

COLUMBIA GENERATING STATION 2002 EXERCISE CONTROLLER MANUAL



Plume Exercise: September 17, 2002
Ingestion Exercise: September 18, 2002

NOTE to Controllers and Evaluators: Following the exercise, please return this manual to EP at Mail Drop PE30.

COLUMBIA GENERATING STATION

2002 EMERGENCY EXERCISE

SCENARIO MANUAL

ENERGY NORTHWEST

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CAUTION:

The Part B contents of this package concerning scenario events and data shall remain confidential from the designated participants until completion of the exercise evaluations.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

PART A GENERAL INFORMATION

NOTE:

Part A of the scenario manual provides a general description of the exercise including administrative and logistical information.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

TABLE OF CONTENTS

	<u>Page</u>
<u>PART A - GENERAL INFORMATION</u>	
<u>FOREWORD</u>	iii
1.0 <u>SCOPE AND OBJECTIVES</u>	
1.1 Scope	1-1
1.2 Objectives and Limitations	1-1
2.0 <u>EXERCISE INFORMATION</u>	
2.1 Exercise Participants	2-1
2.2 Exercise Organization	2-1
2.3 Exercise Conduct	2-2
2.4 Safety Precautions	2-4
2.5 Simulation Guidelines	2-4
2.6 Evaluation and Critique	2-6
3.0 <u>REFERENCES AND DEFINITIONS</u>	
3.1 References	3-1
3.2 Abbreviations	3-1
3.3 Definitions	3-6
4.0 <u>CONTROLLER/EVALUATOR INSTRUCTIONS</u>	
4.1 General Information	4-1
4.2 Controller Instructions	4-1
4.3 Evaluator Instructions	4-2
4.4 Personnel Assignments	4-2
4.5 Simulator Instructions	4-6
4.6 Control Cell Instructions	4-6
4.7 Player Guidelines and Information	4-7
5.0 <u>EVENTS SCHEDULE</u>	
5.1 Times and Places	5-1
5.2 Travel Information	5-2

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

TABLE OF CONTENTS

(Continued)

	<u>Page</u>
<u>PART B - CONTROLLED INFORMATION</u>	
6.0	<u>EXERCISE SCENARIO TIMELINE</u>
6.1	Narrative Summary 6-1
6.2	Procedural Limitations 6-5
6.3	Simulator Setup 6-5
6.4	Timeline 6-6
7.0	<u>PLANT MESSAGES</u>
7.1	Plant Messages 7-1
7.2	Operations Data 7-19
8.0	<u>CHEMISTRY AND ONSITE RADIOLOGICAL DATA</u>
8.1	Process and Area Radiation Monitors 8-1
8.2	In-Plant Radiation Maps and Data 8-1
8.3	Post Accident Sampling System Data 8-2
9.0	<u>METEOROLOGY AND OFFSITE RADIOLOGICAL DATA</u>
9.1	Meteorological Data Summary 9-1
9.2	Radioactive Release Information 9-2
9.3	Onsite Plume Data 9-2
9.4	Offsite Plume Data 9-3
10.0	<u>EQUIPMENT OPERATION AND REPAIR DATA</u>
10.1	Equipment Casualties 10-1
11.0	<u>CONTROL CELL MESSAGES</u> 11-1
12.0	<u>INGESTION PHASE</u> 12-1

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

Foreword

Columbia Generating Station, owned and operated by Energy Northwest, conducts a biennial Emergency Preparedness Exercise to demonstrate that the Energy Northwest emergency response organization can protect the health and safety of the residents within the Emergency Planning Zones in the event of a radiological incident at the plant.

The primary purpose of this exercise is to provide a pre-exercise training opportunity for Energy Northwest, States, and local response organizations in accordance with their respective emergency plans and procedures.

The exercise will be conducted and evaluated by personnel selected by Energy Northwest. Upon termination of the Exercise, the Energy Northwest Controllers and Evaluators will critique the response of the Players and compile a Critique Report for distribution to Energy Northwest management to ensure appropriate actions are taken to resolve any weaknesses that are identified.

This Exercise Manual provides all information required to support successful conduct and evaluation of the Exercise. It is to be used by the Energy Northwest Controllers and Evaluators to ensure that consistent and accurate data is provided to Players during the course of their response to the sequence of events. It is provided to other observers for their information and reference when observing the Exercise.

This manual, which is subject to a limited, controlled distribution (Controllers, Evaluators and authorized observers), consists of two sections. Part A provides information of general interest, instructions to participants, a schedule of associated events, a general description and overview of the Exercise to be conducted, including administrative and logistical information helpful to all participants. Part B provides the scenario-specific information and supporting data for the sequence of events. Exercise "Players" will not have prior access to or knowledge of any of the controlled portions of the scenario that has been developed for this Exercise.

COLUMBIA GENERATING STATION

2002 EMERGENCY EXERCISE

1.0 SCOPE AND OBJECTIVES

1.1 SCOPE

The primary purpose of this Evaluated Exercise, scheduled for September 17-18, 2002, is to demonstrate effective management of the emergency, plant re-entry operations, and ingestion pathway operations with efficient coordination between the Energy Northwest emergency centers and participating offsite agencies.

Emergency response actions during the Evaluated Exercise will include:

- Prompt recognition and accurate classification of emergency conditions;
- Assessment of onsite/offsite radiological consequences, and activities to minimize the offsite consequences;
- Notification and mobilization of the emergency response organizations;
- Implementation of in-plant corrective actions;
- Activation and operation of emergency response facilities and equipment;
- Preparation of adequate records to document decisions made and actions taken;
- Formulation and recommendation of protective actions for personnel within the affected area; and
- Termination of the emergency condition, including a preliminary discussion of the transition into recovery.
- transition to the intermediate phase of emergency response; and
- transfer of MUDAC and JIC leadership to the state of Washington.

Specific objectives to be demonstrated by the Energy Northwest Emergency Response Organization and Facilities, and the Offsite Agencies are identified in the following section.

Timely and proper response by the players will contribute to mitigation of the simulated accident consequences. The exercise will include activation of the Energy Northwest Emergency Operations Facility (EOF), Technical Support Center (TSC), Operations Support Center (OSC), Simulated Control Room, and Joint Information Center (JIC). In addition, several offsite agencies will be participating and activating their emergency facilities. Offsite agency participation will include Washington State Emergency Operations Center; Washington State Department of Health; Oregon State, Benton; Franklin, and Yakima County Emergency Operations Centers; and DOE Richland.

The objectives and limitations are contained in Section 1.2. Specific guidelines on the conduct of the exercise are contained in Section 2.3. Section 2.4 lists the safety precautions. Section 2.5 describes the simulation guidelines and extent of play of Energy Northwest personnel.

1.2 OBJECTIVES AND LIMITATIONS

Exercise objectives are based on the requirements delineated in 10CFR50 and 44CFR350, as well as guidance found in NUREG 0654/FEMA REP-1 and other regulatory documents as identified in EPI-21, Drill and Exercise Performance.

NOTE: Specific exercise objectives shall not be disclosed to Energy Northwest players.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

1.2.1 Objectives for Energy Northwest's Emergency Response Organization:

1. Demonstrate the ability to accurately assess the accident conditions and implement effective mitigation strategies.
2. Demonstrate the ability to assess the accident conditions and declare the appropriate emergency classifications.
3. Demonstrate notification of emergency to state, counties, DOE-RL and NRC.
4. Demonstrate the ability to alert, notify, and mobilize emergency response personnel.
5. Demonstrate adequate initial emergency messages with appropriate content.
6. Demonstrate ability to make follow-up messages to offsite authorities that contain appropriate information.
7. Demonstrate the timely and adequate means to warn or advise individuals in the Protected Area and Owner Controlled Area.
8. Demonstrate the use of primary communications means in the following areas:
 - a. State and local 24-hour emergency response networks.
 - b. Contiguous state/local governments within the EPZs.
 - c. Federal emergency response
 - d. Plant to EOF, State and Local EOCs, and radiological monitoring teams.
 - e. Provision for alerting or activating emergency response personnel in each response organization.
 - f. Provisions for communication by the licensee with NRC headquarters and regional office.
9. Demonstrate reliable primary means of communication for licensee, local and state response organizations.
10. Demonstrate reliable voice and data communications between CR, TSC and EOF.
11. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.
12. Demonstrate reliable voice communications within the CR, TSC and EOF using effective 3-way communications
13. Demonstrate the ability of facility managers to direct, coordinate, and control the activities of their facilities.
14. Demonstrate the use of established onsite exposure guidelines consistent with EPA Emergency Worker and Lifesaving Protective Action Guides.
15. Demonstrate the ability to monitor and control emergency exposure per exposure guidelines.
16. Demonstrate the capability to determine the doses received by emergency personnel.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

17. Demonstrate reading of dosimeters at appropriate frequencies and maintenance of records.
18. Demonstrate action levels for determining the need for decontamination.
19. Demonstrate onsite contamination control measures including area access control.
20. Demonstrate the ability to respond to a man down in the Protected Area.
 - Limitation: Victim will not be transported to the hospital during the exercise. The MS-1 portion of the exercise will be conducted as a FEMA evaluation September 19, 2002.
21. Demonstrate for individuals remaining or arriving onsite during the emergency, provision for:
 - a. Individual respiratory protection
 - c. Protective clothing
 - c. KI (Use of KI will be simulated if recommended.)
22. Demonstrate the ability to make appropriate Protective Action Recommendations to state and local officials.
23. Demonstrate the ability to augment on-shift capabilities by activating onsite (TSC, OSC) and near site (JIC, EOF) emergency centers in a timely manner.
24. Demonstrate the ability to coordinate and dispatch repair team activities between the TSC and OSC.
25. Demonstrate capability to identify second shift staffing.
 - Limitation: Second shift actions are to identify a second shift. However, no shift change will be demonstrated and the paging system will not be activated.
26. Demonstrate the ability to dispatch a representative to principal offsite emergency operations centers.
 - Limitation: WA. State EOC response will be pre-staged.
27. Demonstrate the ability to transfer command and control of the emergency response in a timely manner.
28. Demonstrate the operation of the JIC and availability of space for the media.
29. Demonstrate the ability to brief the media in a clear, accurate, and timely manner.
30. Demonstrate coordinated arrangements for dealing with rumors.
31. Demonstrate the ability of the offsite radiological monitoring field teams to collect and report radiological field data.
32. Demonstrate the ability to perform offsite dose calculations.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

33. Demonstrate the ability to show the relationship between effluent monitor readings and offsite exposures for various meteorological conditions:
 - Estimate integrated dose from the projected and actual dose rates and compare these estimates with the Protective Action Guides (PAGs).
34. Demonstrate the ability to account for all individuals onsite at the time of an emergency and ascertain the names of missing individuals within 30 minutes of an emergency and account for all onsite individuals continuously thereafter.
 - **Limitation:** A complete Protected Area evacuation will not be conducted for accountability purposes. Accountability information will be simulated via a controller.
35. Demonstrate the ability to conduct a post-exercise critique to determine areas requiring additional improvements.
36. Demonstrate preliminary discussions of re-entry, recovery capabilities, and availability of procedures.
37. Demonstrate transfer of MUDAC and JIC leadership to the state of Washington.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

2.0 EXERCISE INFORMATION

2.1 EXERCISE PARTICIPANTS

2.1.1 Energy Northwest

- a. Control Room Simulator
- b. Technical Support Center (TSC)
- c. Operations Support Center (OSC)
- d. Emergency Operations Facility (EOF)
- e. Security Communications Center (SCC)
- f. Joint Information Center (JIC)

2.1.2 Offsite Agencies

- a. State of Washington
 - Emergency Operations Center
 - Department of Health
 - Department of Agriculture
 - JIC Support
- b. Benton County
 - Emergency Operations Center
- c. Franklin County
 - Emergency Operations Center
- d. Yakima County
 - EOC (Ingestion phase)
- c. State of Oregon
 - Emergency Operations Center
- d. Department of Energy - RL
 - EOF Support
 - Field Team Support
- e. NRC

2.2 EXERCISE ORGANIZATION

The Duties of the Exercise Coordinator, Lead Controllers, the Controller/Evaluators, Evaluators, Observers, and the Players are:

- 2.2.1 The Exercise Coordinator develops the scenario manual, coordinates evaluators, controllers, and players, facilitates controller decisions during the exercise, and holds a post-exercise Lead Controller critique meeting. The Coordinator prepares a post-exercise report and prepares an itemized list of recommended action items.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

- 2.2.2 Controllers perform as follows:
- a. A Lead Controller is assigned to each emergency response facility. The Lead Controller is responsible for all Controller, Evaluator, and Observer activities for that facility.
 - b. Controllers have simulated data that will be supplied to players at such times as the players perform tasks, such as inspections or reading of instrumentation, wherein they would naturally obtain the information. Controllers also deliver "Exercise Messages" to Players at specified times and places to control the progress of the scenario. Controllers submit written observations to the Lead Controller. Controllers are provided with instructions, chronology forms and objective-based evaluation materials. The instructions are contained in Section 4.0 of this manual.
- 2.2.3 Evaluators judge the effectiveness of organizations, personnel, and activities in response to the scenario. They will evaluate performance on the basis of standards or requirements contained in the appropriate Emergency Plan, Implementing Procedures, and exercise objectives. Evaluators do not control scenario actions.
- 2.2.5 Observers attend the Exercise to observe for educational benefits or for providing independent assessments.
- 2.2.6 Inspectors are members of the NRC and FEMA evaluation teams with prior knowledge of the Exercise scenario. They will observe and evaluate.
- 2.2.7 Players are Energy Northwest and other response personnel assigned to perform emergency functions as described in emergency procedures for Columbia Generating Station. This includes Players from offsite organizations (Counties, State, Federal, and private industry) as necessary.

2.3 EXERCISE CONDUCT

- 2.3.1 The exercise will be conducted on September 17 and 18, 2002. Exercise players will not possess prior knowledge of the exact exercise start time, and will follow normal routines for that day until mobilized as part of the emergency response.
- 2.3.2 For the exercise, the Control Room staff will operate from the Columbia Generating Station Simulator. Prior to the start of the exercise, a shift briefing will be conducted in the Simulator. The players will be briefed on the postulated plant conditions and general guidelines for the conduct of the exercise. Following the briefing, the in-plant shift personnel (non-control room staff) will return to their normal workstations.
- 2.3.3 The exercise will commence with a postulated condition necessitating the declaration of an emergency classification and escalate to require other emergency classification declarations.
- 2.3.4 The scenario contains simulated radiological release and plant conditions that will require consideration of protective actions for the general public.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

- 2.3.5 Exercise players will perform, as appropriate, radiological monitoring and dose assessment activities. Radiological field monitoring teams will be dispatched in order to evaluate communications and monitoring procedures.
- 2.3.6 The Joint Information Center (JIC) will be staffed and activated. Mock media actors will simulate participation by members of the media. News bulletins will be made which depict simulated exercise events. However, no exercise press bulletins will be released to the actual media or public.
- 2.3.7 If postulated scenario conditions warrant evacuation of non-essential site personnel, these actions will be simulated.

CAUTION

Care shall be taken to ensure that individuals who may overhear or observe exercise activities are not misled into believing that an actual emergency situation exists.

- 2.3.8 All emergency communications that are part of the exercise shall be clearly identified as part of the exercise. Verbal communications that could be heard by non-participants shall initiate with and be closed by the statement "This is a drill." Any use of plant alarms (Station Alarm or Fire Alarm) will be preceded by announcing "This is a drill" over the plant page system. Any exercise documentation transmitted via facsimile machine shall have the word "Drill" stamped on them prior to transmittal.
- 2.3.9 Exercise participation will include the following emergency organizations and facilities:
- COLUMBIA GENERATING STATION
- On-shift Emergency Organization (Normal Operations, Shift Personnel, Chemistry, Radiation Protection, Maintenance, and Security)
 - Onsite Emergency Facilities (TSC and OSC)
 - Near site Emergency Facility (EOF)
 - Joint Information Center (JIC)
- All Columbia Generating Station site personnel are potential participants, since the onsite personnel are expected to report abnormal conditions observed during the exercise, such as smoke, unusual noises, etc. The emergency organization may also call out additional personnel to assist in the response to the simulated emergency conditions.
- 2.3.10 Day one of the exercise will conclude following transfer of MUDAC and JIC leadership to the state of Washington. Following the transfer, day one events will terminate and an in-center critique will be conducted.
- 2.3.11 Following the EOF critique, a briefing will be held to provide the responding offsite agencies with an update on events of day one. This also allows for clarification of roles and responsibilities of the various agencies.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

2.3.12 Day two events will demonstrate the objectives for the ingestion phase of the event. Day two will cover operations that would actually occur over several days with the state of Washington in the lead.

2.4 SAFETY PRECAUTIONS

2.4.1 Personnel will not, in response to the postulated accident conditions, take any action that jeopardizes plant or personnel safety.

2.4.2 Actual plant valves, breakers, and controls shall not be manipulated in response to this exercise. The Columbia Generating Station Simulator and equipment mockups will be manipulated as necessary to meet specific exercise objectives.

2.4.3 In the event an actual emergency occurs during the conduct of this exercise, the exercise Emergency Director shall immediately contact the real Shift Manager and coordinate available resources to mitigate the emergency.

- In the case of an actual fire, the operating shift will provide the initial response.
- In the case of an actual medical emergency, the operating shift will provide the initial response.
- The exercise clock and exercise activities can be stopped at the discretion of the Emergency Coordinator and the real Shift Manager until the actual emergency is assessed and/or under control.
- Qualified exercise participants and exercise control team members can be directed to support the real Shift Manager in response to the actual emergency.

2.4.4 All personnel who enter the RCA will be radiation worker qualified.

2.4.5 Exercise personnel shall observe all radiological controls. In the event the data presented in this exercise package indicates lower radiation levels than those actually found in the plant, actions for the actual (higher) readings shall be followed. In such instances the OSC Health Physics Controller and the Lead Controller should be notified.

2.4.6 ALARA concepts shall be observed during the course of the exercise. Activities associated with the performance of the exercise shall not occur in areas where personnel will receive significant radiation exposures.

2.5 SIMULATION GUIDELINES

NOTE

Simulated exercise events will be initiated as indicated in this exercise scenario package under the direction of a Lead Controller. Since all possible player reactions to the simulated events can not be anticipated, individual Controllers may initiate simulated situations to preserve the continuity of the overall scenario timeline without prior approval of a Lead Controller. However, individuals are prohibited from creating real or simulated situations that are not provided for in the scenario package and that may affect the timeline without prior approval of a Lead Controller.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

- 2.5.1 Exercise players are expected to carry out all responses to the postulated scenario events as if responding to a real emergency. Actions required by Plant Operating Procedures and Emergency Plan Implementing Procedures shall be carried out to the fullest extent possible, unless otherwise directed by the exercise control team.
- 2.5.2 Since the exercise will be performed using the Columbia Generating Station Control Room Simulator, exercise plant parameter data and radiological monitoring data will be obtained from the Simulator control panels and the GDS terminals, which will be configured to display the Simulator data.
- 2.5.3 If a failure of the Simulator occurs and the Simulator can not be recovered in a reasonable period of time, backup data sheets may be used to continue exercise play. The exercise may be terminated at the discretion of the exercise coordinator.
- 2.5.4 Portable fire extinguishers or other sealed canisters shall not have the seals broken or safety pins removed in response to the postulated scenario events, except when specifically required by instructions provided in this scenario package.
- 2.5.5 Exercise players will be expected to obtain the proper tools and equipment necessary in responding to the scenario conditions in order to receive credit for their actions to mitigate the consequences of the simulated conditions.
- 2.5.6 The exercise package may include the use of mock-ups to simulate plant equipment. In most situations where mock-ups are available, the exercise players will be expected to respond to the actual plant equipment and then the exercise control team will direct them to the mock-up. Due to the location of some mock-ups, the exercise control team may instruct the players to proceed directly to the mock-up. Specific instructions are provided in the scenario package regarding the use of individual mock-ups.
- 2.5.7 The use of protective clothing will be demonstrated, not simulated, by the exercise players in the plant.
- 2.5.8 To prevent unnecessarily alarming members of the general public who may observe their activities the radiological field monitoring teams will simulate the use of protective clothing.
- 2.5.9 SCBAs will be donned as required by the scenario conditions, but, after initial fitting on the face, hoses may be disconnected from the mask.
- 2.5.10 The use of silver zeolite cartridges when taking air samples will be simulated. The exercise control team will provide charcoal cartridges for use in the air samplers.
- 2.5.11 The use of potassium iodide for personnel protection will be simulated; *however, actions associated with dispensing potassium iodide will be demonstrated.*
- 2.5.12 If a decision is made to use the Post Accident Sampling System (PASS), sampling activities will be simulated.
- 2.5.13 No plant equipment will actually be removed from service or tagged out in response to the scenario events. However, all necessary authorizations required by procedures are expected to be obtained prior to the simulation of the tag out.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

- 2.5.14 Radiological postings as required by the simulated scenario radiation levels will not be simulated. The exercise control team will insure that the postings are appropriately labeled to identify them as part of the exercise.
- 2.5.15 If consideration is given to relocating the Primary Access Point (PAP) due to the simulated radiological conditions, this activity will be simulated.
- 2.5.17 Activation of the Emergency Response Data System (ERDS) *will be demonstrated and simulator data will be transmitted to the NRC.*
- 2.5.16 Use of the Automated Notification System (ANS) for mobilizing emergency response personnel will not be simulated. Autodialer exercise scenarios are provided for use during the response to the simulated exercise events. The ANS will not be used to notify personnel of second shift staffing requirements.
- 2.5.17 If Security posts such as the PSF Ambulance Bay, roadblocks, and Joint Information Center are manned for this exercise, they may be secured after two hours or when applicable objectives have been demonstrated.

2.6 EVALUATION AND CRITIQUE

Evaluators and Controllers will evaluate Exercise performance on the basis of emergency procedures for Columbia Generating Station. Evaluators and Controllers will prepare evaluation forms documenting the results of exercise performance. Controllers will prepare written comments critiquing the quality of the scenario and control of the exercise.

An in-center self-critique will be conducted in each emergency center immediately following the exercise. This self-critique will be lead by the respective emergency center manager. Immediately following this self-critique, the evaluators for each of the centers will add any additional applicable performance feedback not identified in the self-critique.

Deficiencies in performance, emergency procedures, facilities, equipment, etc., will be identified. Deficiencies will be entered into the applicable action tracking databases for follow-up.

