFP02, Emergency Notification and Response. |

# EXERCISE MEDICAL EMERGENCY CONTROLLER GUIDE

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| **EMT Arrival:**<br><br>**Victim #1:**<br>Respiration: 24<br>Pulse: 110<br>B/P: 130/70<br>Skin: Warm & Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br><br>Semi-conscious but responsive to verbal stimuli. Confused and has difficulty remembering the incident. Copious bleeding from the left forearm and right cheek.<br><br>**Victim #2:**<br>Respiration: 28<br>Pulse: 112<br>B/P: 130/74<br>Skin: Warm & Dry<br>Pupils: Equal, Reactive<br>ECG: Sinus Tachycardia<br><br>Conscious and in extreme pain. Angulated open fracture of the left tibia/fibia with evident venous bleeding. | **EMT:**<br>Communications are established between Fire Protection, Medical and Security. Medical is requested to respond to the scene. Vital signs and patient condition are assessed. Protective clothing is removed to facilitate treatment. Pressure dressings are applied to control bleeding. Victim #2 has traction applied to the fractured leg and distal pulses checked.<br><br>**Medical:**<br>Respond to the scene.<br><br>**U2 CR (Sim):**<br>Ensure that Radiation Protection (RP) responds. |
| **Initial Radiological Conditions:**<br>Initial radiological conditions at the medical emergency scene are given in Message #8 of Appendix B. All further medical emergency radiological data will be provided from this Appendix.<br><br>Immediate Victim Area: (per smear of 100 $cm^2$) 1,000 to 1,500 cpm>bkg<br>Areas other than victims: (per 100 $cm^2$ smear) As Read<br>Radiation Levels: As Read<br>Victim's PCs: 3,000 to 5,000 cpm>bkg<br>Wounds and exposed skin: 2,000 to 5,000 cpm>bkg | **RPTs:**<br>Perform initial surveys to determine contamination of victims and area. Report findings to the EMTs/Medical and the U2 CR (Sim). |

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| <u>Radiation Protection Technicians (RPTs) Respond:</u><br>After the initial quick assessment of radiological conditions, the following detailed radiological data should be ascertained by the RPTs:<br><br><u>General Radiological Conditions:</u><br><br>Both Victim's SRDs: 10 mr<br>Radiation Level: As Read<br>Airborne Radioactivity: As Read<br>Smearable in immediate vicinity (per 100 $cm^2$ smear): 1,000 to 1,500 cpm>bkg<br>Smearable in surrounding areas (per 100 $cm^2$ smear): As Read<br><br><u>Victim #1:</u><br><br>PCs (general): 2500 cpm>bkg<br>Left sleeve: 3000 cpm>bkg<br>Gloves: 3000 cpm>bkg<br>Shoe covers: 5000 cpm>bkg<br><br>After PC removal<br><br>Left Forearm: 2500 cpm>bkg<br>Face, Right Cheek: 1000 cpm>bkg<br>Hands: 1000 cpm>bkg<br>All Other Areas: As Read<br><br><u>Victim #2:</u><br><br>PCs (general): 3000 cpm>bkg<br>Left coverall leg: 3500 cpm>bkg<br>Gloves: 3500 cpm>bkg<br>Shoe Covers: 5000 cpm>bkg<br><br>After PC removal<br><br>Left Lower Leg: 5000 cpm>bkg<br>Face: 500 cpm>bkg<br>Hands: 500 cpm>bkg<br>All Other Areas: As Read | <u>RPTs:</u><br>While EMTs/Medical are performing initial treatment RPTs should be performing detailed radiological surveys of the victims and the area. In general, radiation and contamination other than that detailed is "As Read". |

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| **Initial Treatment:**<br>(During the initial patient treatment and preparation for transport)<br><br>**Victim #1:**<br>Respiration: 24<br>Pulse: 116<br>B/P: 128/74<br>Skin: Cool & Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br><br>Still semi-conscious, but more lucid. Recounts events in the incident (Appendix B, Message #9) with some difficulty. Complaining of headache and pain in the left arm.<br><br>**Victim #2:**<br>Respiration: 28<br>Pulse: 116<br>B/P: 126/72<br>Skin: Cool & Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br><br>Conscious, still in extreme pain. | **EMTs/Medical:**<br>As soon as the patients are stabilized and the initial radiological status is verified, they should be set up for movement with timely contamination control to the U2 First Aid room/ Medical Facility.<br><br>**RPTs:**<br>Support the stretchering and transport of the victims to the U2 First Aid Room/ Medical Facility. Provide contamination control with minimal interference during movements and followup decon and monitoring. |