The schedule for the critiques is included in Section 5.0.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

3.0 REFERENCES AND DEFINITIONS

3.1 REFERENCES

- 3.1.1 Columbia Generating Station Emergency Plan
- 3.1.2 Columbia Generating Station Emergency Plan Implementing Procedures
- 3.1.3 Columbia Generating Station Technical Specifications
- 3.1.4 Columbia Generating Station Final Safety Analysis Report
- 3.1.5 EP Instruction EPI-21, Drill and Exercise Performance
- 3.1.6 10 CFR 50.47, 50.54 and Appendix E
- 3.1.7 44 CFR 350
- 3.1.8 NUREG-0654/FEMA-REP-1, Rev. 1
- 3.1.9 Columbia Generating Station Piping and Instrumentation Drawings

3.2 ABBREVIATIONS

AC	Alternating Current
ACRS	Advisory Committee on Reactor Safeguards
ADS	Automatic Depressurization System
AED	Architectural Engineering Drawing
ALARA	As Low As Reasonably Achievable
ANI	American Nuclear Insurers
ANN	Annunciator
Amp	Ampere
APRM	Average Power Range Monitor
ARI	Alternate Rod Insertion
ARM	Area Radiation Monitor
AOV	Air Operated Valve
AS	Auxiliary Steam
ATWS	Anticipated Transient Without Scram
Bldg	Building
BOP	Balance of Plant
Btu	British thermal unit
BWR	Boiling Water Reactor
C	Containment
°C	Degrees Centigrade
CAC	Containment Atmospheric Control
CC	Channel Calibration
cc	Cubic Centimeters
Ci	Curie (3.7E10 disintegrations per second)
CIA	Containment Instrument Air
CFM	Cubic Feet per Minute
CFT	Channel Functional Test
cm	Centimeters
COND	Condensate

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

cpm	Counts Per Minute (units for an event rate, e.g., interactions of radiation with a detector per unit time).
cps	Counts per second
CRD	Control Rod Drive
CR	Control Room
CRO	Control Room Operator
CRS	Control Room Supervisor
CST	Condensate Storage Tank
CVI	Certified Vendor Information
CW	Circulating Water
C-Zone	Contamination Zone
DAW	Dry Active Waste (denotes a particular source or type of radioactive waste)
DBA	Design Basis Accident
DC	Direct Current
DCS	Document Control System
DEH	Digital Electro-Hydraulic control
Demin	Demineralizer
DG	Diesel Generator
dpm	Disintegrations per minute
dP or DP	Differential Pressure
dT or DT	Differential Temperature
DVM	Digital Volt Meter
DW	Demineralized Water or Drywell
E	East
ECCS	Emergency Core Cooling Systems
EOC	Emergency Operation Center
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
EPIP	Emergency Plan Implementing Procedure
EPN	Equipment Piece Number
EPRI	Electric Power Research Institute
EQ	Equipment Qualification
ESF	Engineered Safety Feature
°F	Degrees Fahrenheit
FCV	Flow Control Valve
FEMA	Federal Emergency Management Agency
F/D	Filter Demineralizer
FPC	Fuel Pool Cooling
FSAR	Final Safety Analysis Report
ft	Feet
ft-lb	Foot-pound
FW	Feedwater
G.E.	General Electric
GE	Greater than or equal to
gnd	Ground
Gpm	Gallons Per Minute
GSB	General Service Building
GT	Greater than

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

HCU	Hydraulic Control Unit
HEPA	High Efficiency Particulate Air
Hg	mercury
HP	Health Physics
HPCS	High Pressure Core Spray
hr	Hour
HV	High Voltage
HVAC	Heating, Ventilation and Cooling
HX	Heat exchanger
I&C	Instrumentation and Controls
ILRT	Integrated Leak Rate Test
IMDS	Instrument Master Data Sheet
in.	Inch
INPO	Institute of Nuclear Power Operations
IV	Independent Verification
JIC	Joint Information Center
lbs.	Pounds
LBD	Licensing Basis Document
LC	Locked Closed
LCO	Limiting Condition for Operation
LCS	Licensee Controlled Specification
LD	Leak Detection
LE	Less Than or Equal to
LER	Licensee Event Report
LI	Level Indicator
LLRT	Local Leak Rate Test
LO	Locked Open
LOCA	Loss of Coolant Accident
LPCI	Low Pressure Coolant Injection
LPCS	Low Pressure Core Spray
LR	Level Recorder
LSA	Low Specific Activity (a radioactive material shipping category)
LT	Less Than
m	Meters
ma	Milliamperes
madc	Milliamperes Direct Current
MCC	Motor Control Center
MDS	Master Data Sheet
min.	Minute or Minimum
mils	Thousandths of an inch
ml	Milliliter
mm	Millimeter
MOV	Motor Operated Valve
mR	Milliroentgen (Millirem if absorbed beta or gamma dose)
mrاد	Millirad
mrem	Millirem
M&TE	Measurement and Test Equipment
MSDS	Material Safety Data Sheet
MSIV	Main Steam Isolation Valve

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

mv	Millivolts
mvdc	Millivolts direct current
MWe	Megawatt electric
MWt	Megawatt thermal
N	North
N/A	Not Available or Not Applicable
N/P	Not Performed
NPSH	Net positive suction head
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OER	Operating Experience Report
OG	Off Gas
OPRM	Oscillation Power Range Monitoring system
OPS	Operations
OSC	Operation Support Center
P&ID	Piping and Instrumentation Drawing
PASS	Post Accident Sample System
PC	Protective Clothing or Primary Containment
PER	Problem Evaluation Request
PM	Preventive Maintenance
PMU	Panel Meter Units
ppm	Parts Per Million
PPM	Plant Procedure Manual
PPS	Plant Procedure System
psia	Pounds per square inch (absolute)
psig	Pounds per square inch (gauge)
QA	Quality Assurance
QC	Quality Control
R	Roentgen
RAD	Radiation Absorbed Dose
RB	Reactor Building
RCC	Reactor Closed Cooling Water
RCIC	Reactor Core Isolation Cooling
REM	Roentgen Equivalent Man
RF	Refuel
RHR	Residual Heat Removal
RMC	Reactor Manual Control
RPIS	Rod Position Indication System
rpm	Revolutions per minute
RPS	Reactor Protection System
RPV	Reactor Pressure Vessel
RRC	Reactor Recirculation
RSCS	Rod Sequence Control System
RTD	Resistance Temperature Detector
RTT	Response Time Test
RW	Radwaste
RWCU	Reactor Water Cleanup
RWM	Rod Worth Minimizer

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

RWP	Radiation Work Permit
Rx	Reactor
S	South
SAT	Satisfactory
SC	Sealed Closed
scfm	Standard Cubic Feet per Minute
SCRAM	deenergization of both divisions of RPS
SDV	Scram Discharge Volume
SGT	Standby Gas Treatment
sh.	Sheet
SM	Shift Manager
SJAE	Steam jet Air Ejector
SLC	Standby Liquid Control
SO	Sealed Open
SOP	Standard Operating Procedure
SRV	Safety Relief Valve
SW	Service Water or Southwest
TAF	Top of Active Fuel (352.56" Above Vessel Bottom)
TB	Terminal Block
T, TB, TGB	Turbine Building
TEMP	Temperature
Term.	Terminal
TIP	Traversing In-Core Probe
TS	Technical Specification
TSC	Technical Support Center
TSW	Plant Service Water
VAC	Volts Alternating Current
VDC	Volts Direct Current
wc	Water column
wg	Water gauge
WNP-2	Washington Nuclear Project 2 (former name of Columbia Generating Station)
WO	Work Order
WR	Work Request
WW	Wet Well
u or μ	Micro (1E-6 as in microcurie - uCi)
UNSAT	Not Satisfactory

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

3.3 DEFINITIONS

ALERT: The level of emergency classification that indicates that events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant.

ANTICIPATED TRANSIENT WITHOUT SCRAM (ATWS): Failure of the reactor control rods to insert into the core upon a scram signal from the Reactor Protection System or the failure of said system to initiate a SCRAM when Reactor Protection System trip limits have been exceeded.

ASSESSMENT ACTIONS: Those actions taken during or after an accident to obtain and process information that is necessary to make decisions to implement specific emergency measures.

COLUMBIA GENERATING STATION: current name of the nuclear power plant formerly known as WNP-2.

CONTROL ROOM (CR): The principal onsite location from which the reactor is controlled and from which emergency control is initially exercised.

CONTROLLER: A member of the Exercise control group, assigned to one or more activities or functions for the purpose of keeping the action going according to a scenario, resolving scenario discrepancies, and providing information which determines the expected actions of the players.

CORRECTIVE ACTIONS: Those emergency measures taken to improve or terminate an emergency situation.

DECONTAMINATION: The process by which the body or an object is relieved of radioactive substances (contamination).

DOSE ASSESSMENT: The process of estimating the amount of radiation a person will potentially receive as a result of exposure to a radiological release.

ENERGY NORTHWEST: Current name of the nuclear power plant licensee formerly known as Washington Public Power Supply System.

EXERCISE: A supervised event aimed at evaluating and assessing skills in a particular operation.

EMERGENCY ACTION LEVELS (EALs): Radiological dose rates; specific contamination levels or airborne, waterborne, or surface-deposited concentrations of radioactivity; or specific plant conditions that may be used as thresholds for initiating specific emergency measures.

EMERGENCY OPERATIONS CENTER (EOC): An emergency response facility from which government officials exercise direction and control. The EOCs are located as follows:

Benton County:	651 Truman Ave. Richland, WA 99352
Franklin County:	502 Boeing St. Pasco, WA 99301
State of Washington:	Building #20, East Aviation Drive Camp Murray, WA

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

State of Oregon: 595 Cottage Street, NE
Salem, OR 97310

EMERGENCY OPERATIONS FACILITY (EOF): The Energy Northwest emergency response facility from which overall direction and control are exercised for emergencies at Columbia Generating Station. The facility also provides a central point of contact for communications and external organizations, and is fully activated for emergencies classified as an Alert or higher.

EMERGENCY PLANNING ZONES (EPZs): The land areas encompassed within approximately 10 and 50 mile radii of Columbia Generating Station in which protective actions may be necessary to protect the public in the event of a nuclear plant accident. The 10-mile zone is referred to as the Plume Exposure Pathway EPZ; the 50 mile zone is termed the Ingestion Exposure Pathway EPZ.

EMERGENCY RESPONSE FACILITY: Any of several onsite and offsite centers that are activated to coordinate emergency actions. Included in this category are the Control Room, Technical Support Center, Operations Support Center, Emergency Operations Facility, Joint Information Center, and State and local Emergency Operations Centers.

EVALUATOR: A member of the exercise evaluation group, assigned to one or more activities or functions for the purpose of evaluating and making recommendations for improvement. An evaluator may serve in a dual capacity as both a Controller and Evaluator.

EXCLUSION AREA: The area surrounding the Columbia Generating Station in which Energy Northwest has the authority to determine all activities including exclusion or removal of persons and property from the area during accident conditions.

EXERCISE: An event that tests the overall functions and capabilities of organizations involved in responding to an emergency situation. An exercise will usually simulate an emergency that results in offsite radiological releases that require response by offsite authorities.

FIELD TEAM: Two-person teams responsible for monitoring radiation levels in the environment and collecting soil, air, vegetation, snow, and water samples for laboratory analysis. Also known as Environmental Field Teams.

GENERAL EMERGENCY: The most severe level of emergency classification, which indicates that events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Release of radioactive material can be reasonably expected to exceed Protective Action Guide exposure levels offsite.

INGESTION EXPOSURE PATHWAY: The exposure mode for which the zone of concern encompasses an area of approximately 50 mile radius and where exposure occurs from ingestion of contaminated water or foods; such as mild or fresh vegetables. The period of potential exposure could range in length from hours to months.

JOINT INFORMATION CENTER (JIC): An emergency response facility, which is staffed by Energy Northwest, local, State, DOE, NRC and FEMA officials. The JIC provides a forum and

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

point of contact for a coordinated release of news and information to the news media, general public, Energy Northwest employees and special interest groups.

OBSERVER: Any individual who is authorized to observe the Exercise, but is not authorized to interact with the players.

OFFSITE: All land and water areas outside the Exclusion Area surrounding the Columbia Generating Station site.

ONSITE: 1. For the purposes of field radiation monitoring, all land and water areas within the Exclusion Area surrounding the Columbia Generating Station site; 2. For the purposes of station personnel accountability, all land and water areas within the Protected Area surrounding the Columbia Generating Station.

OPERATIONS SUPPORT CENTER (OSC): An onsite emergency response facility that provides a location where emergency response teams can be assembled and coordinated during an emergency.

OWNER-CONTROLLED AREA: The area around the Columbia Generating Station that is owned or leased and to which access controlled by Energy Northwest.

PARTICIPANT: An individual who has some part in the Exercise, whether as an Evaluator, Controller, Player or Observer.

PLAYERS: All individuals who are assigned to perform functions of the emergency response organization, as described in the appropriate Emergency Plan and Emergency Plan Implementing Procedures.

PLUME EXPOSURE PATHWAY: The exposure mode for which the zone of concern encompasses an area of approximately a 10-mile radius around Columbia Generating Station. The principle exposure sources in this area: 1) whole body external exposure to gamma radiation from the plume and deposited material, and 2) inhalation exposure from the passing radioactive plume. The period of potential exposure could range from hours to days.

POPULATION AT RISK: Those persons for whom protective actions would be taken.

PROTECTED AREA: The area within the Site Boundary encompassed by physical barriers and to which access is controlled for security purposes.

PROTECTIVE ACTION: Those emergency measures taken after an accident or an uncontrolled release of radioactive materials has occurred, for the purpose of preventing or minimizing radiological exposures to personnel that would otherwise occur.

PROTECTIVE ACTION GUIDES (PAGs): Projected radiological doses to individuals in the general population that warrant protective action following a release of radioactive material.

SITE AREA EMERGENCY: The level of emergency classification which indicates that events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases of radioactive material are not expected to exceed Protection Action Guide (PAG) exposure levels, except within the Site Boundary.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

TECHNICAL SUPPORT CENTER (TSC): An onsite emergency response facility for use by technical and management personnel in support of the command and control functions executed in the Control Room.

UNUSUAL EVENT: The lowest level of emergency classification, which indicates that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

4.0 CONTROLLER/EVALUATOR INSTRUCTIONS

4.1 GENERAL INFORMATION

Each Controller and Evaluator should be familiar with the following:

- The objectives of the Exercise (Section 1.0).
- Applicable precautions and limitations (Section 2.0).
- The Exercise scenario, including the initial conditions and the expected course of actions (Section 6.0).
- The various locations that will be involved and the specific items to be observed at those locations.
 - ◆ Simulated messages are found in Section 7.0.
 - ◆ In-plant radiation is found in Section 8.0.
 - ◆ Environmental radiation data is in Section 9.0.
 - ◆ Section 10.0 contains individual mini-scenarios for various activities involving repair teams or other simulated activities in the plant.
 - ◆ Section 11.0 refers to simulated media and telephone messages which are contained in a separate volume.
- The evaluation checklists provided by the Lead Controllers.

4.2 CONTROLLER INSTRUCTIONS

- 4.2.1 Controllers will position themselves at their assigned locations at least 15 minutes prior to the activation of their facility.
- 4.2.2 Controller communications will be tested prior to Exercise commencement. Watches and clocks will be synchronized with the Simulator Control Room clock as part of the communications testing.
- 4.2.3 Controllers will comply with instructions from the Exercise Coordinator or their facility Lead Controller.
- 4.2.4 Each Controller will have copies of the messages controlling the progress of the Exercise scenario. No messages shall be delivered out of sequence or other than as written unless specifically authorized by the Exercise Coordinator or Lead Controller.
- 4.2.5 Controllers will not provide information to the Players regarding scenario progression or resolution of problems encountered in the course of an exercise. Exercise participants are expected to obtain information through their own organizations and exercise their own judgment in determining response actions and resolving problems.
- 4.2.6 If a Player insists that certain parts of the scenario are unrealistic, Controllers should explain that exercise events often need to be unrealistic to produce situations that allow demonstration of objectives.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

4.3 EVALUATOR INSTRUCTIONS

- 4.3.1 Each Evaluator will record the pertinent actions of Exercise participants. Each Evaluator should note the arrival and departure times of participants, major activities or milestones, and problem areas encountered. Evaluator comments will be used to construct the Exercise chronology and preparing a written evaluation of the Exercise.
- 4.3.2 Sheets containing specific objective evaluation criteria will be provided to each Evaluator during the briefing immediately prior to conduct of the Exercise. These sheets must be completed by each Evaluator and provided to the Lead Evaluator at the conclusion of the Exercise.
- 4.3.3 Any other specialized Evaluator forms will be distributed to Evaluators as needed.

4.4 PERSONNEL ASSIGNMENTS

The personnel assignments for the Controller/Evaluator organization are listed in Table 4.4-1.

Note: Some personnel may play a dual Controller/Evaluator role.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

TABLE 4.4-1

CONTROLLER/EVALUATOR ASSIGNMENTS

ONSITE

Exercise Coordinator		Bill Sawyer
Team Sponsor	C	TBD
JIC Sponsor		Gerry Kucera

CONTROL ROOM SIMULATOR

Lead Controller		Bill Sawyer
Instructor Facility Operator		Ron Hayden
Controller/Evaluator		Pat Bagan

TECHNICAL SUPPORT CENTER

Lead Controller		Dave Holmes
Evaluator		Daljit Mand Dave Schumann

OPERATIONS SUPPORT CENTER

Lead Controller		Dan Lemiere
Lead Evaluator		John Dabney
Craft Lead Controller		Dan Carty
Craft Lead Controller		Gary Shindehite
Health Physics Controller		Dennis Dinger
Repair Team #1		Dan Lemiere
Repair Team #2		Ed Prilucik
Repair Team #3		Mike Curren
Repair Team #4		Robert McQuoid
Repair Team #5		Roger Catlow
Repair Team #6		Jim Michaud
Repair Team #7		Joe Flerchinger
Repair Team #8		Steve Short
Repair Team #9		Ed Cheyney

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

ONSITE

Repair Team #10	TBD
Repair Team #11	TBD
Repair Team #12	TBD
Fire Drill Controller	Wayne Harper

EMERGENCY OPERATIONS FACILITY

Lead Controller	Pat Bagan
Controller/ Evaluator (Mgt)	TBD
Controller/ Evaluator (Eng)	none
Controller/ Evaluator (Site Support)	Debbie Hebert
MUDAC Evaluator	Mike McLain
Field Team Controller	Vicki Burton
Field Team Controller	Gerry McHenry
Field Team Controller	John Hill

**SECURITY COMMUNICATIONS
CENTER/CENTRAL ALARM STATION**

SCC Controller	Sue May
CAS Controller	Chandler Peterson

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

JOINT INFORMATION CENTER

Lead Controller	John Ittner
Lead Evaluator	Maurice Hatrick
Evaluators	James Burnes Audrey Desserault

CONTROL CELL

NRC ENS	Mitch Morris
BPA, INPO, etc.	Paul Ziemer
GE, Raytheon, Engineering, etc.	Dave Weber
Media Caller	Denise Mills
Media Caller	Tim Stumetz
Media Caller	Bev Merrill
Media Caller	Brenda Bridwell
Public Caller	Jackie Brown
Public Caller	Denise Bostrom
Public Caller	Russ Brown
Public Caller	Jerrine Gjerdevig
Media Actor	Dave Orcutt
Media Actor	Ron Seidl
Media Actor	Ron Casavant
Media Actor	Judy Hamilton
Media Actor	Kathy Norris
Media Actor	Jim Hackett

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

4.5 SIMULATOR INSTRUCTIONS

The simulator will be used for data generation and plant response interactions with the Control Room crew. Should it malfunction or go off-line (e.g., a loss of power to the Training Center), the Lead Controller has several options to choose from, including:

- freezing (stopping) Exercise activities until the Simulator can be reset and returned to operation;
- completing the Exercise using data provided by Controllers at Simulator over the phone/fax; or
- ending the Exercise if most of the objectives have been demonstrated.

4.6 CONTROL CELL INSTRUCTIONS

It is common to have non-participating off-site agencies simulated during exercises. These state, local, and industrial organizations, while part of the Columbia Generating Station emergency effort, are not always able to participate due to time and money constraints. In their place a "Control Cell" is used to represent non-participants.

The Control Cell will receive calls from exercise participants, and it will also place calls (e.g., to demonstrate rumor control capabilities or to represent concerned citizens and the news media, etc.).

Additional individuals located offsite may serve a Control Cell function for the state and local agencies and/or public information.

Control Cell guidelines for this Exercise are as follows:

The Control Cell should not take calls for:

- Any plant emergency centers
- Security
- State of Washington
- Benton or Franklin County
- DOE-RL

The Control Cell should take calls for:

- Federal agencies other than DOE (e.g., FEMA, NRC, Congress, etc.)
- Other utilities
- Vendors (e.g., G.E., Raytheon, Bechtel, etc.)
- Support organizations (e.g., INPO, ANI, EPRI, etc.)
- NRC (ENS)

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

4.7 PLAYER GUIDELINES AND INFORMATION

This section provides guidelines and information for all Players, which should be followed throughout the conduct of the Exercise. A pre-exercise briefing will be held for key Players to review the entire exercise process, including "Precaution and Limitations" in Section 2.4, and the following information.

4.7.1 Player Guidelines

- a. Maintain a professional attitude throughout the Exercise.
- b. Teamwork is essential! Do your job and then help other people do theirs. For example, if you know certain information should be available, ask for it.
- c. Brainstorm and look for all possible solutions or consequences of events. Maintain the "big picture" of scenario events.
- d. Identify yourself by name and function to the Controller in your area. Always wear your identification badge.
- e. If you are entering normal nuclear station radiation areas, observe all rules and procedures. No one (including Controllers) is exempt from normal station radiological practices and procedures.

NOTE: DO NOT ENTER HIGH RADIATION OR CONTAMINATED AREAS IN THE PLANT. FOLLOW ALARA PRINCIPLES.

- f. Observe all normal security procedures. All normal security procedures are in effect without exception. If a security condition arises, obey immediately the directions of Security Officers.
- g. Initiate actions in accordance with instructions and responsibilities.
- h. Three-way communications should be used. Minimize use of abbreviations and acronyms. Always include "This is a drill" in communications except in face-to-face discussions within your facility.
- i. Use and demonstrate knowledge of the Emergency Plan and Implementing Procedures.
- j. No response to an Exercise situation will be simulated without Controller approval. No action will be taken that reduces that margin of safety in the plant.
- k. Keep a list of items that you believe will improve the plan and/or procedures. Provide this to your Controller/Evaluator at the end of the Exercise.
- l. Remember, one of the main purposes of an exercise is for you to assure yourself that you are adequately prepared. Identify areas for improvement.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

4.7.2 Player Information

The success of the Exercise is largely dependent upon Player reaction, Player knowledge of their appropriate Emergency Plan and Implementing Procedures, and an understanding of the purpose of the Exercise. Initial conditions that will affect Player actions will be provided at the time the Exercise begins. However, most of the elements of the Exercise play will be introduced through the use of controlled casualties on the simulator or with Plant mock-ups. Players are responsible for initiating actions during the Exercise in accordance with instructions for their particular function.