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| Secondary Treatment: (Site Medical in the U2 First Aid Room/Med Facil.) Medical evaluation of the patients prior to transport:<br><br>Victim #1:<br>Respiration: 28<br>Pulse: 120<br>B/P: 124/76<br>Skin: Cool & Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br><br>Patient is still semi-conscious becoming more confused. Still complaining of headache and pain in the left arm. Forearm laceration is approximately 10 cm in length and deep (to the bone). There is arterial bleeding, muscle and tendon damage. Bleeding is controlled by pressure dressing. The laceration on the right cheek is approximately 4 cm in length and exposing the bone. There is possible muscle/tendon damage.<br><br>Victim #2:<br>Respiration: 24<br>Pulse: 120<br>B/P: 124/76<br>Skin: Cool & Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br><br>Patient is conscious and still in extreme pain from the leg fracture. there is a 2 cm puncture in the left calf area from the fracture with minimal bleeding. The leg is splinted. Distal pulses are still palpable but fading. Capillary refill is starting to decline. Possible muscle and tendon damage. | Medical:<br>Perform evaluation and prepare for transport to Maryvale Samaritan. Order the site ambulance for transport. Stabilize the patients and begin decon efforts. Notify Maryvale Samaritan, Security and the U2 CR (Sim) of impending transport.<br><br>Fire Protection:<br>Bring the site ambulance into the Protected Area and stand by for transport.<br><br>Security:<br>Pass the site ambulance through the Sally Port and prepare for egress.<br><br>RPTs:<br>Continue to monitor and assist in decontamination efforts. Prepare to provide coverage in transport. |

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| <u>Secondary Treatment:</u> (Prior to ambulance transport)<br>Decontamination efforts prior to ambulance transport in the U2 First Aid Room/Medical Facility:<br><br><u>Victim #1:</u><br>Face and Cheek: 500 cpm>bkg<br>Hands: 500 cpm>bkg<br>Left Forearm: 1500 cpm>bkg<br><br><u>Victim #2:</u><br>Face: 100 cpm>bkg<br>Hands: 200 cpm>bkg<br>Left Lower Leg: 2000 cpm>bkg | <u>RPTs:</u><br>Any decontamination effort (eg: irrigation, wet wipes, etc.) will reduce the contamination to the indicated levels, but no lower. |
| <u>Patient Condition During Ambulance Transport:</u><br><br><u>Victim #1:</u><br>Respiration: 28<br>Pulse: 120<br>B/P: 124/76<br>Skin: Cool and Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br>Patient is semi-conscious and confused. complaining of headache and pain in the left forearm.<br><br><u>Victim #2:</u><br>Respiration: 24<br>Pulse: 120<br>B/P: 124/76<br>Skin: Cool and Dry<br>Pupils: Sluggish<br>ECG: Sinus Tachycardia<br>Patient is conscious and in severe pain from the leg fracture.<br><br>Note:<br>These conditions will remain constant throughout the transport to Maryvale Samaritan Hospital. | <u>Unit 2:</u><br>The site ambulance floor is covered for contamination control. Attending EMT(s) wear protective clothing and dosimetry. An RPT accompanies the ambulance for radiological assistance. EMTs treat the patients on route and update the hospital by radio.<br><br><u>Security:</u><br>Passes the ambulance thru the Sally Port. Notifies the U2 CR (Sim) of the departure.<br><br><u>Medical:</u><br>Notifies Maryvale Samaritan of patients on the way. |

# EXERCISE MEDICAL EMERGENCY CONTROLLER GUIDE

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| <u>Arrival at Maryvale Samaritan Hospital:</u><br><br><u>Victim #1:</u><br>Respiration: 24<br>Pulse: 112<br>B/P: 120/78<br>Skin: Warm and Dry<br>ECG: Sinus Tachycardia<br>Patient is conscious and in pain from the forearm and facial wounds.<br><br><u>Victim #2:</u><br>Respiration: 28<br>Pulse: 116<br>B/P: 130/76<br>Skin: Cool and Dry<br>ECG: Sinus Tachycardia<br>Patient is conscious and in considerable pain from the leg injury. | <u>At the REA Entrance:</u><br>The Ambulance arrives. The hospital medical team begins immediate triage. EMTs report pertinent information. RPT reports radiological status, dons protective clothing provided by the medical team and accompanies the team into the treatment room |
| <u>In the REA:</u><br>Initial Medical Treatment:<br><br><u>Victim #1:</u><br>Respiration: 20<br>Pulse: 100<br>B/P: 120/80<br>Skin: Warm and Dry<br>Pupils: Equal and Reactive<br>ECG: Normal Sinus Rhythm<br>X-ray: No Fractures<br>CT Scan: No Significant Changes<br>pH: 7.44<br>$PO_2$: 120<br>$PCO_2$: 35<br>$O_2$ Sat: 99%<br>Bicarb: 23<br><br><u>Victim #2:</u><br>Respiration: 20<br>Pulse: 100<br>B/P: 124/78<br>Skin: Warm and Dry<br>Pupils: Equal and Reactive<br>ECG: Normal Sinus Rhythm<br>X-ray: FX, Left Fib/Tib<br>pH: 7.41<br>$PO_2$: 106<br>$PCO_2$: 38<br>$O_2$ Sat: 99%<br>Bicarb: 22 | <u>In the REA:</u><br>Patient's remaining clothing is removed. Appropriate medical and nursing care is initiated. As determined by the Physician, radiological surveys are performed and samples are collected. All surveys should be correctly documented and all samples correctly labeled. Priorities are established for decontamination. Appropriate techniques are utilized for decon. Surveys are performed and documented. The RPT makes recommendations and maintains control of waste. Area levels are kept ALARA. |

| MEDICAL SCENARIO | ANTICIPATED ACTIONS |
|---|---|
| <u>In the REA:</u><br>Contamination Levels and Decon Results:<br><br><u>Victim #1:</u><br>Right Cheek: 500 cpm>bkg<br>Hands: 500 cpm>bkg<br>Left Forearm: 1500 cpm>bkg<br><br><u>Victim #2:</u><br>Face: 100 cpm>bkg<br>Hands: 200 cpm>bkg<br>Left Lower Leg: 2000 cpm>bkg<br><br><u>After First Decon:</u><br><br><u>Victim #1:</u><br>Right Cheek: 500 cpm>bkg<br>Hands: 100 cpm>bkg<br>Left Forearm: 1000 cpm>bkg<br><br><u>Victim #2:</u><br>Face: Background/As Read<br>Hands: 100 cpm>bkg<br>Left Lower Leg: 1000 cpm>bkg<br><br><u>After Second Decon:</u><br><br><u>Victim #1:</u><br>Right Cheek: 100 cpm>bkg<br>Hands: Background/As Read<br>Left Forearm: 500 cpm>bkg<br><br><u>Victim #2:</u><br>Face: Background/As Read<br>Hands: Background/As Read<br>Left Lower Leg: 500 cpm>bkg<br><br><u>After Third Decon:</u><br><br><u>Victim #1:</u><br>Right Cheek: Background/As Read<br>Hands: Background/As Read<br>Left Forearm: Background/As Read<br><br><u>Victim #2:</u><br>Face: Background/As Read<br>Hands: Background/As Read<br>Left Lower Leg: Background/As Read<br><br><u>Exit Surveys:</u><br>Patients: Background/As Read (all areas)<br>Gurneys: Background/As Read (all areas)<br>Staff: Background/As Read (after removal of protective clothing) | <u>In the REA:</u><br>The readings in cpm are to be given to the RPT as surveys are properly taken after each decontamination process. Nasal smears taken if any, are all to read Background/As Read during the entire treatment process<br><br>The Physician, in consultation with the RPT or a Medical Physicist, determines when decontamination has been satisfactorily completed. At this point, the patients are transferred from the REA while maintaining control of contamination A Radiology Technician (in the buffer zone) performs the exit surveys on the patients and gurneys.<br><br>The RPT assists Medical personnel with the removal of protective clothing. Proper step-off-pad procedures are utilized. Complete body frisks are performed. Dosimetry is collected and documented. PVNGS/APS personnel assume responsibility for decontamination and clean-up of the REA. |

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4a TO: EMT

MESSAGE NO.: M - 1 TIME: 0845 (Approx.)