Although Controllers will attempt to be present during all important Player evolutions, Players should attempt to notify a Controller to be present prior to performing required emergency actions to ensure that credit is obtained for appropriate Player actions.

Players are reminded not to be excessively critical of the mechanics of the Exercise scenario. This Exercise is designed to evaluate the Team in its response to the Emergency Plan and Implementing Procedures. Players should note any needed improvements that come to their attention during the Exercise and submit them to the appropriate Controller at the conclusion of the Exercise.

It is necessary to postulate a series of equipment failures and other events to develop an accident sequence that culminates in the need for recommending that the public take protective action. Please accept exercise information and messages as written, and respond as though the depicted event occurred. If corrective actions are discovered that would terminate the emergency, they should be identified to a Controller so that the Exercise can continue on schedule.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

5.0 EVENTS SCHEDULE

5.1 TIMES AND PLACES

SEPTEMBER

DATE	TIME	Activity	Location
10	9:00-12:00	ERO Controller/Evaluator Briefing for EMERGENCY EXERCISE	(EOF)
11	1:00-3:00	Pre-Drill Walkdowns for OSC Repair Team Controllers	(GSB Lunch Room)
16	3:00-4:00	ERO Controller/Evaluator Briefing	(EOF)
17	8:00-4:30	Team C Emergency Exercise (PLUME)	
18	8:00-4:30	Team C Emergency Exercise (INGESTION) *	
19	8:00-11:00	Lead Controller/Lead Evaluator Ingestion Exercise Critique	(EOF)
19	12:00-4:00	Lead Controller/Evaluator Plume Exercise Critique	(EOF)
20	8:00-9:00	Exercise Debrief w/Sr. Management (NRC Observed)- Only Lead Evaluators attend	Walkley Rm. 3000 Geo. Washington Way
25	2:00-4:00	Team C Exercise Debrief (w/all Team C Players) - Only Lead Evaluators attend	PSF Auditorium

* Energy Northwest Ingestion Exercise players will consist of the EOF Manager, EOF Secretary, EOF Administrative staff, EOF PIO, Radiological Emergency Manager, MUDAC (except field teams), JIC (except phone teams and phone team supervisors).

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

5.2 TRAVEL INFORMATION

For prior arrangements, questions, or permission to observe, contact:

Energy Northwest
Emergency Preparedness Section
Attn: Mr. J.L. Pierce MD PE30 (509) 377-8524
P.O. Box 968
Richland, WA 99352-0968

Airports

Tri-Cities Airport, Pasco, WA - Approximately 27 miles from the plant (Take I-182 West toward Richland then North on George Washington Way, continue North on Stevens Drive and North on Route 4 South, then follow the signs to Columbia Generating Station). Refer to Figure 5-1.

Hotels

Red Lion Inn (Hanford House) (509) 946-7611
Richland, WA

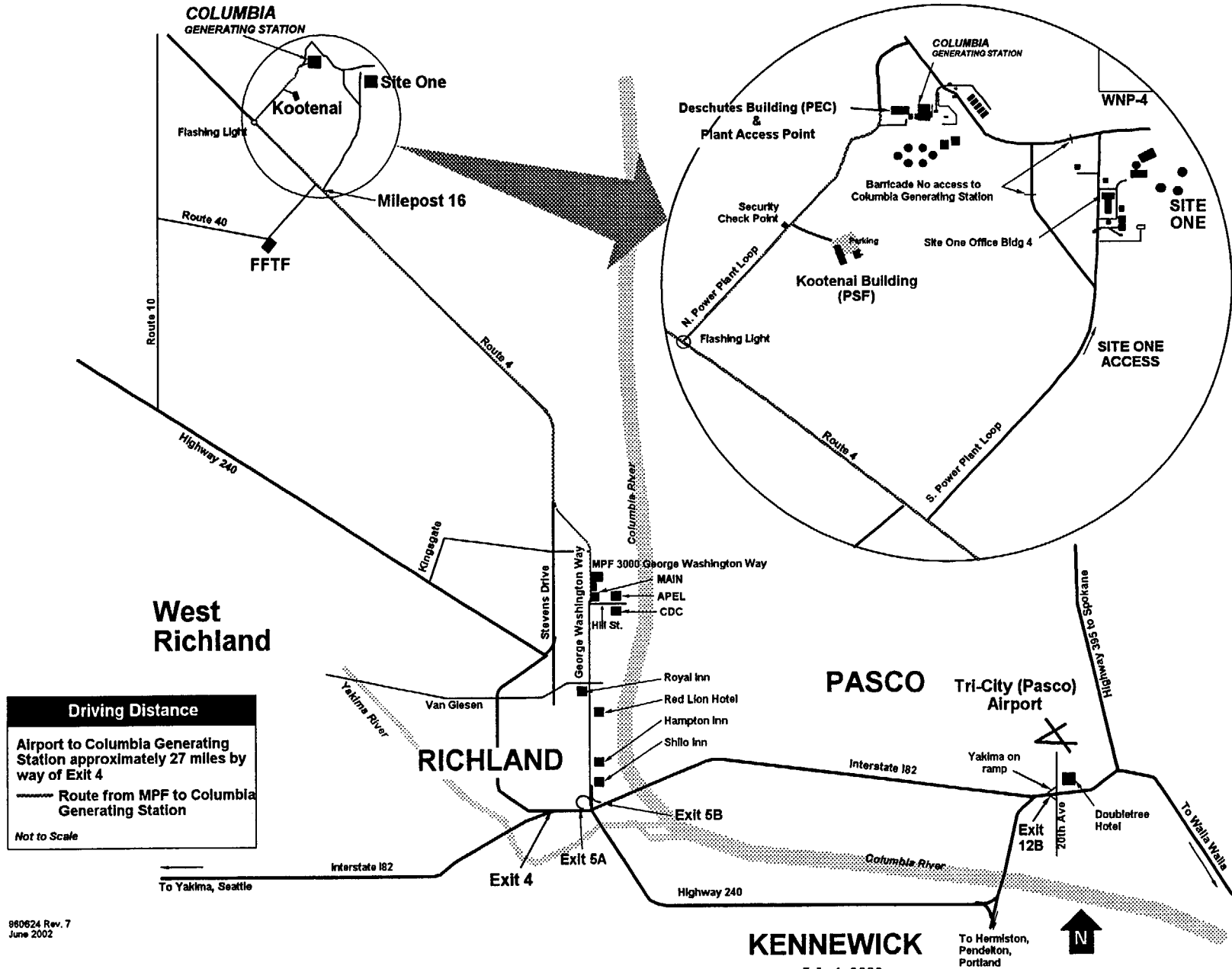
Royal Inn (former Tower Inn) (509) 946-4121
Richland, WA

Shilo Rivershore Motor Inn (509) 946-4661
Richland, WA

Hampton Inn (509) 943-4400
Richland, WA

Doubletree Inn - Pasco (509) 547-0401
Pasco, WA (near airport)

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE



980624 Rev. 7
June 2002



**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

PART B CONTROLLED INFORMATION

CAUTION:

Part B of the scenario manual includes Sections 6 through 12 and is subject to a limited, controlled distribution (Controllers, Evaluators and authorized Observers). These sections provide the scenario specific information and supporting data for the sequence of events. Exercise "Players" shall not have prior access to or knowledge of any of the information provided in these sections.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

6.0 DRILL SCENARIO TIMELINE

6.1 NARRATIVE SUMMARY

Initial Conditions

For the past 230 days Columbia Generating Station has been operating at or near 100% power.

The temperature is 68°F with winds from the northeast at 8 mph. It is an overcast morning with no precipitation in the forecast. Clearing is not expected for the next 24 hours.

The plant entered Technical Specification LCO 3.4.2 at 0400 and is required to be in Mode 3 by 1600. Jet Pump daily surveillance (SR 3.4.2.1) failed when it was performed. Jet Pumps #5 and 6 indicated reduced flow. Reactor power is currently at approximately 85%. The plan is to have power down to 60% by 1000 and be in MODE 3 before 1600. Containment de-inerting is in progress via SGT train 'A'.

All three service water pumps are in service to support H2O2 (Hydrogen Peroxide) chemical addition.

A normal reactor shutdown is in progress, currently at Step 5.1.14 of PPM 3.2.1 (At approximately 950 MWe, INITIATE removal of feedwater heater groups 1 and 2 from service per PPM 2.2.7.)

Inoperable equipment

- Transformer TR-S was taken out of service yesterday due to a ground being discovered on the 6.9 KV X winding of TR-S. Electrical Maintenance located the problem and parts have been ordered. It is estimated that parts will be on site at 1700 and TR-S will be returned to service at 2100, Tuesday September 17. Technical Specification 3.8.1 condition A has been entered. Surveillance 3.8.1.1 (breaker alignment and offsite power availability) was completed at 0500 this

Narrative

The scenario starts with a plant shutdown in progress due to a Technical Specification LCO 3.4.2 entered at 0300. Jet pumps number 5 and 6 are indicating degraded flow. Primary Containment wetwell purging is in progress using SGT train "A". All service water pumps are operating to support chemical addition of hydrogen peroxide per the normal injection schedule.

0725

The first event is a fire alarm in the 'A' SW Pumphouse. At the same time a 2222 call will come in to the Control Room reporting smoke coming from the 'A' SW Pumphouse. The fire will damage the motor and the cabling to HPCS-P-2. HPCS-P-2 will trip off. (Fire Brigade should be called to respond.)

The fire will already be extinguished when the fire brigade gets there due to the breaker for the HPCS-P-2 opening. They will report damage to HPCS-P-2 to the Control Room. Technical Specification 3.7.2 condition A will be entered requiring that the CR declare the HPCS system inoperable immediately. Technical Specification 3.5.1 condition B will be entered, a 14 day LCO.

The crew will declare an ALERT per 8.2.A.1 'Confirmed fire or explosion in a Safe Shutdown Building and Affected safe shutdown system parameters indicate degraded performance or report by plant personnel of visible damage to the affected safe shutdown building or equipment contained within the safe shutdown building'.

Note: A failure of the Met Tower card should be recognized while completing the CNF form for the Alert declaration. All meteorological indication at (P823-02) will read downscale but normal indication will be available on PPCRS. (Maintenance should be requested to investigate and repair the problem.)

0730

Emergency notifications are made and the ERO is activated.

The crew will refer to ABN-FIRE. The crew will also refer to ABN-SW due the loss of HPCS-P-2. The Control Room will direct that the HPCS DG be prevented from starting by closing its air start isolation valves.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

Technical Specification 3.8.1 condition B will be entered, a 72 hour LCO. Additionally Technical Specification 3.8.1 condition D will now apply. This LCO requires the HPCS DG or TR-S be restored within 12 hours or condition F applies. Condition F requires the plant to be in Mode 3 in 12 hours and Mode 4 within 36 hours. .
(A maintenance team should be sent to investigate and repair the problem.)

0840

There will be a man down in the Radwaste Building 437 elevation. A laborer that was transporting a bottle of potentially contaminated water to the Chemistry Lab for analysis will have slipped on something on the floor. The fall will break the individuals right arm. The water bottle that contained about 500 ml (1 cup) of liquid will have broken when he fell. His back and left shoulder area will be wet (The First Responders should be called away).

The man will be transported to the gate and then that problem will be terminated and picked up two days later (Brian from Benton County).

A transponder card will fail on the RDCS resulting in the inability to move control rods other than by scram. (A maintenance team should be sent to investigate and repair the problem.)

Events occur during the next hour that set up a radiological release to the environment.

0925

The next event is a catastrophic failure of number 5 and 6 jet pumps. The failure will cause loose parts to be swept up into the core. Primary system radiation levels will increase due to failed fuel. The crew will scram the reactor due to the core damage indications.

A full hydraulic ATWS will occur on the scram.

0940 –

The crew will declare a SITE AREA EMERGENCY per 2.2.S.1 'Any RPS setpoint (including manual) has been exceeded per T.S. 3.3.1.1 and RPS actuation failed to result in a control rod pattern which alone always assures reactor shutdown under all conditions and Reactor power GT 5%".

The crew will enter PPM 5.1.1 and exit to PPM 5.1.2. Reactor power will be approximately 45%. The crew will initiate SLC. SLC will fail to initiate because of a failure of the suction valves to open (A repair team should be sent to investigate and repair the problem.) There will be a success path for the repair team, however, the return of SLC will not affect the release.)

The crew will perform PPM 5.5.10 and 5.5.11 to insert control rods. Scram reset scram will not work to insert rods but the crew will have limited success driving control rods.

The crew will decrease RPV level to between -161" and -65". RCIC will be prevented from starting by the crew to keep the Main Turbine on the line. Feed and Condensate will be utilized to maintain RPV level.

1000

Repair team opens a suction valve for the SLC pumps and the pumps start and inject boron into the RPV. Power will decrease to the point that the Main Turbine trips on TG motoring.

When the turbine trips, SM-1, SM-2, SM-3, SH5 and SH-6 will become deenergized due to TR-S not being available. Due to this the feed and condensate system is not available.

The MSIVs will close due to a loss of power to the RPS busses and RPV pressure will be via the SRV's.

Crew should restart RCIC and CRD for level control.

The only electrical power will be from TR-B that will close onto SM-7 and SM-8. DG-1 and DG-2 will start on the loss of power to SM-7 and SM-8.

1015

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

SM-4 will become de-energized due to loss of power from SM-2 and the HPCS DG being prevented from starting due to the service water pump failure. HPCS-P-1 will not be available at this point.

A small LOCA will develop and drywell pressures will start to slowly increase. The crews may have to spray but will have RHR B. DW pressure will increase to GT 1.68# initiation signal or level will lower to -129 level 1 initiation of ECCS systems.

RHR-P-2A will fail to start on the ECCS start signal due to a breaker problem on SM-7. (A repair team should be sent to investigate and repair the problem.) A lockout on SM-8 occurs due to a fault in the 2C pump motor and the breaker failing to trip. This causes RHR-P-2B and RHR-P-2C to lose power (A repair team should be sent to investigate and repair the problem.)

1045 - The LOCA will get progressively larger. Primary Containment pressure will increase quickly. Due to a failure of CEP-V-3A and CEP-V-4A to isolate and to a failure of the piping downstream of CEP-V-4A, a release will begin from the Reactor Building through the SGT system.

The leak will eventually get larger than the ability of feed sources and RPV level will continue to decrease to LT -192".

1055 - The Emergency Director will declare a GENERAL EMERGENCY per 2.1.G.2 "RPV level LT -192 inches and failure of both containment isolation valves in any one line to close following auto or manual initiation AND downstream pathway to the environment exists.

When RPV level decreases to LT -192", the crew will enter PPM 5.1.5 and Emergency Depressurize the RPV.

RPV level will fall below indicated range on Fuel Zone level indicators but when RPV pressure decreases to within injection pressure of LPCS, RPV level will be returned to GT -192".

1120

Repair team replaces the fuses for RHR-P-2A

RHR-P-2A breaker will be fixed and the crew will start the pump. The crew will direct Wetwell and Drywell sprays be initiated. This will cause Primary Containment pressure to decrease.

1200

With the decreasing pressure in containment, CEP-V-4A will close.

The release will be terminated due to the decrease in Primary Containment pressure and also by the closing of CEP-V-1A.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

Timeline Summary

- 0700: Start Scenario Crew performs shift turnover
- 0725: Fire alarm on FCP-1 for a fire in the A SW Pumphouse. Security calls 2222 and reports smoke emanating from the Pumphouse.
- 0726: Fire Brigade dispatched.
- 0730: Alert Classification (8.2.A.1)
- 0830: Centers Manned
- 0840: Control Room receives a 2222 emergency call - Man down reported in the Radwaste Building 437' elevation – First responders dispatched.
- 0925: Catastrophic failure of jet pumps results in some fuel damage and increased radiation in the reactor coolant.
- 0935: ATWS occurs when inserting manual scram
- 0940: SAE Classification (2.2.S.1)
- 1000: SLC restored
- 1045: CEP line failure, beginning of release –
- 1050: LOCA exceeds feed capacity, RPV level LT –192”
- 1055: General Emergency Classification (2.1.G.2)
- 1120: RHR-P-2A restored and PC/P reduced
- 1200: CEP-V-4A closed, Termination of release
- 1230: Security Event (does not effect the scenario)
- 1430: Transition of MUDAC to State of WA
- 1445: Transition of JIC to State of WA

COLUMBIA GENERATING STATION

2002 EMERGENCY EXERCISE

6.2 PROCEDURAL LIMITATIONS

In addition to the precautions and limitations provided in Section 2.4, the following additional procedural limitations must be imposed by the Controllers when the associated conditions are met. These limitations shall NOT be provided to Players during the initial Player briefings in order to prevent "prompting" them in advance on conditions that will occur during the scenario sequence of events. In some cases, messages will be available to Controllers in order to assist them in the implementation of these limitations.

- a. The non-essential personnel evacuation process for both the Protected Area and Exclusion Area evacuations will not occur, i.e., procedural steps will be performed but actual personnel movement will be simulated. Protected Area accountability will be performed using Players only. The offsite assembly area will not be activated.

Site 1 sirens and actual personnel evacuation will be simulated. All other Site 1 evacuation procedures will be demonstrated.

- b. The ERO Automated Notification System will be activated using the drill code of 555 and not the actual event code of 444.
- c. Sirens will not be activated during simulated notification processes. (The Plant Alerting tone, however, will be used over the public address system when required.)
- d. The Post Accident Sampling System (PASS) will not be used to draw an actual RCS sample.
- e. Air samples will be taken using charcoal or training cartridges rather than the actual silver zeolite filter cartridges in inventory.
- f. Environmental field samples will be limited to air, soil, non-farm vegetation, and water. Snow, ice, garden produce, and milk samples will not be collected. Samples will not be returned to the lab for analysis.

6.3 SIMULATOR SETUP

1. Reset Simulator to IC-117
2. Load file: type "BAT EPNRC2002.txt" in Expert window.
3. Set external parameters as follows:
 - Maintain wind direction from 70° to 55° from 0700 to 1255.
 - Set ambient temperature to 68°F.
 - Set delta-T to -1.5°.
 - Maintain wind speed at 8 MPH from 0700 to 1255.

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

6.4 TIMELINE

For the past 230 days Columbia Generating Station has been operating at or near 100% power.

The temperature is 68°F with winds from the northeast at 8 mph. It is an overcast morning with no precipitation in the forecast. Clearing is not expected for the next 24 hours.

The plant entered Technical Specification LCO 3.4.2 at 0400 and is required to be in Mode 3 by 1600. Jet Pump daily surveillance (SR 3.4.2.1) failed when it was performed. Jet Pumps #5 and 6 indicated reduced flow. Reactor power is currently at approximately 85%. The plan is to have power down to 60% by 1000 and be in MODE 3 before 1600. Containment de-inerting is in progress via SGT train 'A'.

All three service water pumps are in service to support H2O2 (Hydrogen Peroxide) chemical addition.

A normal reactor shutdown is in progress, currently at Step 5.1.14 of PPM 3.2.1 (At approximately 950 MWe, INITIATE removal of feedwater heater groups 1 and 2 from service per PPM 2.2.7.)

Inoperable equipment

- Transformer TR-S was taken out of service yesterday due to a ground being discovered on the 6.9 KV X winding of TR-S. Electrical Maintenance located the problem and parts have been ordered. It is estimated that parts will be on site at 1700 and TR-S will be returned to service at 2100, Tuesday September 17. Technical Specification 3.8.1 condition A has been entered. Surveillance 3.8.1.1 (breaker alignment and offsite power availability) was completed at 0500 this

<u>Clock Time</u>	<u>Event Time</u>	<u>Description</u>	<u>Message Number</u>
0700	-0030	The Shift Manager is briefed in the Simulator Control Room and the Drill Authorization Form is approved.	
0710	-0020	Initial plant conditions (refer to Section 6.1) are established with the drill crew at the Simulator. The crew is then given some time to walk the boards down. Note: The Simulator will be used to conduct Control Room Operator response measures. An off-shift Operations crew will be pre-staged and briefed at the Simulator. Non-control room personnel will be released after the briefing to return to the plant. Pre-designated Maintenance, Chemistry and Radiation Protection personnel will assemble at the OSC once it is activated. A "Drill Phone List" will be provided to Players so they know how to contact locations that have been established for drill purposes.	1
0725	-0005	The Lead Controller at the Simulator will direct an initial Plant and Industrial Area PA message to announce the start of the drill.	2
0730	0000	Fire in the A SW Pumphouse; HPCS-P-2 trips off. Security contacts Control Room on X8322 (X2222) and reports smoke coming from the A SW Pump house. (EQ-03) MET Tower card failure – Board L indications fail downscale.	TRG 1 3 TRG 10

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

<u>Clock Time</u>	<u>Event Time</u>	<u>Description</u>	<u>Message Number</u>
0730	0000	Shift Manager declares an ALERT per 8.2.A.1. Confirmed fire or explosion in a Safe Shutdown Building and Affected safe shutdown system parameters indicate degraded performance or report by plant personnel of visible damage to the affected safe shutdown building or equipment contained within the safe shutdown building. Crew notes failure of Met Tower input on Board L when completing Alert notification CNF Form. Crew utilizes PPCRS input to complete CNF form.	
0730	0000	Crew enters Tech Spec 3.7.2 condition B, a 72 hour LCO. Additionally T.S. 3.8.1 condition D now applies. This LCO requires the HPCS DG or TR-S be restored within 12 hours of be in Mode 3 in 12 hours and Mode 4 in 36 hours.	
0745	0025	Contingency message in the event an Alert has not been declared by this time.	4X
0830	0100	All Emergency Centers are manned.	
0840	0110	Control room gets a report of a man down in the Radwaste Building and calls away the First Responders. (EQ-18)	5
		Simulator Controller: If necessary to recover from a simulator problem, restart from IC-xx	
0900	0130	Transponder card failure occurs which causes a failure of the Rod Drive Control System and the inability of the CR operators to drive control rods. (EQ- 14)	TRG 8
0925	0155	Catastrophic failure of jet pumps 5 and 6 initiates. This results in increased RRC Pump vibrations and some fuel damage due to metallic material impinging on the core fuel elements.	TRG 3
0925	0155	Due to the failed jet pumps: Reactor power drops by about 5% The crew will insert a manual scram due to increased radiation alarms and degrading plant conditions. Hydraulic ATWS occurs and crew enters PPM 5.1.2. (EQ-7) Reactor power ends up at about 10 - 13% after RRC/P's off and RPV level decreased. (Conditions are met for EAL 2.2.S.1 – SAE)	
0935	0215	Emergency Director declares an SITE AREA EMERGENCY due to 2.2.S.1. Any RPS setpoint (including manual) has been exceeded per T.S. 3.3.1.1 and RPS actuation failed to result in a control rod pattern which alone always assures reactor shutdown under all conditions and Reactor power GT 5%.). Off-site notifications and PARs (Protective Action Recommendations) are made. An announcement is made to evacuate the Protected Area. (Any evacuations will be simulated	6 7
0940	0205	Contingency message in the event a Site Area Emergency has not been declared by this time.	8X

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

<u>Clock Time</u>	<u>Event Time</u>	<u>Description</u>	<u>Message Number</u>
0945	0140	Crew initiates Standby Liquid Control – system fails to initiate as suction valves fail to open. (EQ-6) Crew performs PPM 5.5.6 to keep MSIVs open. Crew prevents RCIC start to keep Main Turbine on the line. Crew stops and prevents injection and lowers RPV level and maintains level between –65” and –192”. Crew performs PPM 5.5.10 and PPM 5.5.11 to S/D the reactor.	
0950	0145	The Control Room may request a repair team to individually insert control rods by manually venting the over-piston areas. (Refer to mini-scenario EQ-15.)	
0950	0145	The Control Room may requests the TSC initiate alternate boron injection using RWCU per PPM 5.5.8. (Refer to mini-scenario EQ-9.)	
0950	0145	The control room may request a Repair Team to initiate isolation of the CRD charging header to allow individual control rod insertion.	
1000	0155	Repair Team opens suction valve(s) and SLC pumps start SLC injection Reactor power starts to decrease due to SLC injection.	
		Simulator Controller: If necessary to recover from a simulator problem, restart from IC-xx	
1005	0200	Main Turbine trips due to reverse power on the generator as power is reduced by SLC; feed and condensate are lost due to TR-S not being available. Crew initiates RCIC and restarts CRD for level control. Crew requests Repair Team be sent to restart CAS air compressors and RPS A.	TRG 21 TRG 23
1015	0210	Small leak initiates in the DW to get DW pressure GT 1.68# (pressure gets to 7.5# in DW in 20 minutes)). ECCS may start due to –129” RPV level or 1.68# DW pressure due to loss of cooling. Drywell pressure exceeds 1.68# or level reached –129”. CEP-V-3A and CEP-V-4A fail to close on FAZ signal. (Leak path) (Refer to mini-scenario EQ-10) RHR-P-2A fails to start due to blown closing fuse. (Refer to mini-scenario EQ-09)	TRG 4
1030	0225	RHR-P-2C motor over-current, breaker fails to trip and results in a lockout on SM-8 (Refer to mini-scenario EQ-08)	TRG 5
1035	0230	The PSF Ambulance Bay Security Officer calls in to inform the EOF Security Manager of the number of plant evacuees who have reported to the assembly area. This is a simulated figure since Protected Area evacuation will be simulated.	9
1045	0240	LOCA starts RPV level decreases and DW/WW pressure increases.	TRG 6

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

Clock Time	Event Time	Description	Message Number
1045	0240	LOCA exceeds capacity of RCIC/CRD/SLC systems and level drops to LT -192" requiring crew to ED. Crew emergency depressurizes the RPV. RPV level drops to below indicated on Fuel Zone indication. MARFP is reached (143# RPV pressure) and the crew utilizes LPCS to feed vessel and recover RPV level	
1050	0245	Failure of CEP piping between CEP-V-3A and CEP-V-4A RELEASE BEGINS. The piping failure gets progressively larger until CEP pipe totally fails. DW/WW Pressure initially increase but decrease significantly due to CEP piping failure.	TRG 7
1055	0250	ARM readings in the Reactor building increase as well as readings on radiation monitors in the Reactor Building Ventilation Exhaust and primary containment.	
1055	0250	Emergency Director declares a GENERAL EMERGENCY due to 2.1.G.2. RPV level LT -192 inches and failure of both containment isolation valves in any one line to close following auto or manual initiation AND downstream pathway to the environment exists, or due to Emergency Director discretion (10.1.G.1 or 10.1.G.2).	10X
1100	0245	RDCS operation may be restored. (Refer to mini-scenario EQ-5.) NOTE: Simulator Controller should not restore RDCS until Control Room staff "reset" at RDCS panel.	
		Simulator Controller: If necessary to recover from a simulator problem, restart from IC-xx	
1100	0245	Contingency message in the event a General Emergency has not been declared by this time.	11X
1100	0245	Lead Controllers advise Support/Admin. Managers at each emergency center that lunches have been delivered to each Energy Northwest emergency center.	12
1115	0300	Environmental Field Teams begin tracking the plume.	13
1120	0305	Repair Team replaces closing fuse for RHR-P-2A. (Delete malfunction on RHR-P-2A breaker). Crew uses RHR-P-2A to spray containment if needed.	
1210	0345	State field teams collect air samples.	
1200	0400	CEP-V-4A closes due to reduced pressure in the Primary Containment. (Delete malfunction on CEP-V-4A) RELEASE IS TERMINATED. Crew notes CEP-V-4A closed on GDS and may also notice a slight DW/WW pressure increase.	
		Simulator Controller: If necessary to recover from a simulator problem, restart from IC-xx	
1200	0400	The release is terminated and Reactor Building area and exhaust monitor readings begin to decrease.	

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

Clock Time	Event Time	Description	Message Number
1230	0430	Security Event (EQ-17)	
1300	0500	Field Teams confirm decreasing dose rates in the plume near the site boundary.	
1400	0600	Discussions are held with the offsite officials regarding transfer of off-site emergency response authority while the plant transitions into recovery phase.	15X
1430	0630	Control of MUDAC is transferred to the state.	
1445	0645	Control of JIC is transferred to the state	
1500	0700	The exercise is terminated and critique sessions follow. Facility managers recall all personnel.	16
1505	0605	The TSC makes a PA announcing the end of the exercise.	17
1515	0715	Begin all-player critique in Energy Northwest emergency centers.	
1615	0815	Complete player self-critique sessions.	
1630	0830	Facilities are restored to standby condition. Data is gathered and saved for use in the Ingestion Phase exercise to follow.	18
1700	0930	JIC, SCC, CR, TSC, EOF and OSC Evaluators and Controllers confer in their centers regarding exercise performance and exercise scenario quality.	

COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE

Sample Of Expected Dose Projections

Figure 6.4-1

```
QEDPS Model Version 2.0                               Run: 09/17/2002  11:39:43

Distance (miles)      Centerline doses and dose rates at select distances
                     .6      1.2      2.0      5.0      7.0      10.0
-----
TEDE (Rem)            3.1E-01  1.6E-01  1.0E-01  3.5E-02  2.2E-02  1.4E-02
External Dose         1.8E-02  1.1E-02  7.5E-03  2.9E-03  1.9E-03  1.2E-03
Thyroid CDE          4.7E+00  2.5E+00  1.5E+00  5.2E-01  3.3E-01  2.1E-01

TEDE = Cloud Shine + 4-Day Ground Shine + CEDE Inhalation
External Dose = Cloud Shine + Initial Ground Shine

-----
TEDE Rate (Rem/h)    1.0E-01  5.4E-02  3.3E-02  1.2E-02  7.5E-03  4.6E-03
External Dose Rate   6.1E-03  3.7E-03  2.5E-03  9.7E-04  6.4E-04  3.9E-04
Thyroid CDE Rate     1.6E+00  8.2E-01  5.1E-01  1.7E-01  1.1E-01  6.9E-02
-----
Worker Adj. Factor   1.7E+01  1.5E+01  1.3E+01  1.1E+01  1.1E+01  1.1E+01
Transport Time (h)   3.1E+00  3.1E+00  3.3E+00  3.6E+00  3.9E+00  4.2E+00

NOTE: Dose and dose rate values below 1.0E-06 have been set to zero.

-----
You have selected: High Range Stack Monitor   Reading = 6.28E+02 cps
Release is Unfiltered                          Flow = 4500. cfm
Wind Dir. From (deg.) = 55.   Wind Spd (mph) = 8.0   Stab. Class = D
Release duration: 3 hr 0 min   Holdup duration: 1 hr 30 min

-----
Source term: A total of 3.2E+04 Ci were released.

Release      Release      Release
Nuclide (Ci/s) Fract.  Nuclide (Ci/s) Fract.  Nuclide (Ci/s) Fract.
Kr-85  3.5E-03 5.7E-05  Kr-85m 1.2E-01 5.7E-05  Kr-87  1.3E-01 5.7E-05
Kr-88  3.0E-01 5.7E-05  Sr-89  6.5E-03 6.5E-07  Sr-90  2.5E-04 6.5E-07
Sr-91  7.0E-03 6.5E-07  Y-91   5.6E-04 4.4E-08  Mo-99  2.9E-03 1.7E-07
Tc-99m 2.9E-03 1.2E-06  Ru-103 2.1E-03 1.7E-07  Ru-106 4.5E-04 1.7E-07
Sb-127 2.1E-03 3.3E-06  Sb-129 9.1E-03 3.3E-06  Te-129m 1.9E-03 3.3E-06
Te-131m 4.1E-03 3.3E-06  Te-132 4.2E-02 3.3E-06  I-131  6.8E-02 7.6E-06
I-132  9.8E-02 7.6E-06  I-133  1.3E-01 7.6E-06  I-134  4.7E-02 7.6E-06
I-135  1.0E-01 7.6E-06  Xe-131m 6.1E-03 5.7E-05  Xe-133  1.1E+00 5.7E-05
Xe-133m 3.7E-02 5.7E-05  Xe-135  2.7E-01 5.7E-05  Xe-138  1.3E-02 5.7E-05
Cs-134  4.4E-03 5.4E-06  Cs-136  1.7E-03 5.4E-06  Cs-137  2.8E-03 5.4E-06
Ba-140  1.5E-02 8.7E-07  La-140  7.4E-04 4.4E-08  Ce-144  2.0E-03 2.2E-07
Np-239  3.8E-02 2.2E-07  Rb-87   4.8E-17 5.4E-06  Rb-88  3.0E-01 5.4E-05
Y-90   2.7E-07 4.4E-08  Y-91m  2.0E-04 4.4E-08  Tc-99  3.1E-13 1.7E-07
Rh-103 1.4E-03 1.7E-07  Rh-106 4.5E-04 1.7E-07  Te-127m 1.4E-07 3.3E-06
Te-127 1.8E-04 3.3E-06  Te-129  1.9E-03 1.1E-06  I-129  7.3E-14 7.6E-06
Te-131 8.4E-04 3.3E-06  Xe-135m 1.0E-01 4.5E-05  Cs-135  1.2E-12 5.4E-06
Cs-138  1.0E-02 5.4E-06  Ba-137m 2.8E-03 5.7E-06  Pr-144m 5.6E-06 4.4E-08
Pr-144  2.0E-03 2.2E-07

Fract. is the fraction of the core inventory released.

-----
Computed By: _____ Reviewed By: _____

Authorized By: _____
```

NOTE: The above dose projection was derived from data generated by the Win-Dose program. EDPS calculations by drill participants will use simulator data for input and be performed at varying times.

**COLUMBIA GENERATING STATION
2002 EMERGENCY EXERCISE**

7.0 PLANT MESSAGES AND OPERATIONS DATA

This section provides the messages and data needed to describe the scenario conditions to the players at the plant.

7.1 PLANT MESSAGES

Messages are assigned to Controllers for release at specified times. These times can only be modified with the approval of the Drill Coordinator. Some Controller judgment can be used for contingency messages (marked with an X), if it appears the Players are close to taking the actions indicated on the messages.

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 1	TIME: 0710
MESSAGE FOR:	Control Room Simulator Staff
FROM:	Controller
LOCATION:	Control Room Simulator
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<u>INITIAL CONDITIONS</u>	
<p>For the past 230 days Columbia Generating Station has been operating at or near 100% power. The temperature is 68°F with winds from the northeast at 8 mph. It is an overcast morning with no precipitation in the forecast. Clearing is not expected for the next 24 hours.</p> <p>The plant entered Technical Specification LCO 3.4.2 at 0400 and is required to be in Mode 3 by 1600. Jet Pump daily surveillance (SR 3.4.2.1) failed when it was performed. Jet Pumps #5 and 6 indicated reduced flow. Reactor power is currently at approximately 85%. The plan is to have power down to 60% by 1000 and be in MODE 3 before 1600. Containment de-inerting is in progress via SGT train 'A'.</p> <p>All three service water pumps are in service to support H2O2 (Hydrogen Peroxide) chemical addition.</p> <p>A normal reactor shutdown is in progress, currently at Step 5.1.14 of PPM 3.2.1 (At approximately 950 MWe, INITIATE removal of feedwater heater groups 1 and 2 from service per PPM 2.2.7.)</p> <p><u>Inoperable equipment</u></p> <ul style="list-style-type: none">• Transformer TR-S was taken out of service yesterday due to a ground being discovered on the 6.9 KV X winding of TR-S. Electrical Maintenance located the problem and parts have been ordered. It is estimated that parts will be on site at 1700 and TR-S will be returned to service at 2100, Tuesday September 17. Technical Specification 3.8.1 condition A has been entered. Surveillance 3.8.1.1 (breaker alignment and offsite power availability) was completed at 0500 this	
<u>SPECIAL GUIDELINES</u>	
<ol style="list-style-type: none">1. All communications outside the Simulator must include the phrase "This is a Drill."2. All contacts to non-participating organizations you would normally make based on the events that occur are to be made to the Control Cell. (Refer to the Drill Phone List.)	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Ensure the Shift Manager is briefed in the real Control Room and the Drill Authorization Form is approved.2. Provide the initial conditions above to the Simulator Staff. Give Players the handout (plant conditions) as part of their initial conditions briefing.3. Ensure players have a copy of the drill phone list.4. Allow Simulator crew to "walk the boards down."5. Send Equipment Operators to EO break room in plant.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 2	TIME: 0725
MESSAGE FOR:	Control Room Simulator Staff
FROM:	Lead Controller
LOCATION:	Control Room Simulator
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Make the following Plant PA announcement when directed by the Lead Drill Controller:</p> <p>"ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL. THIS IS AN INFORMATIONAL ANNOUNCEMENT ONLY. NO ACTIONS ARE REQUIRED AT THIS TIME. THE EMERGENCY DRILL IS COMMENCING. ALL ANNOUNCEMENTS PRECEDED BY 'THIS IS A DRILL' ARE FOR PLAYERS ONLY. SHOULD AN ACTUAL EMERGENCY OCCUR, AN ANNOUNCEMENT WILL BE MADE TO STOP THE DRILL. ALL PERSONNEL ARE REQUESTED TO MINIMIZE THE USE OF THE PLANT PUBLIC ADDRESS SYSTEM UNTIL THE DRILL HAS BEEN COMPLETED."</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. After the Shift Manager at the real Control Room approves the start of the Drill, then make the above PA announcement.2. Make contact over the Controller network. Synchronize watches and ensure the PA message was heard in all Controller locations at the site.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 3	TIME: 0730
MESSAGE FOR:	Shift Manager/CRS
FROM:	Lead Controller
LOCATION:	Control Room Simulator or OSC
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
Initiate a call to extension 8832 (Simulator Control Room) and repeat the following:	
“This is a Drill.	
This is Officer King. There is smoke coming from the ALPHA Service Water Pump House.	
This is a Drill.”	
“	
CONTROLLER INSTRUCTIONS	
1. Deliver this message to the CRS or Shift Manager in the Simulator Control Room using a plant phone or security radio channel.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 4X	TIME: 0745
MESSAGE FOR:	Shift Manager
FROM:	Lead Controller
LOCATION:	Control Room Simulator
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Declare an <u>ALERT</u> per EAL 8.2.A.1. Confirmed fire or explosion in a Safe Shutdown Building and Affected safe shutdown system parameters indicate degraded performance or report by plant personnel of visible damage to the affected safe shutdown building or equipment contained within the safe shutdown building.</p>	
CONTROLLER INSTRUCTIONS	
1. Do not issue this message unless the crew has made no attempt to classify the situation.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 5	TIME: 0840
MESSAGE FOR:	Control Room Simulator Staff
FROM:	Controller (EQ-18)
LOCATION:	Radwaste Building 437 elevation
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
Refer to Man Down Event (EQ-18)	
CONTROLLER INSTRUCTIONS	
1. none	
***** THIS IS A DRILL ***** DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES ***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 6	TIME: 0935
MESSAGE FOR:	TSC Manager
FROM:	Lead Controller
LOCATION:	Technical Support Center
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Have the following PA announcements made:</p> <p style="padding-left: 40px;">"THIS IS A DRILL, THIS IS A DRILL. ATTENTION PLANT PERSONNEL, ATTENTION PLANT PERSONNEL. A PROTECTED AREA EVACUATION IS BEING SIMULATED. AN ORDER FOR EVACUATION OF THE COLUMBIA GENERATING STATION PROTECTED AREA HAS BEEN MADE BY THE EMERGENCY DIRECTOR. NORMALLY ALL EMERGENCY RESPONSE PERSONNEL WOULD BE ASKED TO REPORT TO THEIR EMERGENCY CENTER AND ALL OTHER PERSONNEL WOULD BE ASKED TO EXIT THE PROTECTED AREA THROUGH THE ALTERNATE ACCESS POINT AND DIRECTED TO REPORT TO THE PSF HEALTH PHYSICS CENTER/AMBULANCE BAY. FOR THIS DRILL, HOWEVER, NO RESPONSE IS REQUIRED OF PERSONNEL NOT PARTICIPATING IN THE DRILL."</p> <p style="padding-left: 40px;">"THIS IS A DRILL."</p> <p>Repeat the above.</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Give this message to the TSC Staff to use as the protected area evacuation is implemented. This replaces the PA message in procedure 13.5.1, Attachment 5.2, Item number 2.2. Ensure they have found the correct procedural announcement FIRST, before issuing this message.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 7	TIME: 0935
MESSAGE FOR:	TSC Manager
FROM:	Controller
LOCATION:	Technical Support Center
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>When necessary to perform the Exclusion Area evacuation, simulate activation of the crossroads siren and make the following PA announcement instead of the one in PPM 13.5.3:</p> <p style="margin-left: 40px;">"THIS IS A DRILL, THIS IS A DRILL. YOUR ATTENTION PLEASE. AN EXCLUSION AREA EVACUATION IS BEING SIMULATED. AN ORDER TO EVACUATE THE COLUMBIA GENERATING STATION EXCLUSION AREA HAS BEEN MADE BY THE EMERGENCY DIRECTOR. NORMALLY ALL NON-ESSENTIAL PERSONNEL WOULD BE ASKED TO EVACUATE THE EXCLUSION AREA AT THIS TIME AND DIRECTED TO PROCEED HOME. FOR THIS DRILL, HOWEVER, NO RESPONSE IS REQUIRED OF PERSONNEL NOT PARTICIPATING IN THE DRILL."</p> <p style="margin-left: 40px;">"THIS IS A DRILL."</p> <p>Repeat the above.</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Give this message to the TSC Staff to use as the exclusion area evacuation is implemented. This replaces the PA message in Form 968-26051.2. Ensure they have found the correct procedural announcement FIRST, before issuing this message. <p>Note: Be prepared to issue this message at the Site Area Emergency level at around 1315. The Emergency Director has the discretion to perform an exclusion area evacuation earlier.</p>	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 8X	TIME: 0940
MESSAGE FOR:	Emergency Director
FROM:	Lead Controller
LOCATION:	TSC or EOF, depending on location of Emergency Director
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Declare a SITE AREA EMERGENCY due to 2.2.S.1. Any RPS setpoint (including manual) has been exceeded per T.S. 3.3.1.1 and RPS actuation failed to result in a control rod pattern which alone always assures reactor shutdown under all conditions and Reactor power GT 5%.</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Do not issue this message unless the Emergency Director has made no attempt to classify the situation.1. Issue Message #6 along with this message to ensure that the correct PA announcement is made.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 9	TIME: 1035
MESSAGE FOR:	EOF Security Manager
FROM:	Lead Controller
LOCATION:	Emergency Operations Facility
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
Deliver the following message to the EOF Security Manager: "This is a drill." "This is the Ambulance Bay Security Officer" "So far, we've had 215 employees from the Protected Area check in to the Ambulance Bay." "This is a drill."	
CONTROLLER INSTRUCTIONS	
1. Wait about 40 minutes after the simulated Protected Area evacuation. Note: The Security Manager should actually ask for this information. This request is usually prompted by a request from the PIO.	
***** THIS IS A DRILL ***** DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES ***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 10X	TIME: 1055
MESSAGE FOR:	Site Support Manager, TSC Admin. Manager, JIC Support Manager
FROM:	Controllers at EOF, TSC, and JIC
LOCATION:	EOF, TSC, and JIC
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>If the Site Support Manager simulates the calling of a relief shift, wait one hour and then deliver the simulated ANS report showing the status of the call-ins. This simulated report will be included in the Controllers' packets.</p> <p>Tell the recipients:</p> <p style="padding-left: 40px;">"This is a drill.</p> <p style="padding-left: 40px;">The information in this packet is the simulated Dialogic printout showing the status of the ANS call-out of the second shift.</p> <p style="padding-left: 40px;">This is a drill."</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Wait one hour after the Site Support Manager has simulated initiating the Dialogic 1000 scenario for calling out the second shift.2. Do NOT deliver this information if the Site Support Manager or TSC Admin. Manager has made no attempt to call out a second shift. <p>Note: Be prepared to issue this message at any time. The time noted at the top of this sheet is only an estimate.</p>	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 11X	TIME: 1100
MESSAGE FOR:	Emergency Director
FROM:	Controller
LOCATION:	Emergency Operations Facility
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Declare a GENERAL EMERGENCY due RPV level LT -192 inches and failure of both containment isolation valves in any one line to close following auto or manual initiation AND downstream pathway to the environment exists.</p> <p>EAL 2.1.G.2.</p> <ul style="list-style-type: none">• RPV level LT -192 inches and failure of both containment isolation valves in any one line to close following auto or manual initiation AND downstream pathway to the environment exists.	
CONTROLLER INSTRUCTIONS	
<p>1. Do not issue this message unless the Emergency Director has made no attempt to classify the situation.</p>	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 12	TIME: 1100
MESSAGE FOR:	All Center Managers
FROM:	Lead Controller
LOCATION:	All Energy Northwest Centers
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS: Inform the center Support or Admin. Manager that lunches have been made available. The Center managers shall use their own discretion on how to deliver lunches to the players. Caution the Center Managers that exercise play must not be stalled due to lunch.	
CONTROLLER INSTRUCTIONS <ol style="list-style-type: none">1. In the TSC, EOF and JIC, this message should be delivered to the Admin. Manager, Site Support Manager, and JIC Support Manager, respectively.2. Ensure that drill personnel outside the centers, such as Field Teams, CAS, SCC, other security posts, have an opportunity to obtain lunches.	
***** THIS IS A DRILL ***** DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES ***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 13

TIME: 1115

MESSAGE FOR: REM, Field Team Dispatcher, Field
Team Controllers

FROM: MUDAC Controller

LOCATION: MUDAC

***** THIS IS A DRILL *****

PLAYER INSTRUCTIONS:

Instruct all Field Teams to collect actual air samples.