LOCATION: Unit 2 Aux Bldg 140' West Wrap

---

INSTRUCTION:
Provide the following information to the EMT as vital signs are taken during initial response to and evaluation of the two victims.

---

# MEDICAL EXERCISE MESSAGE FORM

**THIS IS A DRILL!**

TO: EMT

MESSAGE NO.: M - 1 TIME: 0845 (Approx.)

LOCATION: Unit 2 Aux Bldg 140' West Wrap

MESSAGE:

Vital Signs on initial evaluation:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Resp: | 24 | Resp: | 28 |
| Pulse: | 110 | Pulse: | 112 |
| B/P: | 130/70 | B/P: | 130/74 |
| Skin: | Warm & Dry | Skin: | Warm & Dry |
| Pupils: | Sluggish | Pupils: | Sluggish |
| ECG: | Sinus Tachycardia | ECG: | Sinus Tachycardia |

Semi-conscious but responsive to verbal stimuli. Confused and has difficulty remembering the incident. Copious bleeding from the left forearm and right cheek.

Conscious and in extreme pain. Angulated open fracture of the left tibia/fibia with evident venous bleeding.

## MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4d TO: RPT

MESSAGE NO.: M - 2 TIME: 0850(Approx.)

LOCATION: Unit 2 Aux Bldg 140' West Wrap

---

INSTRUCTION:
Provide the following information only to the RPT as radiological surveys are taken during preparation for movement.

---

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: RPT

MESSAGE NO.: M - 2 TIME: 0850 (Approx.)

LOCATION: Unit 2 Aux Bldg 140' West Wrap

MESSAGE:

Results of radiological measurements taken during the preparation for movement to the U2 First Aid Room/Medical Facility:

General Information:

| | |
|---|---|
| Both victim's SRDs: | 10 mr |
| Radiation Level: | As Read |
| Airborne Radioactivity: | As Read |
| Smearable Contamination in immediate vicinity, (per 100 $cm^2$ smear): | 1000 to 1500 cpm>Bkg |
| Smearable Contamination in surrounding areas, (per 100 $cm^2$ smear): | As Read |

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| PCs (general): | 2500 cpm>Bkg | PCs (general): | 3000 cpm>Bkg |
| Left Sleeve: | 3000 cpm>Bkg | Left PC Leg: | 3500 cpm>Bkg |
| Gloves: | 3000 cpm>Bkg | Gloves: | 3500 cpm>Bkg |
| Shoe Covers: | 5000 cpm>Bkg | Shoe Covers: | 5000 cpm>Bkg |

AFTER PC REMOVAL:

| | | | |
|---|---|---|---|
| Left Forearm: | 2500 cpm>Bkg | Left Lower Leg: | 5000 cpm>Bkg |
| Face, Right Cheek: | 1000 cpm>Bkg | Face: | 500 cpm>Bkg |
| Hands: | 1000 cpm>Bkg | Hands: | 500 cpm>Bkg |
| All Other Areas: | As Read | All Other Areas: | As Read |

## MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4a TO: EMT

MESSAGE NO.: M - 3 TIME: 0850(Approx.)

LOCATION: Unit 2 Aux Bldg 140' West Wrap

---

INSTRUCTION:
Provide the following information to the EMT as vital signs are taken during preparation for movement.

---

# MEDICAL EXERCISE MESSAGE FORM

**THIS IS A DRILL!**

TO: EMT

MESSAGE NO.: M - 3 TIME: 0850 (Approx.)

LOCATION: Unit 2 Aux Bldg 140' West Wrap

MESSAGE:

Vital Signs on preparation for movement to the U2 First Aid Room/Medical Facility:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Resp: | 24 | Resp: | 28 |
| Pulse: | 116 | Pulse: | 116 |
| B/P: | 128/74 | B/P: | 126/72 |
| Skin: | Cool & Dry | Skin: | Cool & Dry |
| Pupils: | Sluggish | Pupils: | Sluggish |
| ECG: | Sinus Tachycardia | ECG: | Sinus Tachycardia |

Still semi-conscious but more lucid. Recounts events in the incident to the RPTs/EMTs with some difficulty. Complaining of headache and pain in the left arm.

Conscious and in extreme pain.