Instruct each Field Team to collect actual samples of water, soil or vegetation. (E.g., Team 1: water, Team 2: soil, Team 3: vegetation).

Remind teams to package and identify the samples properly for return to the ambulance bay.

CONTROLLER INSTRUCTIONS

1. At least one sample of each medium should be collected per team.
2. Samples must be properly packaged, but there will be no transfer of samples to lab facilities for evaluation.
1. No spiked samples will be used.

***** THIS IS A DRILL *****

**DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS
DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES**

***** THIS IS A DRILL *****

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 15X	TIME: 1400
MESSAGE FOR:	EOF and JIC Managers, Offsite Agencies
FROM:	EOF, JIC and Offsite Agency Controllers
LOCATION:	EOF, JIC and EOCs
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Begin transition into recovery phase using appropriate procedures. Demonstrate transferring MUDAC responsibilities from Energy Northwest to the State of Washington.</p> <p>A formal Recovery Organization need not be established, however, procedural guidelines should be referred to as necessary to provide direction for the discussions. Limit the extent of the discussions to approximately 30 minutes.</p> <p>Direct Field Teams to return if they have not been notified already.</p> <p>Maintain communications with the other emergency centers.</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Issue this message only if discussions regarding the transfer of MUDAC responsibilities have not begun at this time. This should be a relative natural transition from the on-going recovery discussions.2. Upon return of field teams, conduct separate critique away from command area, then release the field team participants to restore their equipment.3. Ensure that Field Team Kits are inventoried and replenished as required.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 16	TIME: 1500
MESSAGE FOR:	All Center Managers
FROM:	All Controllers
LOCATION:	All Participating Centers
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
<p>Terminate Drill play. Do not erase the status boards. Notify any Players located outside of the facility, then take a short break.</p> <p>Once everyone has returned to the facility, conduct a critique. Refer to status boards as necessary to review specific situations and/or conditions during the discussions.</p>	
CONTROLLER INSTRUCTIONS	
<ol style="list-style-type: none">1. Terminate Drill play.2. Notify all plant personnel through use of message 21.3. During critique sessions, ensure Player comments are documented (i.e., pass out Player Comment Forms).4. When the critique is over, refer to Message No. 22.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 17	TIME: 1505
MESSAGE FOR:	TSC Manager
FROM:	Lead Controller
LOCATION:	Technical Support Center

***** THIS IS A DRILL *****

PLAYER INSTRUCTIONS:

Make the following Plant PA announcement when directed by the Lead Controller:

"ATTENTION ALL PERSONNEL. ATTENTION ALL PERSONNEL. THE EMERGENCY
DRILL HAS ENDED.

ATTENTION ALL PERSONNEL. THE EMERGENCY DRILL HAS ENDED. REGARD ALL
FUTURE ALARMS AND ANNOUNCEMENTS AS VALID."

Repeat the above announcement.

CONTROLLER INSTRUCTIONS

1. Contact the Shift Manager at the real Control Room and inform him of the completion of the Drill.
2. Have the TSC make the Plant PA announcement.
3. **Instruct the Plant Control Room to restore the communication switch to normal following this announcement.**

***** THIS IS A DRILL *****

**DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS
DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES**

***** THIS IS A DRILL *****

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

MESSAGE NO.: 18	TIME: 1630
MESSAGE FOR:	Facility Managers
FROM:	Lead Controller
LOCATION:	All Participating Emergency Facilities
***** THIS IS A DRILL *****	
PLAYER INSTRUCTIONS:	
When the critique is over, perform the following:	
1. Erase the status boards.	
2. Gather all facility logs and report forms (i.e., forms filled out by Players) for the Lead Controller.	
3. All Drill-related forms (i.e., Message Sheets, Data Sheets, Drill Phone Lists, etc.) should be removed from the facility or trashed.	
4. All radiological equipment (i.e., dosimeters, TLDs, survey meters, etc.) should be taken to their storage location, batteries removed as applicable, and properly returned to storage.	
5. Chairs, tables and other miscellaneous equipment used during the Drill should be returned to their original location.	
CONTROLLER INSTRUCTIONS	
1. Upon completion of facility critiques, ensure equipment is returned to a normal pre-emergency status.	
***** THIS IS A DRILL *****	
DO NOT INITIATE ACTIONS THAT MAY AFFECT PLANT OPERATIONS DO NOT INITIATE ACTIONS THAT MAY VIOLATE SAFETY RULES	
***** THIS IS A DRILL *****	

**COLUMBIA GENERATING STATION
2002 EXERCISE TEAM C**

7.2 OPERATIONS DATA

The following pages are snapshots of plant status and information for use by the Controllers in the event that the Simulator fails to transmit plant status.

TBD

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

8.0 CHEMISTRY AND ONSITE RADIOLOGICAL DATA

This section provides post accident sampling and radiochemistry information, in-plant and site dose rate information for Controller use during site emergency response team missions.

8.1 PROCESS AND AREA RADIATION MONITORS

The process and area radiation monitors change due to the manner in which the radioactivity is released. The Reactor Building Area and ventilation monitors and a few Radwaste Building monitors have been affected by the core activity released in this sequence of events. The Plant Simulator will be relied on to generate "live" in-plant radiation parameter information to the onsite emergency centers consistent with the event being modeled.

In the event the simulator fails, actions will be taken to try to restart it and pick up from where it left off (refer to Section 4.5). If the simulator cannot be returned to service and there is a need to continue the Drill, the Lead Drill Controller will direct pre-identified Controllers to begin issuing data using hard copy data sheets. On the following pages is a summary of the in-plant radiation parameters being utilized to create the hard copy data sheets to be handed out. This summary also makes it easier to see trends or how events effect overall plant status.

Hard copy data is provided on the enclosed Tables (In-plant Controllers only.):

- Radiation Monitor Reference Table Table 8.1
- Area Radiation Monitors Table 8.2
- Process Radiation Monitors Table 8.3

8.2 IN-PLANT RADIATION MAPS and DATA

The in-plant radiological conditions postulated by the events sequence is based primarily on increasing radiation levels in the Turbine Building. The maps provided in this section indicate the changes in radiation levels occurring in the Reactor and Turbine Buildings.

Controllers should inform Players that their readings are "as read" when checking their survey meters in locations outside of the Reactor or Turbine Buildings or in areas not shown in Figures 8.1 to 8-12.

The various reactor and turbine building floors are divided into compartments for calculation purposes. The data in the tables following the floor maps refer to these same compartments. Maps are provided for the following building areas:

Figure 8-1:	Reactor Building Elev. 422'	Compartments 1 through 10
Figure 8-2:	Reactor Building Elev. 441'	Compartments 12 through 21
Figure 8-3:	Reactor Building Elev. 471'	Compartments 23 through 32
Figure 8-4:	Reactor Building Elev. 501'	Compartments 34 through 44
Figure 8-5:	Reactor Building Elev. 522'	Compartments 46 through 55
Figure 8-6:	Reactor Building Elev. 548'	Compartments 56 through 67
Figure 8-7:	Reactor Building Elev. 572'	Compartments 69 through 78
Figure 8-8:	Reactor Building Elev. 606'	Compartments 80 through 83
Figure 8-9:	Turbine Building Elev. 441'	Compartments 85 through 95
Figure 8-10:	Turbine Building Elev. 471'	Compartments 97 through 99 and 109-110
Figure 8-11:	Turbine Building Elev. 501'	Compartments 101 through 107
Figure 8-12:	Corridors, Elev. 441'	Compartments 113 through 120

COLUMBIA GENERATING STATION 2002 EMERGENCY EXERCISE

In-Plant radiation data is included in the enclosed tables (In-Plant Controllers only.):

- Compartment Dose Rates Table 8.4
- Compartment Airborne Count Rate Table 8.5
- Compartment Airborne Concentration Table 8.6
- Compartment Contamination Table 8.7

The maps and tables 8.4 through 8.7 are arranged such that each map faces its corresponding table and both are visible when opened.

8.3 POST ACCIDENT SAMPLING SYSTEM DATA

The scenario postulates up to $\approx 6\%$ fuel activity (4% gap release, 2% pin melt) released into the primary coolant following core damage approximately two hours into the drill. Starting at 0915, fuel failure increases from zero to approximately 6% at 0945. Prior to the initial damage, all chemistry samples (if taken) could be via the normal sampling methods and equipment. Once the activity has been released into the coolant, however, sampling will have to be performed using the Post Accident Sampling System (PASS).

ARM readings may prompt the Players to be concerned about what is happening to the core and to want to know what type of source term exists for performing dose assessment and determining offsite protective actions. The PASS can be used to obtain this type of information and thus, PASS sample results are provided in this section.

Data is furnished for the following sample points:

- Reactor Coolant System Table 8.8
- Drywell Air Sample Table 8.9
- Wetwell Air Sample Table 8.10
- Suppression Pool Water Sample Table 8.11
- Secondary Containment Table 8.12
- Stack Table 8.13

No PASS samples should be drawn or simulated during the course of this drill. Should any such request be received, Controllers will advise the players that due to the amount of time involved in obtaining and evaluating a PASS sample, drill participants may not receive the results during the course of the drill. Also, PASS is not needed for mitigation of plant casualties and should not be employed until after recovery begins.

Columbia Generating Station
Radiation Monitor Reference Table

2002 Exercise

Radiation Monitor	Channel No.	Location/Description	Units	Instrument Range		Hi	Hi-Hi
				Min.	Max.	Alarm	Alarm
ARM-RIS-1	1	RX Bldg Fuel Pool (606')	mR/hr	0.00E-01	1.00E+06	3.00E+02	NA
ARM-RIS-2	2	RX Bldg Fuel Pool (606')	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-3	3	RX Bldg New Fuel Area (606')	mR/hr	0.00E-01	1.00E+06	3.50E+03	NA
ARM-RIS-3A	3A	RX Bldg New Fuel Area (606')	mR/hr	0.00E-01	1.00E+06	3.50E+03	NA
ARM-RIS-4	4	RX Bldg CRD Hyd. Eq. Area East (522')	mR/hr	0.00E-01	1.00E+04	4.00E+01	NA
ARM-RIS-5	5	RX Bldg CRD Hyd. Eq. Area West (522')	mR/hr	0.00E-01	1.00E+04	6.00E+01	NA
ARM-RIS-6	6	RX Bldg Eq Access Area South (572')	mR/hr	0.00E-01	1.00E+04	2.50E+01	NA
ARM-RIS-7	7	RX Bldg TIP Sys. Drive Mech Area (501')	mR/hr	0.00E-01	1.00E+04	2.50E+01	NA
ARM-RIS-8	8	RX Bldg Stby Gas Treatment Filter Area	mR/hr	0.00E-01	1.00E+04	2.50E+01	NA
ARM-RIS-9	9	RX Bldg RHR A Pump Room 2 (422')	mR/hr	0.00E-01	1.00E+04	2.00E+02	NA
ARM-RIS-10	10	RX Bldg RHR B Pump Room 1 (422')	mR/hr	0.00E-01	1.00E+04	1.50E+02	NA
ARM-RIS-11	11	RX Bldg RHR C Pump Room 4 (422')	mR/hr	0.00E-01	1.00E+04	3.00E+01	NA
ARM-RIS-12	12	RX Bldg RCIC Pump Room 3 (422')	mR/hr	0.00E-01	1.00E+04	4.50E+01	NA
ARM-RIS-13	13	RX Bldg HPCS Pump Room 6 (422')	mR/hr	0.00E-01	1.00E+04	3.50E+01	NA
ARM-RIS-14	14	TG Bldg Turb Front Standard (501') East	mR/hr	0.00E-01	1.00E+04	3.25E+02	NA
ARM-RIS-15	15	TG Bldg Entrance (Aux Blr Rm) (441') South	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-16	16	TG Bldg RX Feed Pump 1A Area (441')	mR/hr	0.00E-01	1.00E+04	5.00E+02	NA
ARM-RIS-17	17	TG Bldg RX Feed Pump 1B Area (441')	mR/hr	0.00E-01	1.00E+04	5.00E+02	NA
ARM-RIS-18	18	TG Bldg Cond Pump Area (441')	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-19	19	Main Control Room	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-20	20	RW Bldg Valve Room East (467')	mR/hr	0.00E-01	1.00E+04	4.00E+01	NA
ARM-RIS-21	21	RW Bldg Valve Room West (467')	mR/hr	0.00E-01	1.00E+04	4.50E+01	NA
ARM-RIS-22	22	RW Bldg Sampling Room (487')	mR/hr	0.00E-01	1.00E+04	2.50E+01	NA
ARM-RIS-23	23	RX Bldg CRD Pump Room 10 (422')	mR/hr	0.00E-01	1.00E+04	4.50E+01	NA
ARM-RIS-24	24	RX Bldg Eq Access Area Northwest (471')	mR/hr	0.00E-01	1.00E+04	3.50E+01	NA
ARM-RIS-25	25	RW Bldg Hot Machine Shop (487')	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-26	26	RW Bldg Contam Tool Room (467')	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-27	27	RW Bldg Waste Surge Tank Area (437')	mR/hr	0.00E-01	1.00E+04	4.50E+01	NA
ARM-RIS-28	28	RW Bldg Tank Corridor North (437')	mR/hr	0.00E-01	1.00E+04	5.00E+01	NA
ARM-RIS-29	29	RW Bldg Tank Corridor South (437')	mR/hr	0.00E-01	1.00E+04	2.00E+02	NA
ARM-RIS-30	30	Radwaste Control Room (467')	mR/hr	0.00E-01	1.00E+04	1.50E+01	NA
ARM-RIS-32	32	RX Bldg High Range Monitor (471')	R/hr	0.00E-01	1.00E+04	5.00E+01	NA
ARM-RIS-33	33	RX Bldg High Range Monitor (501')	R/hr	0.00E-01	1.00E+04	5.00E+01	NA
ARM-RIS-34	34	RX Bldg High Range Monitor (606')	R/hr	0.00E-01	1.00E+04	5.00E+01	NA
CMS-RIS-12/1A	1A	Containment Particulate Rad Monitor (501')	cpm	1.00E+00	1.00E+07	1.28E+05	1.70E+05
CMS-RIS-12/1B	1B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+07	1.28E+05	1.70E+05
CMS-RIS-12/3A	3A	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+07	2.60E+05	4.20E+05

Columbia Generating Station
Radiation Monitor Reference Table

2002 Exercise

Radiation Monitor	Channel No.	Location/Description	Maximum Safe Operating Value	UE	ALERT	SAE	GE
ARM-RIS-1	1	RX Bldg Fuel Pool (606')					
ARM-RIS-2	2	RX Bldg Fuel Pool (606')					
ARM-RIS-3	3	RX Bldg New Fuel Area (606')					
ARM-RIS-3A	3A	RX Bldg New Fuel Area (606')					
ARM-RIS-4	4	RX Bldg CRD Hyd. Eq. Area East (522')	1.00E+05	>5000	>10000		
ARM-RIS-5	5	RX Bldg CRD Hyd. Eq. Area West (522')	1.00E+05	>5000	>10000		
ARM-RIS-6	6	RX Bldg Eq Access Area South (572')	1.00E+05	>5000	>10000		
ARM-RIS-7	7	RX Bldg TIP Sys. Drive Mech Area (501')	1.00E+05	>5000	>10000		
ARM-RIS-8	8	RX Bldg Stby Gas Treatment Filter Area	1.00E+05	>5000	>10000		
ARM-RIS-9	9	RX Bldg RHR A Pump Room 2 (422')	1.00E+05	>5000	>10000		
ARM-RIS-10	10	RX Bldg RHR B Pump Room 1 (422')	1.00E+05	>5000	>10000		
ARM-RIS-11	11	RX Bldg RHR C Pump Room 4 (422')	1.00E+05	>5000	>10000		
ARM-RIS-12	12	RX Bldg RCIC Pump Room 3 (422')	1.00E+05	>5000	>10000		
ARM-RIS-13	13	RX Bldg HPCS Pump Room 6 (422')	1.00E+05	>5000	>10000		
ARM-RIS-14	14	TG Bldg Turb Front Standard (501') East		>5000	>10000		
ARM-RIS-15	15	TG Bldg Entrance (Aux Blr Rm) (441') South		>5000	>10000		
ARM-RIS-16	16	TG Bldg RX Feed Pump 1A Area (441')		>5000	>10000		
ARM-RIS-17	17	TG Bldg RX Feed Pump 1B Area (441')		>5000	>10000		
ARM-RIS-18	18	TG Bldg Cond Pump Area (441')		>5000	>10000		
ARM-RIS-19	19	Main Control Room			>15		
ARM-RIS-20	20	RW Bldg Valve Room East (467')		>5000			
ARM-RIS-21	21	RW Bldg Valve Room West (467')		>5000			
ARM-RIS-22	22	RW Bldg Sampling Room (487')		>5000			
ARM-RIS-23	23	RX Bldg CRD Pump Room 10 (422')	1.00E+05	>5000	>10000		
ARM-RIS-24	24	RX Bldg Eq Access Area Northwest (471')	1.00E+05	>5000	>10000		
ARM-RIS-25	25	RW Bldg Hot Machine Shop (487')		>5000			
ARM-RIS-26	26	RW Bldg Contam Tool Room (467')		>5000			
ARM-RIS-27	27	RW Bldg Waste Surge Tank Area (437')		>5000			
ARM-RIS-28	28	RW Bldg Tank Corridor North (437')		>5000			
ARM-RIS-29	29	RW Bldg Tank Corridor South (437')		>5000			
ARM-RIS-30	30	Radwaste Control Room (467')		>5000			
ARM-RIS-32	32	RX Bldg High Range Monitor (471')	10	>5000	>10000		
ARM-RIS-33	33	RX Bldg High Range Monitor (501')	10	>5000	>10000		
ARM-RIS-34	34	RX Bldg High Range Monitor (606')		>5000	>10000		
CMS-RIS-12/1A	1A	Containment Particulate Rad Monitor (501')					
CMS-RIS-12/1B	1B	Containment Particulate Rad Monitor (501')					
CMS-RIS-12/3A	3A	Containment Particulate Rad Monitor (501')					

Columbia Generating Station
Radiation Monitor Reference Table

2002 Exercise

Radiation Monitor	Channel No.	Location/Description	Units	Instrument Range		Hi	Hi-Hi
				Min.	Max.	Alarm	Alarm
CMS-RIS-12/3B	3B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+07	2.60E+05	4.20E+05
CMS-RIS-27A	A	Containment LOCA Monitor (522')	R/hr	1.00E-02	1.00E+04	1.00E+02	2.00E+03
CMS-RIS-27B	B	Containment LOCA Monitor (522')	R/hr	1.00E-02	1.00E+04	1.00E+02	2.00E+03
CMS-RIS-27E	E	In-Containment LOCA Monitor (501')	R/hr	1.00E+00	1.00E+07	1.00E+04	2.00E+05
CMS-RIS-27F	F	In-Containment LOCA Monitor (501')	R/hr	1.00E+00	1.00E+07	3.50E+04	7.00E+05
MS-RIS-610A	A	Main Steam Line A	mR/hr	0.00E-01	1.00E+06	1.50E+03	2.57E+03
MS-RIS-610B	B	Main Steam Line B	mR/hr	0.00E-01	1.00E+06	1.80E+03	3.09E+03
MS-RIS-610C	C	Main Steam Line C	mR/hr	0.00E-01	1.00E+06	1.65E+03	2.83E+03
MS-RIS-610D	D	Main Steam Line D	mR/hr	0.00E-01	1.00E+06	1.35E+03	2.31E+03
OG-RIS-612		Off-Gas Pre-Treatment (SJAE Outlet)	mR/hr	1.00E+00	1.00E+06	1.00E+02	2.30E+03
OG-RIS-601A	A	Off-Gas Post-Treatment	cpm	1.00E+00	1.00E+06	1.70E+03	6.00E+05
OG-RIS-601B	B	Off-Gas Post-Treatment	cpm	1.00E+00	1.00E+06	1.70E+03	6.00E+05
PRM-RE-1A	A	RX Bldg Low Range Stack Monitor	cps	1.00E+00	1.00E+06	5.00E+05	NA
PRM-RE-1B	B	RX Bldg Intermed Range Stack Monitor	cps	1.00E+00	1.00E+06	NA	NA
PRM-RE-1C	C	RX Bldg High Range Stack Monitor	cps	1.00E+00	1.00E+06	NA	NA
PSR-RI-507		PASS Area Radiation Monitor	mR/hr	0.00E-01	1.00E+04	1.00E+02	NA
PSR-RI-665		Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-02	1.00E+02	1.00E+00	1.00E+02
PSR-RI-704		Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+04	1.00E+05	NA
REA-RIS-609A	A	RX Bldg Exhaust	mR/hr	1.00E-02	1.00E+02	1.00E+01	1.30E+01
REA-RIS-609B	B	RX Bldg Exhaust	mR/hr	1.00E-02	1.00E+02	1.00E+01	1.30E+01
REA-RIS-609C	C	RX Bldg Exhaust	mR/hr	1.00E-02	1.00E+02	1.00E+01	1.30E+01
REA-RIS-609D	D	RX Bldg Exhaust	mR/hr	1.00E-02	1.00E+02	1.00E+01	1.30E+01
RRA-RIS-3		RX Bldg In-Plant Air Monitor	cpm	5.00E+01	5.00E+04	1.00E+04	NA
SW-RIS-604		RHR Service Water HX-1A Outlet	cps	1.00E-01	1.00E+06	8.00E+01	1.00E+05
SW-RIS-605		RHR Service Water HX-1B Outlet	cps	1.00E-01	1.00E+06	7.50E+01	1.00E+05
TEA-RIS-13		TG Bldg Exhaust	cpm	1.00E+00	1.00E+07	1.68E+03	3.35E+03
TEA-RIS-13A	A	TG Bldg Exhaust (Extended Range)	pmu	1.00E+00	1.00E+05	NA	NA
WEA-RIS-14		RW Bldg Exhaust	cpm	1.00E+01	1.00E+07	6.00E+03	1.20E+04
WEA-RIS-14A	A	RW Bldg Exhaust (Extended Range)	pmu	1.00E+00	1.00E+05	NA	NA
WOA-RIS-31A	A	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+07	4.00E+02	4.00E+03
WOA-RIS-31B	B	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+07	4.00E+02	4.00E+03
WOA-RIS-32A	A	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+07	4.00E+02	4.00E+03
WOA-RIS-32B	B	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+07	4.00E+02	4.00E+03
WRA-RIS-1		RW Bldg In-Plant Part. Air Monitor	cpm	5.00E+01	5.00E+04	1.00E+04	NA
WRA-RIS-2		RW Bldg In-Plant Part. Air Monitor	cpm	5.00E+01	5.00E+04	1.10E+04	NA
TRA-RIS-1		TG Bldg In-Plant Part. Air Monitor	cpm	5.00E+01	5.00E+04	NA	NA

Columbia Generating Station
Radiation Monitor Reference Table

2002 Exercise

Radiation Monitor	Channel No.	Location/Description	Maximum Safe Operating Value				
			UE	ALERT	SAE	GE	
CMS-RIS-12/3B	3B	Containment Particulate Rad Monitor (501')					
CMS-RIS-27A	A	Containment LOCA Monitor (522')					
CMS-RIS-27B	B	Containment LOCA Monitor (522')					
CMS-RIS-27E	E	In-Containment LOCA Monitor (501')		>70	>3600	>14000	
CMS-RIS-27F	F	In-Containment LOCA Monitor (501')		>70	>3600	>14000	
MS-RIS-610A	A	Main Steam Line A					
MS-RIS-610B	B	Main Steam Line B					
MS-RIS-610C	C	Main Steam Line C					
MS-RIS-610D	D	Main Steam Line D					
OG-RIS-612		Off-Gas Pre-Treatment (SJAE Outlet)					
OG-RIS-601A	A	Off-Gas Post-Treatment					
OG-RIS-601B	B	Off-Gas Post-Treatment					
PRM-RE-1A	A	RX Bldg Low Range Stack Monitor					
PRM-RE-1B	B	RX Bldg Intermed Range Stack Monitor	1.35E+04				
PRM-RE-1C	C	RX Bldg High Range Stack Monitor		2.80E+02	1.00E+03	8.10E+03	
PSR-RI-507		PASS Area Radiation Monitor					
PSR-RI-665		Post Accident Primary Coolant Rad. Monitor					
PSR-RI-704		Post Accident Primary Cont. Atmos. Rad. Monitor					
REA-RIS-609A	A	RX Bldg Exhaust					
REA-RIS-609B	B	RX Bldg Exhaust					
REA-RIS-609C	C	RX Bldg Exhaust					
REA-RIS-609D	D	RX Bldg Exhaust					
RRA-RIS-3		RX Bldg In-Plant Air Monitor					
SW-RIS-604		RHR Service Water HX-1A Outlet	2.00E+02	2.00E+04			
SW-RIS-605		RHR Service Water HX-1B Outlet	2.00E+02	2.00E+04			
TEA-RIS-13		TG Bldg Exhaust	1.70E+04	4.40E+04	4.40E+05		
TEA-RIS-13A	A	TG Bldg Exhaust (Extended Range)				8.00E+00	
WEA-RIS-14		RW Bldg Exhaust	1.20E+05	1.70E+05	1.70E+06		
WEA-RIS-14A	A	RW Bldg Exhaust (Extended Range)				2.60E+01	
WOA-RIS-31A	A	CR Fresh Air Intake Monitor					
WOA-RIS-31B	B	CR Fresh Air Intake Monitor					
WOA-RIS-32A	A	CR Fresh Air Intake Monitor					
WOA-RIS-32B	B	CR Fresh Air Intake Monitor					
WRA-RIS-1		RW Bldg In-Plant Part. Air Monitor					
WRA-RIS-2		RW Bldg In-Plant Part. Air Monitor					
TRA-RIS-1		TG Bldg In-Plant Part. Air Monitor					

Columbia Generating Station
Area Radiation Monitors

2002 Exercise

Radiation Monitor	Location/Description	Units	7:00 0:00	7:30 0:30	8:00 1:00
ARM-RJS-1	RX Bldg Fuel Pool (606')	mR/hr	2.20E+02	2.20E+02	2.20E+02
ARM-RJS-2	RX Bldg Fuel Pool (606')	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RJS-3	RX Bldg New Fuel Area (606')	mR/hr	1.60E+02	1.60E+02	1.60E+02
ARM-RJS-3A	RX Bldg New Fuel Area (606')	mR/hr	2.00E+02	2.00E+02	2.00E+02
ARM-RJS-4	RX Bldg CRD Hyd. Eq. Area East (522')	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RJS-5	RX Bldg CRD Hyd. Eq. Area West (522')	mR/hr	1.74E+01	1.74E+01	1.74E+01
ARM-RJS-6	RX Bldg Eq Access Area South (572')	mR/hr	3.80E+00	3.80E+00	3.80E+00
ARM-RJS-7	RX Bldg TIP Sys. Drive Mech Area (501')	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RJS-8	RX Bldg Stby Gas Treatment Filter Area	mR/hr	6.40E+00	6.40E+00	6.40E+00
ARM-RJS-9	RX Bldg RHR A Pump Room 2 (422')	mR/hr	1.85E+01	1.85E+01	1.85E+01
ARM-RJS-10	RX Bldg RHR B Pump Room 1 (422')	mR/hr	2.02E+01	2.02E+01	2.02E+01
ARM-RJS-11	RX Bldg RHR C Pump Room 4 (422')	mR/hr	4.10E+00	4.10E+00	4.10E+00
ARM-RJS-12	RX Bldg RCIC Pump Room 3 (422')	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RJS-13	RX Bldg HPCS Pump Room 6 (422')	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RJS-14	TG Bldg Turb Front Standard (501') East	mR/hr	8.00E+01	8.00E+01	8.00E+01
ARM-RJS-15	TG Bldg Entrance (Aux Blr Rm) (441') South	mR/hr	4.60E+00	4.60E+00	4.60E+00
ARM-RJS-16	TG Bldg RX Feed Pump 1A Area (441')	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RJS-17	TG Bldg RX Feed Pump 1B Area (441')	mR/hr	1.20E+01	1.20E+01	1.20E+01
ARM-RJS-18	TG Bldg Cond Pump Area (441')	mR/hr	3.60E+00	3.60E+00	3.60E+00
ARM-RJS-19	Main Control Room	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RJS-20	RW Bldg Valve Room East (467')	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RJS-21	RW Bldg Valve Room West (467')	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RJS-22	RW Bldg Sampling Room (487')	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RJS-23	RX Bldg CRD Pump Room 10 (422')	mR/hr	9.20E+00	9.20E+00	9.20E+00
ARM-RJS-24	RX Bldg Eq Access Area Northwest (471')	mR/hr	5.40E+00	5.40E+00	5.40E+00
ARM-RJS-25	RW Bldg Hot Machine Shop (487')	mR/hr	5.60E+00	5.60E+00	5.60E+00
ARM-RJS-26	RW Bldg Contam Tool Room (467')	mR/hr	2.40E+00	2.40E+00	2.40E+00
ARM-RJS-27	RW Bldg Waste Surge Tank Area (437')	mR/hr	7.50E+00	7.50E+00	7.50E+00
ARM-RJS-28	RW Bldg Tank Corridor North (437')	mR/hr	8.00E+00	8.00E+00	8.00E+00
ARM-RJS-29	RW Bldg Tank Corridor South (437')	mR/hr	3.20E+01	3.20E+01	3.20E+01
ARM-RJS-30	Radwaste Control Room (467')	mR/hr	4.20E+00	4.20E+00	4.20E+00
ARM-RJS-32	RX Bldg High Range Monitor (471')	R/hr	1.00E-01	1.00E-01	1.00E-01
ARM-RJS-33	RX Bldg High Range Monitor (501')	R/hr	1.00E-01	1.00E-01	1.00E-01
ARM-RJS-34	RX Bldg High Range Monitor (606')	R/hr	9.60E-02	9.60E-02	9.60E-02
PSR-RI-507	PASS Area Radiation Monitor	mR/hr	5.00E+00	5.00E+00	5.00E+00

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Area Radiation Monitors

Radiation Monitor	Location/Description	Units	8:30	9:00	9:30
ARM-RIS-1	RX Bldg Fuel Pool (606)	mR/hr	2.20E+02	2.20E+02	2.20E+02
ARM-RIS-2	RX Bldg Fuel Pool (606)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-3	RX Bldg New Fuel Area (606)	mR/hr	1.60E+02	1.60E+02	1.60E+02
ARM-RIS-3A	RX Bldg New Fuel Area (606)	mR/hr	2.00E+02	2.00E+02	2.00E+02
ARM-RIS-4	RX Bldg CRD Hyd. Eq. Area East (522)	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RIS-5	RX Bldg CRD Hyd. Eq. Area West (522)	mR/hr	1.74E+01	1.74E+01	1.74E+01
ARM-RIS-6	RX Bldg Eq Access Area South (572)	mR/hr	3.80E+00	3.80E+00	3.80E+00
ARM-RIS-7	RX Bldg TIP Sys. Drive Mech Area (501)	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RIS-8	RX Bldg Stby Gas Treatment Filter Area	mR/hr	6.40E+00	6.40E+00	6.40E+00
ARM-RIS-9	RX Bldg RHR A Pump Room 2 (422)	mR/hr	1.85E+01	1.85E+01	1.85E+01
ARM-RIS-10	RX Bldg RHR B Pump Room 1 (422)	mR/hr	2.02E+01	2.02E+01	2.02E+01
ARM-RIS-11	RX Bldg RHR C Pump Room 4 (422)	mR/hr	4.10E+00	4.10E+00	4.10E+00
ARM-RIS-12	RX Bldg RCIC Pump Room 3 (422)	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RIS-13	RX Bldg HFCS Pump Room 6 (422)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-14	TG Bldg Turb Front Standard (501) East	mR/hr	8.00E+01	8.00E+01	5.31E+02 *
ARM-RIS-15	TG Bldg Entrance (Aux Blr Rm) (441) South	mR/hr	4.60E+00	4.60E+00	4.60E+00
ARM-RIS-16	TG Bldg RX Feed Pump 1A Area (441)	mR/hr	1.00E+01	1.00E+01	1.53E+02
ARM-RIS-17	TG Bldg RX Feed Pump 1B Area (441)	mR/hr	1.20E+01	1.20E+01	1.53E+02
ARM-RIS-18	TG Bldg Cond Pump Area (441)	mR/hr	3.60E+00	3.60E+00	1.58E+03 *
ARM-RIS-19	Main Control Room	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RIS-20	RW Bldg Valve Room East (467)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-21	RW Bldg Valve Room West (467)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-22	RW Bldg Sampling Room (487)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-23	RX Bldg CRD Pump Room 10 (422)	mR/hr	9.20E+00	9.20E+00	9.20E+00
ARM-RIS-24	RX Bldg Eq Access Area Northwest (471)	mR/hr	5.40E+00	5.40E+00	5.40E+00
ARM-RIS-25	RW Bldg Hot Machine Shop (487)	mR/hr	5.60E+00	5.60E+00	5.60E+00
ARM-RIS-26	RW Bldg Contam Tool Room (467)	mR/hr	2.40E+00	2.40E+00	2.40E+00
ARM-RIS-27	RW Bldg Waste Surge Tank Area (437)	mR/hr	7.50E+00	7.50E+00	7.50E+00
ARM-RIS-28	RW Bldg Tank Corridor North (437)	mR/hr	8.00E+00	8.00E+00	8.00E+00
ARM-RIS-29	RW Bldg Tank Corridor South (437)	mR/hr	3.20E+01	3.20E+01	3.20E+01
ARM-RIS-30	Radwaste Control Room (467)	mR/hr	4.20E+00	4.20E+00	4.20E+00
ARM-RIS-32	RX Bldg High Range Monitor (471)	R/hr	1.00E-01	1.00E-01	1.00E-01
ARM-RIS-33	RX Bldg High Range Monitor (501)	R/hr	1.00E-01	1.00E-01	1.00E-01
ARM-RIS-34	RX Bldg High Range Monitor (606)	R/hr	9.60E-02	9.60E-02	9.60E-02
PSR-RI-507	PASS Area Radiation Monitor	mR/hr	5.00E+00	5.00E+00	5.00E+00

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Area Radiation Monitors

Monitor	Location/Description	Units	10:00	10:30	10:45
ARM-RIS-1	RX Bldg Fuel Pool (606)	mR/hr	2.20E+02	1.90E+02	1.90E+02
ARM-RIS-2	RX Bldg Fuel Pool (606)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-3	RX Bldg New Fuel Area (606)	mR/hr	1.60E+02	1.50E+02	1.50E+02
ARM-RIS-3A	RX Bldg New Fuel Area (606)	mR/hr	2.00E+02	1.80E+02	1.80E+02
ARM-RIS-4	RX Bldg CRD Hyd. Eq. Area East (522)	mR/hr	6.00E+00	6.00E+00	6.00E+00
ARM-RIS-5	RX Bldg CRD Hyd. Eq. Area West (522)	mR/hr	1.74E+01	9.00E+00	9.00E+00
ARM-RIS-6	RX Bldg Eq Access Area South (572)	mR/hr	3.80E+00	3.00E+00	3.00E+00
ARM-RIS-7	RX Bldg TIP Sys. Drive Mech Area (501)	mR/hr	1.00E+01	5.00E+00	5.00E+00
ARM-RIS-8	RX Bldg Stby Gas Treatment Filter Area	mR/hr	6.40E+00	6.00E+00	6.00E+00
ARM-RIS-9	RX Bldg RHR A Pump Room 2 (422)	mR/hr	1.85E+01	1.50E+01	1.50E+01
ARM-RIS-10	RX Bldg RHR B Pump Room 1 (422)	mR/hr	2.02E+01	2.00E+01	2.00E+01
ARM-RIS-11	RX Bldg RHR C Pump Room 4 (422)	mR/hr	4.10E+00	3.00E+00	3.00E+00
ARM-RIS-12	RX Bldg RCIC Pump Room 3 (422)	mR/hr	6.00E+00	1.00E+04	1.00E+04
ARM-RIS-13	RX Bldg HPCS Pump Room 6 (422)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-14	TG Bldg Turb Front Standard (501) East	mR/hr	4.12E+03	4.00E+00	4.00E+00
ARM-RIS-15	TG Bldg Entrance (Aux Bldg Rm) (441) South	mR/hr	4.60E+00	4.00E+00	4.00E+00
ARM-RIS-16	TG Bldg RX Feed Pump 1A Area (441)	mR/hr	1.22E+03	1.00E+01	1.00E+01
ARM-RIS-17	TG Bldg RX Feed Pump 1B Area (441)	mR/hr	1.22E+03	1.00E+01	1.00E+01
ARM-RIS-18	TG Bldg Cond Pump Area (441)	mR/hr	1.00E+04	8.32E+03	7.57E+03
ARM-RIS-19	Main Control Room	mR/hr	6.00E+00	5.00E+00	5.00E+00
ARM-RIS-20	RW Bldg Valve Room East (467)	mR/hr	5.00E+00	4.00E+00	4.00E+00
ARM-RIS-21	RW Bldg Valve Room West (467)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-22	RW Bldg Sampling Room (487)	mR/hr	5.00E+00	3.00E+00	3.00E+00
ARM-RIS-23	RX Bldg CRD Pump Room 10 (422)	mR/hr	9.20E+00	8.50E+00	8.50E+00
ARM-RIS-24	RX Bldg Eq Access Area Northwest (471)	mR/hr	5.40E+00	3.00E+00	3.00E+00
ARM-RIS-25	RW Bldg Hot Machine Shop (487)	mR/hr	5.60E+00	3.00E+00	3.00E+00
ARM-RIS-26	RW Bldg Contam Tool Room (467)	mR/hr	2.40E+00	2.00E+00	2.00E+00
ARM-RIS-27	RW Bldg Waste Surge Tank Area (437)	mR/hr	7.50E+00	7.00E+00	7.00E+00
ARM-RIS-28	RW Bldg Tank Corridor North (437)	mR/hr	8.00E+00	5.00E+00	5.00E+00
ARM-RIS-29	RW Bldg Tank Corridor South (437)	mR/hr	3.20E+01	2.50E+01	2.50E+01
ARM-RIS-30	Radwaste Control Room (467)	mR/hr	4.20E+00	3.80E+00	3.80E+00
ARM-RIS-32	RX Bldg High Range Monitor (471)	R/hr	1.00E-01	5.91E+02	3.54E+02
ARM-RIS-33	RX Bldg High Range Monitor (501)	R/hr	1.00E-01	1.00E-02	1.00E-02
ARM-RIS-34	RX Bldg High Range Monitor (606)	R/hr	9.60E-02	1.00E-03	1.00E-03
PSR-RI-507	PASS Area Radiation Monitor	mR/hr	5.00E+00	5.00E+00	5.00E+00

Monitor Status Legend

- * HI Alarm
- ** HI-HI Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Area Radiation Monitors

Monitor	Location/Description	Units	11:00	4:00	4:15	4:30
ARM-RIS-1	RX Bldg Fuel Pool (606)	mR/hr	6.05E+02	4.13E+04	*	4.59E+04
ARM-RIS-2	RX Bldg Fuel Pool (606)	mR/hr	6.05E+02	1.00E+04	*	1.00E+04
ARM-RIS-3	RX Bldg New Fuel Area (606)	mR/hr	1.50E+02	2.72E+04	*	3.48E+04
ARM-RIS-3A	RX Bldg New Fuel Area (606)	mR/hr	1.80E+02	2.72E+04	*	3.48E+04
ARM-RIS-4	RX Bldg CRD Hyd. Eq. Area East (522)	mR/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-5	RX Bldg CRD Hyd. Eq. Area West (522)	mR/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-6	RX Bldg Eq Access Area South (572)	mR/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-7	RX Bldg TIP Sys. Dnve Mech Area (501)	mR/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-8	RX Bldg Sty Gas Treatment Filter Area	mR/hr	3.08E+03	1.00E+04	*	1.00E+04
ARM-RIS-9	RX Bldg RHR A Pump Room 2 (422)	mR/hr	1.50E+01	1.50E+01		1.50E+01
ARM-RIS-10	RX Bldg RHR B Pump Room 1 (422)	mR/hr	2.00E+01	2.00E+01		2.00E+01
ARM-RIS-11	RX Bldg RHR C Pump Room 4 (422)	mR/hr	3.00E+00	3.00E+00		3.00E+00
ARM-RIS-12	RX Bldg RCIC Pump Room 3 (422)	mR/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-13	RX Bldg HPCS Pump Room 6 (422)	mR/hr	5.00E+00	5.00E+00		5.00E+00
ARM-RIS-14	TG Bldg Turb Front Standard (501) East	mR/hr	4.00E+00	4.00E+00		4.00E+00
ARM-RIS-15	TG Bldg Entrance (Aux Bldg Rm) (441) South	mR/hr	4.00E+00	4.00E+00		4.00E+00
ARM-RIS-16	TG Bldg RX Feed Pump 1A Area (441)	mR/hr	1.00E+01	1.00E+01		1.00E+01
ARM-RIS-17	TG Bldg RX Feed Pump 1B Area (441)	mR/hr	1.00E+01	1.00E+01		1.00E+01
ARM-RIS-18	TG Bldg Cond Pump Area (441)	mR/hr	6.93E+03	6.39E+03	*	5.92E+03
ARM-RIS-19	Main Control Room	mR/hr	5.00E+00	5.00E+00		5.00E+00
ARM-RIS-20	RW Bldg Valve Room East (467)	mR/hr	4.00E+00	4.00E+00		4.00E+00
ARM-RIS-21	RW Bldg Valve Room West (467)	mR/hr	5.00E+00	5.00E+00		5.00E+00
ARM-RIS-22	RW Bldg Sampling Room (487)	mR/hr	3.00E+00	3.00E+00		3.00E+00
ARM-RIS-23	RX Bldg CRD Pump Room 10 (422)	mR/hr	8.50E+00	8.50E+00		8.50E+00
ARM-RIS-24	RX Bldg Eq Access Area Northwest (471)	mR/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-25	RW Bldg Hot Machine Shop (487)	mR/hr	3.00E+00	3.00E+00		3.00E+00
ARM-RIS-26	RW Bldg Contam Tool Room (467)	mR/hr	2.00E+00	2.00E+00		2.00E+00
ARM-RIS-27	RW Bldg Waste Surge Tank Area (437)	mR/hr	7.00E+00	7.00E+00		7.00E+00
ARM-RIS-28	RW Bldg Tank Corridor North (437)	mR/hr	5.00E+00	5.00E+00		5.00E+00
ARM-RIS-29	RW Bldg Tank Corridor South (437)	mR/hr	2.50E+01	2.50E+01		2.50E+01
ARM-RIS-30	Radwaste Control Room (467)	mR/hr	3.80E+00	3.80E+00		3.80E+00
ARM-RIS-32	RX Bldg High Range Monitor (471)	R/hr	1.00E+04	1.00E+04	*	1.00E+04
ARM-RIS-33	RX Bldg High Range Monitor (501)	R/hr	1.00E+04	1.00E+04	*	8.79E+03
ARM-RIS-34	RX Bldg High Range Monitor (606)	R/hr	6.05E+01	4.13E+01		4.59E+01
PSSR-RI-507	PASS Area Radiation Monitor	mR/hr	5.00E+00	5.00E+00		5.00E+00

Monitor Status Legend

- * HI Alarm
- ** HI-HI Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Area Radiation Monitors