## CONTINGENCY MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4a TO: Site Medical Representative

MESSAGE NO.: M - A TIME: 0900 (Approx.)

LOCATION: Unit 2 First Aid Room/Medical Facility

---

INSTRUCTION:

CONTINGENCY MESSAGE

If the Site Medical Representative has not contacted Maryvale Samaritan Hospital or ordered the transport of the victims by site ambulance by this time, deliver the following message.

---

Note:

Due to the high level of subjectivity involved in a medical diagnosis and the lack of subtlety inherent in the simulation of medical symptoms, it may be necessary for the continuity of the medical scenario to intervene at this time. This should not be interpreted as a lack of performance on the part of the medical representatives, but instead a need of the scenario.

MEDICAL EXERCISE CONTINGENCY MESSAGE FORM

THIS IS A DRILL!

TO: Site Medical Representative

MESSAGE NO.: M - A TIME: 0900 (Approx.)

LOCATION: Unit 2 First Aid Room/Medical Facility

MESSAGE:

Due to needs of the medical scenario, contact Maryvale Samaritan Hospital and request site ambulance transport of the victims at this time.

## MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4a TO: EMT/Medical Representative

MESSAGE NO.: M - 4 TIME: 0905 (Approx.)

LOCATION: Unit 2 First Aid Room/Medical Facility

---

INSTRUCTION:
Provide the following information to the Site Medical Representative when examination/evaluation of the victims is performed.

---

# MEDICAL EXERCISE MESSAGE FORM

**THIS IS A DRILL!**

TO: EMT/Medical Representative

MESSAGE NO.: M - 4 TIME: 0905 (Approx.)

LOCATION: Unit 2 First Aid Room/Medical Facility

MESSAGE:

When the patients are examined and evaluated by Site Medical Representative:

Vital Signs on initial evaluation:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Resp: | 28 | Resp: | 24 |
| Pulse: | 120 | Pulse: | 120 |
| B/P: | 124/76 | B/P: | 124/76 |
| Skin: | Cool & Dry | Skin: | Cool & Dry |
| Pupils: | Sluggish | Pupils: | Sluggish |
| ECG: | Sinus Tachycardia | ECG: | Sinus Tachycardia |

Still semi-conscious and becoming more confused. Still complaining of headache and pain in the left arm. Forearm laceration is approximately 10 cm in length and deep (to the bone). There is arterial bleeding, muscle and tendon damage. Bleeding is controlled by pressure bandage. The laceration on the right cheek is approximately 4 cm in length and exposing the bone. There is possible muscle/tendon damage.

Conscious and in extreme pain, there is a 2 cm puncture in the calf area of the left leg exhibiting minimal venous bleeding. The leg is splinted. Distal pulses are still palpable, but fading. Capillary refill is starting to decline. Possible muscle and tendon damage.

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4a TO: RPT/EMT

MESSAGE NO.: M - 5 TIME: 0905 (Approx.)

LOCATION: Unit 2 First Aid Room/Medical Facility

---

INSTRUCTION:
Provide the following information to the RPT if decontamination and subsequent resurvey is performed.

---

Contamination levels will remain as before until decontamination activities are performed. After initial decontamination, the following numbers will remain unchanged until arrival at the offsite treatment center.

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: RPT/EMT

MESSAGE NO.: M - 5 TIME: 0905 (Approx.)

LOCATION: Unit 2 First Aid Room/Medical Facility

MESSAGE:

Initial decontamination efforts yield the following results:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Left Forearm: | 1500 cpm>Bkg | Left Lower Leg: | 2000 cpm>Bkg |
| Face, Right Cheek: | 500 cpm>Bkg | Face: | 100 cpm>Bkg |
| Hands: | 500 cpm>Bkg | Hands: | 200 cpm>Bkg |
| All Other Areas: | As Read | All Other Areas: | As Read |

## MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4a TO: EMT/Ambulance Attendants

MESSAGE NO.: M - 6 TIME: 0915 (Approx.)

LOCATION: Site Ambulance

---

INSTRUCTION:
Provide the following information to the EMT/Ambulance Attendants upon examination after loading into the site ambulance.

---

The patient's condition will remain constant while enroute in the ambulance. Supply the following statistics to the attending EMTs as often as they perform the diagnostics.