Radiation	Monitor	Location/Description	Units	11:45	12:00	12:15
ARM-RIS-1	RX Bldg Fuel Pool (606)	RX Bldg Fuel Pool (606)	mR/hr	5.34E+04	6.35E+04	6.34E+04
ARM-RIS-2	RX Bldg Fuel Pool (606)	RX Bldg Fuel Pool (606)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-3	RX Bldg New Fuel Area (606)	RX Bldg New Fuel Area (606)	mR/hr	4.27E+04	5.31E+04	5.43E+04
ARM-RIS-3A	RX Bldg New Fuel Area (606)	RX Bldg New Fuel Area (606)	mR/hr	4.27E+04	5.31E+04	5.43E+04
ARM-RIS-4	RX Bldg CRD Hyd Eq, Area East (522)	RX Bldg CRD Hyd Eq, Area East (522)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-5	RX Bldg CRD Hyd Eq, Area West (522)	RX Bldg CRD Hyd Eq, Area West (522)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-6	RX Bldg Eq Access Area South (572)	RX Bldg Eq Access Area South (572)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-7	RX Bldg T/P Sys, Drive Mech Area (501)	RX Bldg T/P Sys, Drive Mech Area (501)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-8	RX Bldg Stby Gas Treatment Filter Area	RX Bldg Stby Gas Treatment Filter Area	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-9	RX Bldg RHR A Pump Room 2 (422)	RX Bldg RHR A Pump Room 2 (422)	mR/hr	1.50E+01	1.50E+01	1.50E+01
ARM-RIS-10	RX Bldg RHR B Pump Room 1 (422)	RX Bldg RHR B Pump Room 1 (422)	mR/hr	2.00E+01	1.00E+04	1.00E+04
ARM-RIS-11	RX Bldg RHR C Pump Room 4 (422)	RX Bldg RHR C Pump Room 4 (422)	mR/hr	3.00E+00	3.00E+00	3.00E+00
ARM-RIS-12	RX Bldg RHC Pump Room 3 (422)	RX Bldg RHC Pump Room 3 (422)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-13	RX Bldg HPCS Pump Room 6 (422)	RX Bldg HPCS Pump Room 6 (422)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-14	TG Bldg Turb Front Standard (501) East	TG Bldg Turb Front Standard (501) East	mR/hr	4.00E+00	4.00E+00	4.00E+00
ARM-RIS-15	TG Bldg Entrance (Aux Bldg Rm) (441) South	TG Bldg Entrance (Aux Bldg Rm) (441) South	mR/hr	4.00E+00	4.00E+00	4.00E+00
ARM-RIS-16	TG Bldg RX Feed Pump 1A Area (441)	TG Bldg RX Feed Pump 1A Area (441)	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RIS-17	TG Bldg RX Feed Pump 1B Area (441)	TG Bldg RX Feed Pump 1B Area (441)	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RIS-18	TG Bldg Cond Pump Area (441)	TG Bldg Cond Pump Area (441)	mR/hr	5.52E+03	5.18E+03	4.88E+03
ARM-RIS-19	Main Control Room	Main Control Room	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-20	RW Bldg Valve Room East (467)	RW Bldg Valve Room East (467)	mR/hr	4.00E+00	4.00E+00	4.00E+00
ARM-RIS-21	RW Bldg Valve Room West (467)	RW Bldg Valve Room West (467)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-22	RW Bldg Sampling Room (487)	RW Bldg Sampling Room (487)	mR/hr	3.00E+00	3.00E+00	3.00E+00
ARM-RIS-23	RX Bldg CRD Pump Room 10 (422)	RX Bldg CRD Pump Room 10 (422)	mR/hr	8.50E+00	8.50E+00	8.50E+00
ARM-RIS-24	RX Bldg Eq Access Area Northwest (471)	RX Bldg Eq Access Area Northwest (471)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-25	RW Bldg Hot Machine Shop (487)	RW Bldg Hot Machine Shop (487)	mR/hr	3.00E+00	3.00E+00	3.00E+00
ARM-RIS-26	RW Bldg Contam Tool Room (467)	RW Bldg Contam Tool Room (467)	mR/hr	2.00E+00	2.00E+00	2.00E+00
ARM-RIS-27	RW Bldg Waste Surge Tank Area (437)	RW Bldg Waste Surge Tank Area (437)	mR/hr	7.00E+00	7.00E+00	7.00E+00
ARM-RIS-28	RW Bldg Tank Corridor North (437)	RW Bldg Tank Corridor North (437)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-29	RW Bldg Tank Corridor South (437)	RW Bldg Tank Corridor South (437)	mR/hr	2.50E+01	2.50E+01	2.50E+01
ARM-RIS-30	Radwaste Control Room (467)	Radwaste Control Room (467)	mR/hr	3.80E+00	3.80E+00	3.80E+00
ARM-RIS-32	RX Bldg High Range Monitor (471)	RX Bldg High Range Monitor (471)	R/hr	1.00E+04	1.00E+04	1.29E+03
ARM-RIS-33	RX Bldg High Range Monitor (501)	RX Bldg High Range Monitor (501)	R/hr	7.60E+03	2.22E+03	6.65E+02
ARM-RIS-34	RX Bldg High Range Monitor (606)	RX Bldg High Range Monitor (606)	R/hr	5.34E+01	6.35E+01	6.34E+01
PSR-RI-507	PASS Area Radiation Monitor	PASS Area Radiation Monitor	mR/hr	5.00E+00	5.00E+00	5.00E+00

Monitor Status Legend

- * HI Alarm
- ** HI-HI Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Area Radiation Monitors
2002 Exercise

Monitor	Location/Description	Units	5:30	5:45	6:00
Radiation			12:30	12:45	13:00
ARM-RIS-1	RX Bldg Fuel Pool (606)	mR/hr	5.89E+04	5.10E+04	4.16E+04
ARM-RIS-2	RX Bldg Fuel Pool (606)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-3	RX Bldg New Fuel Area (606)	mR/hr	5.15E+04	4.51E+04	3.71E+04
ARM-RIS-3A	RX Bldg New Fuel Area (606)	mR/hr	5.15E+04	4.51E+04	3.71E+04
ARM-RIS-4	RX Bldg CRD Hyd. Eq. Area East (522)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-5	RX Bldg CRD Hyd. Eq. Area West (522)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-6	RX Bldg Eq Access Area South (572)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-7	RX Bldg TIP Sys. Drive Mech Area (501)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-8	RX Bldg Stby Gas Treatment Filter Area	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-9	RX Bldg RHR A Pump Room 2 (422)	mR/hr	1.50E+01	1.50E+01	1.50E+01
ARM-RIS-10	RX Bldg RHR B Pump Room 1 (422)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-11	RX Bldg RHR C Pump Room 4 (422)	mR/hr	3.00E+00	3.00E+00	3.00E+00
ARM-RIS-12	RX Bldg RCIC Pump Room 3 (422)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-13	RX Bldg HPCS Pump Room 6 (422)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-14	TG Bldg Turb Front Standard (501) East	mR/hr	4.00E+00	4.00E+00	4.00E+00
ARM-RIS-15	TG Bldg Entrance (Aux Bldg Rm) (441) South	mR/hr	4.00E+00	4.00E+00	4.00E+00
ARM-RIS-16	TG Bldg RX Feed Pump 1A Area (441)	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RIS-17	TG Bldg RX Feed Pump 1B Area (441)	mR/hr	1.00E+01	1.00E+01	1.00E+01
ARM-RIS-18	TG Bldg Cond Pump Area (441)	mR/hr	4.61E+03	4.39E+03	4.18E+03
ARM-RIS-19	Main Control Room	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-20	RW Bldg Valve Room East (467)	mR/hr	4.00E+00	4.00E+00	4.00E+00
ARM-RIS-21	RW Bldg Valve Room West (467)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-22	RW Bldg Sampling Room (487)	mR/hr	3.00E+00	3.00E+00	3.00E+00
ARM-RIS-23	RX Bldg CRD Pump Room 10 (422)	mR/hr	8.50E+00	8.50E+00	8.50E+00
ARM-RIS-24	RX Bldg Eq Access Area Northwest (471)	mR/hr	1.00E+04	1.00E+04	1.00E+04
ARM-RIS-25	RW Bldg Hot Machine Shop (487)	mR/hr	3.00E+00	3.00E+00	3.00E+00
ARM-RIS-26	RW Bldg Contam Tool Room (467)	mR/hr	2.00E+00	2.00E+00	2.00E+00
ARM-RIS-27	RW Bldg Waste Surge Tank Area (437)	mR/hr	7.00E+00	7.00E+00	7.00E+00
ARM-RIS-28	RW Bldg Tank Corridor North (437)	mR/hr	5.00E+00	5.00E+00	5.00E+00
ARM-RIS-29	RW Bldg Tank Corridor South (437)	mR/hr	2.50E+01	2.50E+01	2.50E+01
ARM-RIS-30	Radwaste Control Room (467)	mR/hr	3.80E+00	3.80E+00	3.80E+00
ARM-RIS-32	RX Bldg High Range Monitor (471)	R/hr	2.99E+02	1.99E+02	1.54E+02
ARM-RIS-33	RX Bldg High Range Monitor (501)	R/hr	2.14E+02	1.14E+02	6.29E+01
ARM-RIS-34	RX Bldg High Range Monitor (606)	R/hr	5.89E+01	5.10E+01	4.16E+01
PSR-RI-507	PASS Area Radiation Monitor	mR/hr	5.00E+00	5.00E+00	5.00E+00

Monitor Status Legend

- * HI Alarm
- ** HI-HI Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Process Radiation Monitors

2002 Exercise

Radiation Monitor	Location/Description	Units	7:00 0:00	7:30 0:30	8:00 1:00
CMS-RIS-12/1A	Containment Particulate Rad Monitor (501')	cpm	8.00E+01	8.00E+01	8.00E+01
CMS-RIS-12/1B	Containment Particulate Rad Monitor (501')	cpm	5.50E+02	5.50E+02	5.50E+02
CMS-RIS-12/3A	Containment Particulate Rad Monitor (501')	cpm	9.50E+01	9.50E+01	9.50E+01
CMS-RIS-12/3B	Containment Particulate Rad Monitor (501')	cpm	2.50E+02	2.50E+02	2.50E+02
CMS-RIS-27A	Containment LOCA Monitor (522')	R/hr	3.75E-01	3.75E-01	3.75E-01
CMS-RIS-27B	Containment LOCA Monitor (522')	R/hr	4.28E-01	4.28E-01	4.28E-01
CMS-RIS-27E	In-Containment LOCA Monitor (501')	R/hr	1.20E+00	1.20E+00	1.20E+00
CMS-RIS-27F	In-Containment LOCA Monitor (501')	R/hr	1.80E+00	1.80E+00	1.80E+00
MS-RIS-610A	Main Steam Line A	mR/hr	1.12E+03	1.12E+03	1.12E+03
MS-RIS-610B	Main Steam Line B	mR/hr	1.09E+03	1.09E+03	1.09E+03
MS-RIS-610C	Main Steam Line C	mR/hr	1.00E+03	1.00E+03	1.00E+03
MS-RIS-610D	Main Steam Line D	mR/hr	1.00E+03	1.00E+03	1.00E+03
OG-RIS-612	Off-Gas Pre-Treatment (SJAE Outlet)	mR/hr	3.20E+01	3.20E+01	3.20E+01
OG-RIS-601A	Off-Gas Post-Treatment	cpm	1.00E+02	1.00E+02	1.00E+02
OG-RIS-601B	Off-Gas Post-Treatment	cpm	1.40E+02	1.40E+02	1.40E+02
PRM-RE-1A	RX Bldg Low Range Stack Monitor	cps	2.00E+04	2.00E+04	2.00E+04
PRM-RE-1B	RX Bldg Intermed Range Stack Monitor	cps	8.00E+02	8.00E+02	8.00E+02
PRM-RE-1C	RX Bldg High Range Stack Monitor	cps	2.00E+02	2.00E+02	2.00E+02
PSR-RI-665	Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-01	1.00E-01	1.00E-01
PSR-RI-704	Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+00	1.00E+00
REA-RIS-609A	RX Bldg Exhaust	mR/hr	3.30E-01	3.30E-01	3.30E-01
REA-RIS-609B	RX Bldg Exhaust	mR/hr	2.10E-01	2.10E-01	2.10E-01
REA-RIS-609C	RX Bldg Exhaust	mR/hr	3.60E-01	3.60E-01	3.60E-01
REA-RIS-609D	RX Bldg Exhaust	mR/hr	2.90E-01	2.90E-01	2.90E-01
RRA-RIS-3	RX Bldg In-Plant Air Monitor	cpm	1.28E+03	1.28E+03	1.28E+03
SW-RIS-604	RHR Service Water HX-1A Outlet	cps	5.50E+00	5.50E+00	5.50E+00
SW-RIS-605	RHR Service Water HX-1B Outlet	cps	4.20E+00	4.20E+00	4.20E+00
TEA-RIS-13	TG Bldg Exhaust	cpm	6.50E+01	6.50E+01	6.50E+01
TEA-RIS-13A	TG Bldg Exhaust (Extended Range)	pmu	1.80E+00	1.80E+00	1.80E+00
WEA-RIS-14	RW Bldg Exhaust	cpm	6.00E+01	6.00E+01	6.00E+01
WEA-RIS-14A	RW Bldg Exhaust (Extended Range)	pmu	1.80E+00	1.80E+00	1.80E+00
WOA-RIS-31A	CR Fresh Air Intake Monitor	cpm	1.80E+01	1.80E+01	1.80E+01
WOA-RIS-31B	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01
WOA-RIS-32A	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01
WOA-RIS-32B	CR Fresh Air Intake Monitor	cpm	2.50E+01	2.50E+01	2.50E+01
WRA-RIS-1	RW Bldg In-Plant Part. Air Monitor	cpm	1.60E+03	1.60E+03	1.60E+03
WRA-RIS-2	RW Bldg In-Plant Part. Air Monitor	cpm	7.55E+02	7.55E+02	7.55E+02
TRA-RIS-1	TG Bldg In-Plant Part. Air Monitor	cpm	1.16E+02	1.16E+02	1.16E+02

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Process Radiation Monitors

2002 Exercise

Radiation Monitor	Location/Description	Units	8:30 1:30	9:00 2:00	9:30 2:30
CMS-RIS-12/1A	Containment Particulate Rad Monitor (501')	cpm	8.00E+01	8.00E+01	8.00E+01
CMS-RIS-12/1B	Containment Particulate Rad Monitor (501')	cpm	5.50E+02	5.50E+02	5.50E+02
CMS-RIS-12/3A	Containment Particulate Rad Monitor (501')	cpm	9.50E+01	9.50E+01	9.50E+01
CMS-RIS-12/3B	Containment Particulate Rad Monitor (501')	cpm	2.50E+02	2.50E+02	2.50E+02
CMS-RIS-27A	Containment LOCA Monitor (522')	R/hr	3.75E-01	3.75E-01	3.75E-01
CMS-RIS-27B	Containment LOCA Monitor (522')	R/hr	4.28E-01	4.28E-01	4.28E-01
CMS-RIS-27E	In-Containment LOCA Monitor (501')	R/hr	1.20E+00	1.20E+00	1.20E+00
CMS-RIS-27F	In-Containment LOCA Monitor (501')	R/hr	1.80E+00	1.80E+00	1.80E+00
MS-RIS-610A	Main Steam Line A	mR/hr	1.12E+03	1.12E+03	4.82E+03 *
MS-RIS-610B	Main Steam Line B	mR/hr	1.09E+03	1.09E+03	4.82E+03 *
MS-RIS-610C	Main Steam Line C	mR/hr	1.00E+03	1.00E+03	4.82E+03 *
MS-RIS-610D	Main Steam Line D	mR/hr	1.00E+03	1.00E+03	4.82E+03 *
OG-RIS-612	Off-Gas Pre-Treatment (SJAE Outlet)	mR/hr	3.20E+01	3.20E+01	3.20E+01
OG-RIS-601A	Off-Gas Post-Treatment	cpm	1.00E+02	1.00E+02	1.00E+02
OG-RIS-601B	Off-Gas Post-Treatment	cpm	1.40E+02	1.40E+02	1.40E+02
PRM-RE-1A	RX Bldg Low Range Stack Monitor	cps	2.00E+04	2.00E+04	2.00E+04
PRM-RE-1B	RX Bldg Intermed Range Stack Monitor	cps	8.00E+02	8.00E+02	8.00E+02
PRM-RE-1C	RX Bldg High Range Stack Monitor	cps	2.00E+02	2.00E+02	2.00E+02
PSR-RI-665	Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-01	1.00E-01	1.00E-01
PSR-RI-704	Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+00	1.00E+00
REA-RIS-609A	RX Bldg Exhaust	mR/hr	3.30E-01	3.30E-01	3.30E-01
REA-RIS-609B	RX Bldg Exhaust	mR/hr	2.10E-01	2.10E-01	2.10E-01
REA-RIS-609C	RX Bldg Exhaust	mR/hr	3.60E-01	3.60E-01	3.60E-01
REA-RIS-609D	RX Bldg Exhaust	mR/hr	2.90E-01	2.90E-01	2.90E-01
RRA-RIS-3	RX Bldg In-Plant Air Monitor	cpm	1.28E+03	1.28E+03	1.28E+03
SW-RIS-604	RHR Service Water HX-1A Outlet	cps	5.50E+00	5.50E+00	5.50E+00
SW-RIS-605	RHR Service Water HX-1B Outlet	cps	4.20E+00	4.20E+00	4.20E+00
TEA-RIS-13	TG Bldg Exhaust	cpm	6.50E+01	6.50E+01	6.50E+01
TEA-RIS-13A	TG Bldg Exhaust (Extended Range)	pmu	1.80E+00	1.80E+00	1.80E+00
WEA-RIS-14	RW Bldg Exhaust	cpm	6.00E+01	6.00E+01	6.00E+01
WEA-RIS-14A	RW Bldg Exhaust (Extended Range)	pmu	1.80E+00	1.80E+00	1.80E+00
WOA-RIS-31A	CR Fresh Air Intake Monitor	cpm	1.80E+01	1.80E+01	1.80E+01
WOA-RIS-31B	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01
WOA-RIS-32A	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01
WOA-RIS-32B	CR Fresh Air Intake Monitor	cpm	2.50E+01	2.50E+01	2.50E+01
WRA-RIS-1	RW Bldg In-Plant Part. Air Monitor	cpm	1.60E+03	1.60E+03	1.60E+03
WRA-RIS-2	RW Bldg In-Plant Part. Air Monitor	cpm	7.55E+02	7.55E+02	7.55E+02
TRA-RIS-1	TG Bldg In-Plant Part. Air Monitor	cpm	1.16E+02	1.16E+02	1.16E+02

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Process Radiation Monitors

2002 Exercise

Radiation Monitor	Location/Description	Units	10:00 3:00	10:30 3:30	10:45 3:45	
CMS-RIS-12/1A	Containment Particulate Rad Monitor (501)	cpm	8.00E+01	1.00E+00	1.00E+00	
CMS-RIS-12/1B	Containment Particulate Rad Monitor (501)	cpm	5.50E+02	1.00E+01	1.00E+01	
CMS-RIS-12/3A	Containment Particulate Rad Monitor (501)	cpm	9.50E+01	1.00E+01	1.00E+01	
CMS-RIS-12/3B	Containment Particulate Rad Monitor (501)	cpm	2.50E+02	1.00E+01	1.00E+01	
CMS-RIS-27A	Containment LOCA Monitor (522)	R/hr	3.75E-01	7.59E+01	2.06E+02	*
CMS-RIS-27B	Containment LOCA Monitor (522)	R/hr	4.28E-01	7.59E+01	2.06E+02	*
CMS-RIS-27E	In-Containment LOCA Monitor (501)	R/hr	1.20E+00	7.59E+01	2.06E+02	A
CMS-RIS-27F	In-Containment LOCA Monitor (501)	R/hr	1.80E+00	7.59E+01	2.06E+02	A
MS-RIS-610A	Main Steam Line A	mR/hr	3.56E+04	* 1.00E+01	1.00E+01	
MS-RIS-610B	Main Steam Line B	mR/hr	3.56E+04	* 1.00E+01	1.00E+01	
MS-RIS-610C	Main Steam Line C	mR/hr	3.56E+04	* 1.60E+01	1.60E+01	
MS-RIS-610D	Main Steam Line D	mR/hr	3.56E+04	* 1.00E+01	1.00E+01	
OG-RIS-612	Off-Gas Pre-Treatment (SJAЕ Outlet)	mR/hr	3.20E+01	1.00E+00	1.00E+00	
OG-RIS-601A	Off-Gas Post-Treatment	cpm	1.00E+02	1.00E+00	1.00E+00	
OG-RIS-601B	Off-Gas Post-Treatment	cpm	1.40E+02	2.00E+00	2.00E+00	
PRM-RE-1A	RX Bldg Low Range Stack Monitor	cps	2.00E+04	7.00E+03	7.00E+03	
PRM-RE-1B	RX Bldg Intermed Range Stack Monitor	cps	8.00E+02	5.00E+02	5.00E+02	
PRM-RE-1C	RX Bldg High Range Stack Monitor	cps	2.00E+02	2.00E+02	2.00E+02	
PSR-RI-665	Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-01	1.00E-01	1.00E-01	
PSR-RI-704	Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+00	1.00E+00	
REA-RIS-609A	RX Bldg Exhaust	mR/hr	3.30E-01	2.90E-01	2.90E-01	
REA-RIS-609B	RX Bldg Exhaust	mR/hr	2.10E-01	2.20E-01	2.20E-01	
REA-RIS-609C	RX Bldg Exhaust	mR/hr	3.60E-01	3.50E-01	3.50E-01	
REA-RIS-609D	RX Bldg Exhaust	mR/hr	2.90E-01	2.90E-01	2.90E-01	
RRA-RIS-3	RX Bldg In-Plant Air Monitor	cpm	1.28E+03	1.60E+02	1.60E+02	
SW-RIS-604	RHR Service Water HX-1A Outlet	cps	5.50E+00	5.00E+00	5.00E+00	
SW-RIS-605	RHR Service Water HX-1B Outlet	cps	4.20E+00	3.50E+00	3.50E+00	
TEA-RIS-13	TG Bldg Exhaust	cpm	6.50E+01	4.50E+01	4.50E+01	
TEA-RIS-13A	TG Bldg Exhaust (Extended Range)	pmu	1.80E+00	1.50E+00	1.50E+00	
WEA-RIS-14	RW Bldg Exhaust	cpm	6.00E+01	4.00E+01	4.00E+01	
WEA-RIS-14A	RW Bldg Exhaust (Extended Range)	pmu	1.80E+00	1.50E+00	1.50E+00	
WOA-RIS-31A	CR Fresh Air Intake Monitor	cpm	1.80E+01	1.00E+01	1.00E+01	
WOA-RIS-31B	CR Fresh Air Intake Monitor	cpm	2.00E+01	1.50E+01	1.50E+01	
WOA-RIS-32A	CR Fresh Air Intake Monitor	cpm	2.00E+01	1.50E+01	1.50E+01	
WOA-RIS-32B	CR Fresh Air Intake Monitor	cpm	2.50E+01	2.00E+01	2.00E+01	
WRA-RIS-1	RW Bldg In-Plant Part. Air Monitor	cpm	1.60E+03	4.10E+02	4.10E+02	
WRA-RIS-2	RW Bldg In-Plant Part. Air Monitor	cpm	7.55E+02	3.00E+02	3.00E+02	
TRA-RIS-1	TG Bldg In-Plant Part. Air Monitor	cpm	1.16E+02	1.22E+02	1.22E+02	