# MEDICAL EXERCISE MESSAGE FORM

**THIS IS A DRILL!**

TO: EMT/Ambulance Attendants

MESSAGE NO.: M - 6 TIME: 0915 (Approx.)

LOCATION: Site Ambulance

MESSAGE:

Patient status at site ambulance loading:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Resp: | 28 | Resp: | 24 |
| Pulse: | 120 | Pulse: | 120 |
| B/P: | 124/76 | B/P: | 124/76 |
| Skin: | Cool & Dry | Skin: | Cool & Dry |
| Pupils: | Sluggish | Pupils: | Sluggish |
| ECG: | Sinus Tachycardia | ECG: | Sinus Tachycardia |

Semi-conscious but responsive to verbal stimuli. Confused and is complaining of headache and pain in the left forearm.

Conscious and in extreme pain.

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: Maryvale Samaritan Medical Team

MESSAGE NO.: M - 7 TIME: 1030 (Approx.)

LOCATION: Maryvale Samaritan Hospital

---

INSTRUCTION:
Provide the following information to the Maryvale Samaritan Medical Team as initial examinations are performed upon arrival.

---

# MEDICAL EXERCISE MESSAGE FORM

**THIS IS A DRILL!**

TO: Maryvale Samaritan Medical Team

MESSAGE NO.: M - 7 TIME: 1030 (Approx.)

LOCATION: Maryvale Samaritan Hospital

MESSAGE:

Patient status upon arrival at the Hospital:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Resp: | 24 | Resp: | 28 |
| Pulse: | 112 | Pulse: | 116 |
| B/P: | 120/78 | B/P: | 130/76 |
| Skin: | Warm & Dry | Skin: | Cool & Dry |
| Pupils: | Sluggish | Pupils: | Sluggish |
| ECG: | Sinus Tachycardia | ECG: | Sinus Tachycardia |

Conscious and in considerable pain from the arm and facial injuries.

Conscious and in extreme pain from the leg injury.

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: Maryvale Samaritan Medical Team

MESSAGE NO.: M - 8 TIME: 1035 (Approx.)

LOCATION: In the REA

---

INSTRUCTION:
Provide the following information to the Maryvale Samaritan Medical Team as initial treatment is performed in the REA.

---

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: Maryvale Samaritan Medical Team

MESSAGE NO.: M - 8 TIME: 1035 (Approx.)

LOCATION: In the REA

MESSAGE:

Patient status upon treatment in the REA:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Resp: | 20 | Resp: | 20 |
| Pulse: | 100 | Pulse: | 100 |
| B/P: | 120/80 | B/P: | 124/78 |
| Skin: | Warm & Dry | Skin: | Warm & Dry |
| Pupils: | Equal & Reactive | Pupils: | Equal & Reactive |
| ECG: | Normal Sinus Rhythm | ECG: | Normal Sinus Rhythm |
| X-ray: | No Fractures | X-ray: | FX, left tib/fib |
| CT Scan: | No Significant Changes | | |
| pH: | 7.44 | pH: | 7.41 |
| $PO_2$: | 120 | $PO_2$: | 106 |
| $PCO_2$: | 35 | $PCO_2$: | 38 |
| $O_2$ Sat: | 99% | $O_2$ Sat: | 99% |
| Bicarb: | 23 | Bicarb: | 22 |

# MEDICAL CONTROLLER INSTRUCTION

FROM: C-4b TO: RPT

MESSAGE NO.: M - 9 TIME: 1035 (Approx.)

LOCATION: In the REA

INSTRUCTION:
Provide the following radiological information to the RPT as the initial patient surveys are performed in the REA.

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: RPT

MESSAGE NO.: M - 9 TIME: 1035 (Approx.)

LOCATION: In the REA

MESSAGE:

Initial radiological survey results:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Left Forearm: | 1500 cpm>Bkg | Left Lower Leg: | 2000 cpm>Bkg |
| Face, Right Cheek: | 500 cpm>Bkg | Face: | 100 cpm>Bkg |
| Hands: | 500 cpm>Bkg | Hands: | 200 cpm>Bkg |
| All Other Areas: | As Read | All Other Areas: | As Read |

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: RPT

MESSAGE NO.: M - 10 TIME: 1045 (Approx.)

LOCATION: In the REA

---

INSTRUCTION:
Provide the following radiological information to the RPT as the survey is performed after the initial decontamination.

---

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: RPT

MESSAGE NO.: M - 10 TIME: 1045 (Approx.)

LOCATION: In the REA

MESSAGE:

Post-Decon radiological survey results:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Left Forearm: | 1000 cpm>Bkg | Left Lower Leg: | 1000 cpm>Bkg |
| Face, Right Cheek: | 500 cpm>Bkg | Face: | As Read |
| Hands: | 100 cpm>Bkg | Hands: | 100 cpm>Bkg |
| All Other Areas: | As Read | All Other Areas: | As Read |

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: RPT

MESSAGE NO.: M - 11 TIME: 1055 (Approx.)

LOCATION: In the REA

---

INSTRUCTION:
Provide the following radiological information to the RPT as the survey is performed after the second decontamination.

---

# MEDICAL EXERCISE MESSAGE FORM

**THIS IS A DRILL!**

TO: RPT

MESSAGE NO.: M - 11 TIME: 1055 (Approx.)

LOCATION: In the REA

MESSAGE:

Post-Decon radiological survey results:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Left Forearm: | 500 cpm>Bkg | Left Lower Leg: | 500 cpm>Bkg |
| Face, Right Cheek: | 100 cpm>Bkg | Face: | As Read |
| Hands: | As Read | Hands: | As Read |
| All Other Areas: | As Read | All Other Areas: | As Read |

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: RPT

MESSAGE NO.: M - 12 TIME: 1110 (Approx.)

LOCATION: In the REA

---

INSTRUCTION:
Provide the following radiological information to the RPT as the survey is performed after the third decontamination.

---

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: RPT

MESSAGE NO.: M - 12 TIME: 1110 (Approx.)

LOCATION: In the REA

MESSAGE:

Post-Decon radiological survey results:

| Victim #1: | | Victim #2: | |
|---|---|---|---|
| Left Forearm: | As Read | Left Lower Leg: | As Read |
| Face, Right Cheek: | As Read | Face: | As Read |
| Hands: | As Read | Hands: | As Read |
| All Other Areas: | As Read | All Other Areas: | As Read |

# MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: RPT/Radiology Tech.

MESSAGE NO.: M - 13 TIME: 1140 (Approx)

LOCATION: At the REA exit

---

INSTRUCTION:
Provide the following information to the RPT and Radiology Technician after the transfer of the patients and the Medical Team has exited the REA, removed protective clothing and been whole-body frisked.

---

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: RPT/Radiology Tech.

MESSAGE NO.: M - 13 TIME: 1140 (Approx)

LOCATION: At the REA exit

MESSAGE:

After the transfer of the patients, proper exit and removal of protective clothing by Medical Team personnel--survey/status is:

| | |
|---|---|
| Patients: | All Areas Background |
| Gurneys: | All Areas Background |
| Medical Team Members: | All Areas Background |

MEDICAL CONTROLLER INSTRUCTION

DH: Q-24: TO: Medical Team

PAGE NO.: X.X.X. TITE: LZOO (Approx.)

LOCATION: Above RSA exit

ACTION:
The medical Team has satisfactorily demonstrated to the
nurse, the problems have been realistically related and
an has successfully turned via RSA, providing the solution
information needed.

## MEDICAL CONTROLLER INSTRUCTION

---

FROM: C-4b TO: Medical Team

MESSAGE NO.: M - 14 TIME: 1200 (Approx.)

LOCATION: At the REA exit

---

INSTRUCTION:
After the Medical Team has satisfactorily demonstrated their performance, the patients have been radiologically released and the team has successfully exited the REA, provide the following Drill termination message.

---

MEDICAL EXERCISE MESSAGE FORM

---

THIS IS A DRILL!

---

TO: Medical-Team

ISSUE NOTIFICATION TIME: 1200 (Approx.)

LOCATION: AFLAMS PERIMETER

---

MSG:

Radiological Medical Emergency Drill is terminated. An in-
ventory and decontamination will take place with the
release.

MEDICAL EXERCISE MESSAGE FORM

THIS IS A DRILL!

TO: Medical Team

MESSAGE NO.: M - 14 TIME: 1200 (Approx.)

LOCATION: At the REA exit

MESSAGE:

The Radiological Medical Emergency Drill is terminated. An in-place critique and discussion will take place with the Controllers.