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Process Radiation Monitors

2002 Exercise

Radiation Monitor	Location/Description	Units	11:00 4:00	11:15 4:15	11:30 4:30
CMS-RIS-12/1A	Containment Particulate Rad Monitor (501')	cpm	1.00E+00	1.00E+00	1.00E+00
CMS-RIS-12/1B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01
CMS-RIS-12/3A	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01
CMS-RIS-12/3B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01
CMS-RIS-27A	Containment LOCA Monitor (522')	R/hr	3.96E+02 *	1.96E+02 *	1.05E+02 *
CMS-RIS-27B	Containment LOCA Monitor (522')	R/hr	3.96E+02 *	1.96E+02 *	1.05E+02 *
CMS-RIS-27E	In-Containment LOCA Monitor (501')	R/hr	3.96E+02 A	1.96E+02 A	1.05E+02 A
CMS-RIS-27F	In-Containment LOCA Monitor (501')	R/hr	3.96E+02 A	1.96E+02 A	1.05E+02 A
MS-RIS-610A	Main Steam Line A	mR/hr	1.06E+01	1.02E+01	1.01E+01
MS-RIS-610B	Main Steam Line B	mR/hr	1.06E+01	1.02E+01	1.01E+01
MS-RIS-610C	Main Steam Line C	mR/hr	1.60E+01	1.60E+01	1.60E+01
MS-RIS-610D	Main Steam Line D	mR/hr	1.06E+01	1.02E+01	1.01E+01
OG-RIS-612	Off-Gas Pre-Treatment (SJAЕ Outlet)	mR/hr	1.00E+00	1.00E+00	1.00E+00
OG-RIS-601A	Off-Gas Post-Treatment	cpm	1.00E+00	1.00E+00	1.00E+00
OG-RIS-601B	Off-Gas Post-Treatment	cpm	2.00E+00	2.00E+00	2.00E+00
PRM-RE-1A	RX Bldg Low Range Stack Monitor	cps	1.00E+06 *	1.00E+06 *	1.00E+06 *
PRM-RE-1B	RX Bldg Intermed Range Stack Monitor	cps	5.15E+03	4.29E+05 U	8.45E+05 U
PRM-RE-1C	RX Bldg High Range Stack Monitor	cps	2.00E+02	2.36E+02	4.65E+02 A
PSR-RI-665	Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-01	1.00E-01	1.00E-01
PSR-RI-704	Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+00	1.00E+00
REA-RIS-609A	RX Bldg Exhaust	mR/hr	2.90E-01	2.08E+01 *	2.52E+01 *
REA-RIS-609B	RX Bldg Exhaust	mR/hr	2.20E-01	2.08E+01 *	2.52E+01 *
REA-RIS-609C	RX Bldg Exhaust	mR/hr	3.50E-01	2.08E+01 *	2.52E+01 *
REA-RIS-609D	RX Bldg Exhaust	mR/hr	2.90E-01	2.08E+01 *	2.52E+01 *
RRA-RIS-3	RX Bldg In-Plant Air Monitor	cpm	1.60E+02	1.19E+04 *	2.34E+04 *
SW-RIS-604	RHR Service Water HX-1A Outlet	cps	5.00E+00	5.00E+00	5.00E+00
SW-RIS-605	RHR Service Water HX-1B Outlet	cps	3.50E+00	3.50E+00	3.50E+00
TEA-RIS-13	TG Bldg Exhaust	cpm	4.50E+01	4.50E+01	4.50E+01
TEA-RIS-13A	TG Bldg Exhaust (Extended Range)	pmu	1.50E+00	1.50E+00	1.50E+00
WEA-RIS-14	RW Bldg Exhaust	cpm	4.00E+01	4.00E+01	4.00E+01
WEA-RIS-14A	RW Bldg Exhaust (Extended Range)	pmu	1.50E+00	1.50E+00	1.50E+00
WOA-RIS-31A	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+01	1.00E+01
WOA-RIS-31B	CR Fresh Air Intake Monitor	cpm	1.50E+01	1.50E+01	1.50E+01
WOA-RIS-32A	CR Fresh Air Intake Monitor	cpm	1.50E+01	1.50E+01	1.50E+01
WOA-RIS-32B	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01
WRA-RIS-1	RW Bldg In-Plant Part. Air Monitor	cpm	4.10E+02	4.10E+02	4.10E+02
WRA-RIS-2	RW Bldg In-Plant Part. Air Monitor	cpm	3.00E+02	3.00E+02	3.00E+02
TRA-RIS-1	TG Bldg In-Plant Part. Air Monitor	cpm	1.22E+02	1.22E+02	1.22E+02

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Process Radiation Monitors

2002 Exercise

Radiation Monitor	Location/Description	Units	11:45 4:45	12:00 5:00	12:15 5:15	
CMS-RIS-12/1A	Containment Particulate Rad Monitor (501')	cpm	1.00E+00	1.00E+00	1.00E+00	
CMS-RIS-12/1B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01	
CMS-RIS-12/3A	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01	
CMS-RIS-12/3B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01	
CMS-RIS-27A	Containment LOCA Monitor (522')	R/hr	5.14E+01	1.88E-01	1.00E-01	
CMS-RIS-27B	Containment LOCA Monitor (522')	R/hr	5.14E+01	1.88E-01	1.00E-01	
CMS-RIS-27E	In-Containment LOCA Monitor (501')	R/hr	5.14E+01	1.00E+00	1.00E+00	
CMS-RIS-27F	In-Containment LOCA Monitor (501')	R/hr	5.14E+01	1.00E+00	1.00E+00	
MS-RIS-610A	Main Steam Line A	mR/hr	1.00E+01	1.00E+01	1.00E+01	
MS-RIS-610B	Main Steam Line B	mR/hr	1.00E+01	1.00E+01	1.00E+01	
MS-RIS-610C	Main Steam Line C	mR/hr	1.60E+01	1.60E+01	1.60E+01	
MS-RIS-610D	Main Steam Line D	mR/hr	1.00E+01	1.00E+01	1.00E+01	
OG-RIS-612	Off-Gas Pre-Treatment (SJAЕ Outlet)	mR/hr	1.00E+00	1.00E+00	1.00E+00	
OG-RIS-601A	Off-Gas Post-Treatment	cpm	1.00E+00	1.00E+00	1.00E+00	
OG-RIS-601B	Off-Gas Post-Treatment	cpm	2.00E+00	2.00E+00	2.00E+00	
PRM-RE-1A	RX Bldg Low Range Stack Monitor	cps	1.00E+06 *	1.00E+06 *	1.00E+06 *	
PRM-RE-1B	RX Bldg Intermed Range Stack Monitor	cps	1.00E+06 HH	1.00E+06 HH	9.65E+05 U	
PRM-RE-1C	RX Bldg High Range Stack Monitor	cps	5.98E+02 A	6.14E+02 A	5.31E+02 A	
PSR-RI-665	Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-01	1.00E-01	1.00E-01	
PSR-RI-704	Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+00	1.00E+00	
REA-RIS-609A	RX Bldg Exhaust	mR/hr	2.99E+01 *	3.65E+01 *	3.69E+01 *	
REA-RIS-609B	RX Bldg Exhaust	mR/hr	2.99E+01 *	3.65E+01 *	3.69E+01 *	
REA-RIS-609C	RX Bldg Exhaust	mR/hr	2.99E+01 *	3.65E+01 *	3.69E+01 *	
REA-RIS-609D	RX Bldg Exhaust	mR/hr	2.99E+01 *	3.65E+01 *	3.69E+01 *	
RRA-RIS-3	RX Bldg In-Plant Air Monitor	cpm	3.01E+04 *	3.09E+04 *	2.68E+04 *	
SW-RIS-604	RHR Service Water HX-1A Outlet	cps	5.00E+00	5.00E+00	5.00E+00	
SW-RIS-605	RHR Service Water HX-1B Outlet	cps	3.50E+00	3.50E+00	3.50E+00	
TEA-RIS-13	TG Bldg Exhaust	cpm	4.50E+01	4.50E+01	4.50E+01	
TEA-RIS-13A	TG Bldg Exhaust (Extended Range)	pmu	1.50E+00	1.50E+00	1.50E+00	
WEA-RIS-14	RW Bldg Exhaust	cpm	4.00E+01	4.00E+01	4.00E+01	
WEA-RIS-14A	RW Bldg Exhaust (Extended Range)	pmu	1.50E+00	1.50E+00	1.50E+00	
WOA-RIS-31A	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+01	1.00E+01	
WOA-RIS-31B	CR Fresh Air Intake Monitor	cpm	1.50E+01	1.50E+01	1.50E+01	
WOA-RIS-32A	CR Fresh Air Intake Monitor	cpm	1.50E+01	1.50E+01	1.50E+01	
WOA-RIS-32B	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01	
WRA-RIS-1	RW Bldg In-Plant Part. Air Monitor	cpm	4.10E+02	4.10E+02	4.10E+02	
WRA-RIS-2	RW Bldg In-Plant Part. Air Monitor	cpm	3.00E+02	3.00E+02	3.00E+02	
TRA-RIS-1	TG Bldg In-Plant Part. Air Monitor	cpm	1.22E+02	1.22E+02	1.22E+02	

Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

Columbia Generating Station
Process Radiation Monitors

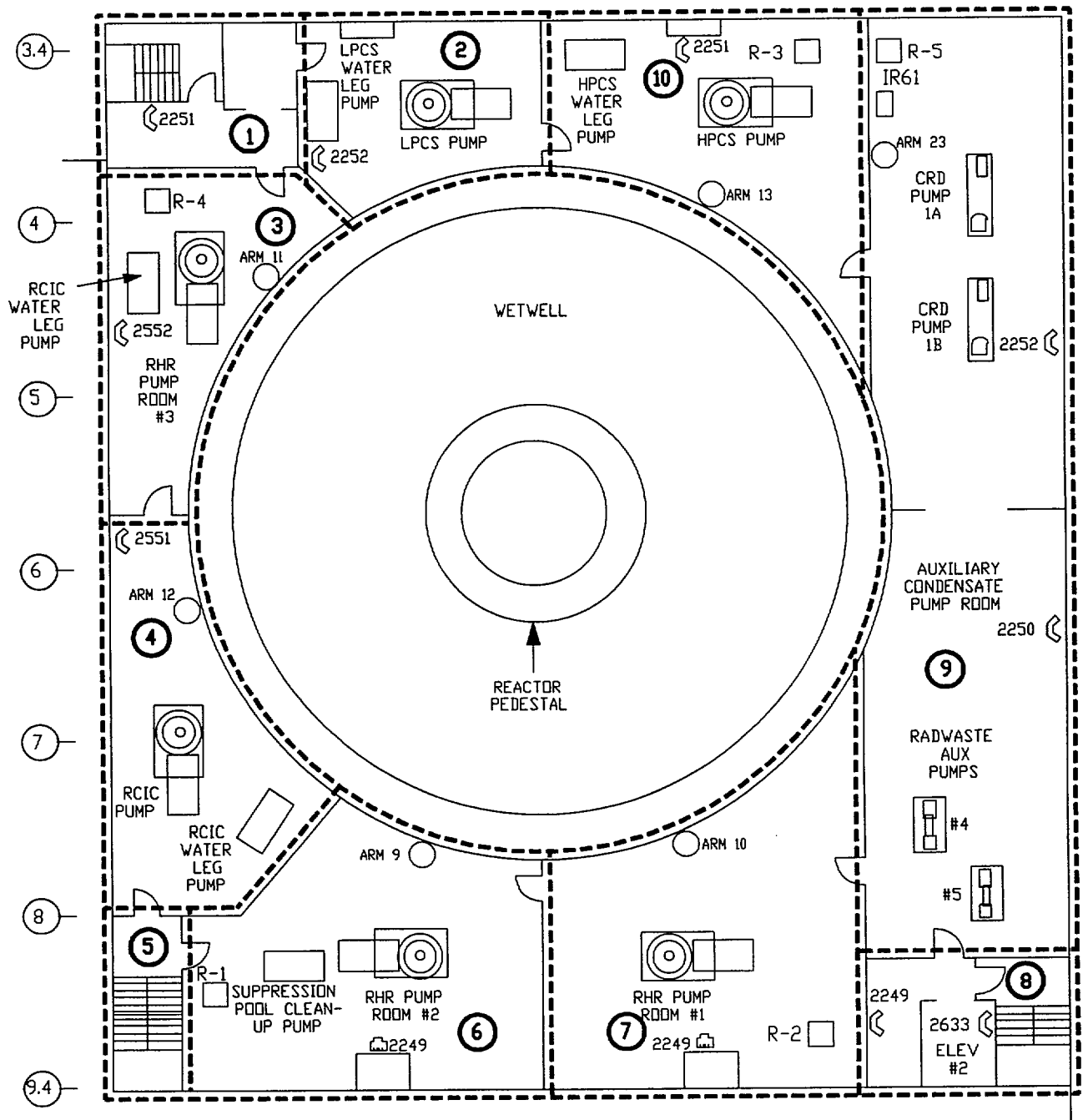
2002 Exercise

Radiation Monitor	Location/Description	Units	12:30	12:45	13:00
			5:30	5:45	6:00
CMS-RIS-12/1A	Containment Particulate Rad Monitor (501')	cpm	1.00E+00	1.00E+00	1.00E+00
CMS-RIS-12/1B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01
CMS-RIS-12/3A	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01
CMS-RIS-12/3B	Containment Particulate Rad Monitor (501')	cpm	1.00E+01	1.00E+01	1.00E+01
CMS-RIS-27A	Containment LOCA Monitor (522')	R/hr	1.00E-01	1.00E-01	1.00E-01
CMS-RIS-27B	Containment LOCA Monitor (522')	R/hr	1.00E-01	1.00E-01	1.00E-01
CMS-RIS-27E	In-Containment LOCA Monitor (501')	R/hr	1.00E+00	1.00E+00	1.00E+00
CMS-RIS-27F	In-Containment LOCA Monitor (501')	R/hr	1.00E+00	1.00E+00	1.00E+00
MS-RIS-610A	Main Steam Line A	mR/hr	1.00E+01	1.00E+01	1.00E+01
MS-RIS-610B	Main Steam Line B	mR/hr	1.00E+01	1.00E+01	1.00E+01
MS-RIS-610C	Main Steam Line C	mR/hr	1.60E+01	1.60E+01	1.60E+01
MS-RIS-610D	Main Steam Line D	mR/hr	1.00E+01	1.00E+01	1.00E+01
OG-RIS-612	Off-Gas Pre-Treatment (SJAЕ Outlet)	mR/hr	1.00E+00	1.00E+00	1.00E+00
OG-RIS-601A	Off-Gas Post-Treatment	cpm	1.00E+00	1.00E+00	1.00E+00
OG-RIS-601B	Off-Gas Post-Treatment	cpm	2.00E+00	2.00E+00	2.00E+00
PRM-RE-1A	RX Bldg Low Range Stack Monitor	cps	1.00E+06 *	1.00E+06 *	1.00E+06 *
PRM-RE-1B	RX Bldg Interned Range Stack Monitor	cps	7.48E+05 U	5.35E+05 U	3.63E+05 U
PRM-RE-1C	RX Bldg High Range Stack Monitor	cps	4.12E+02 A	2.95E+02 A	2.00E+02
PSR-RI-665	Post Accident Primary Coolant Rad. Monitor	R/hr	1.00E-01	1.00E-01	1.00E-01
PSR-RI-704	Post Accident Primary Cont. Atmos. Rad. Monitor	mR/hr	1.00E+00	1.00E+00	1.00E+00
REA-RIS-609A	RX Bldg Exhaust	mR/hr	3.47E+01 *	3.03E+01 *	2.48E+01 *
REA-RIS-609B	RX Bldg Exhaust	mR/hr	3.47E+01 *	3.03E+01 *	2.48E+01 *
REA-RIS-609C	RX Bldg Exhaust	mR/hr	3.47E+01 *	3.03E+01 *	2.48E+01 *
REA-RIS-609D	RX Bldg Exhaust	mR/hr	3.47E+01 *	3.03E+01 *	2.48E+01 *
RRA-RIS-3	RX Bldg In-Plant Air Monitor	cpm	2.07E+04 *	1.48E+04 *	1.01E+04 *
SW-RIS-604	RHR Service Water HX-1A Outlet	cps	5.00E+00	5.00E+00	5.00E+00
SW-RIS-605	RHR Service Water HX-1B Outlet	cps	3.50E+00	3.50E+00	3.50E+00
TEA-RIS-13	TG Bldg Exhaust	cpm	4.50E+01	4.50E+01	4.50E+01
TEA-RIS-13A	TG Bldg Exhaust (Extended Range)	pmu	1.50E+00	1.50E+00	1.50E+00
WEA-RIS-14	RW Bldg Exhaust	cpm	4.00E+01	4.00E+01	4.00E+01
WEA-RIS-14A	RW Bldg Exhaust (Extended Range)	pmu	1.50E+00	1.50E+00	1.50E+00
WOA-RIS-31A	CR Fresh Air Intake Monitor	cpm	1.00E+01	1.00E+01	1.00E+01
WOA-RIS-31B	CR Fresh Air Intake Monitor	cpm	1.50E+01	1.50E+01	1.50E+01
WOA-RIS-32A	CR Fresh Air Intake Monitor	cpm	1.50E+01	1.50E+01	1.50E+01
WOA-RIS-32B	CR Fresh Air Intake Monitor	cpm	2.00E+01	2.00E+01	2.00E+01
WRA-RIS-1	RW Bldg In-Plant Part. Air Monitor	cpm	4.10E+02	4.10E+02	4.10E+02
WRA-RIS-2	RW Bldg In-Plant Part. Air Monitor	cpm	3.00E+02	3.00E+02	3.00E+02
TRA-RIS-1	TG Bldg In-Plant Part. Air Monitor	cpm	1.22E+02	1.22E+02	1.22E+02

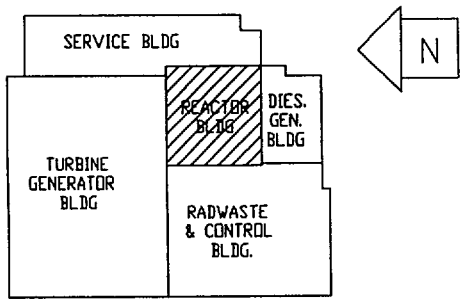
Monitor Status Legend

- * Hi Alarm
- ** Hi-Hi Alarm
- H Max. Safe
- HH Offscale High
- U Unusual Event
- A Alert
- S Site Area Emergency
- G General Emergency

H J K L M N O



BASED ON
891150 RB 422
Feb 1992



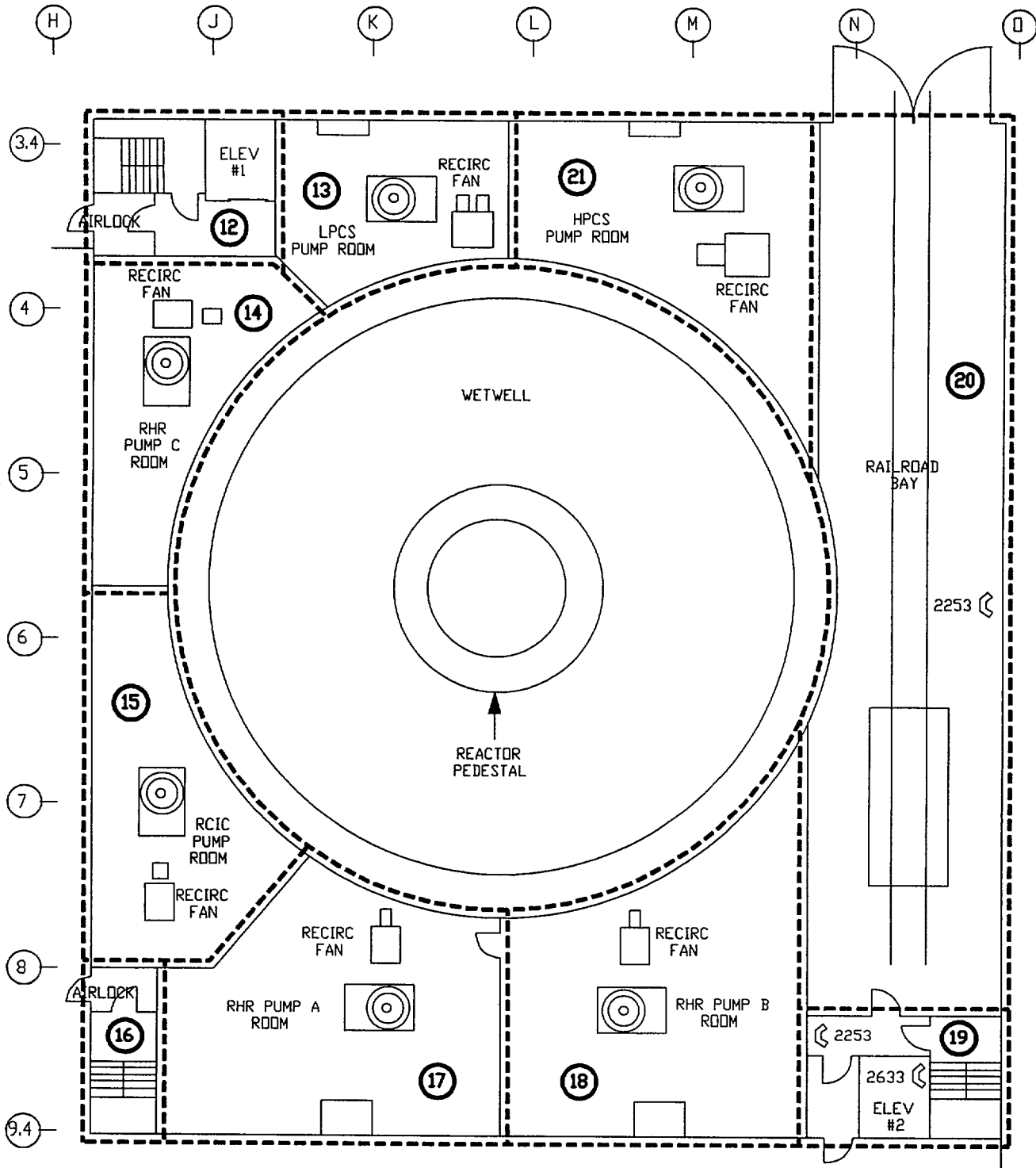
KEY PLAN

REACTOR BUILDING ELEV. 422'

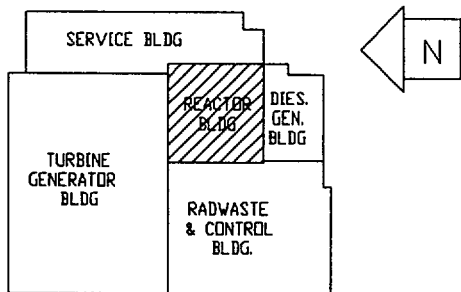
Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 422'									
		1	2	3	4	5	6	7	8	9	10
7:00	0:00	As Read	2	2	2	As Read	14	15	As Read	2	5
7:30	0:30	As Read	2	2	2	As Read	14	15	As Read	2	5
8:00	1:00	As Read	2	2	2	As Read	14	15	As Read	2	5
8:30	1:30	As Read	2	2	2	As Read	14	15	As Read	2	5
9:00	2:00	As Read	2	2	2	As Read	14	15	As Read	2	5
9:30	2:30	As Read	2	2	2	As Read	14	15	As Read	2	5
10:00	3:00	As Read	2	2	2	As Read	14	15	As Read	2	5
10:30	3:30	As Read	1	2	5.0E+05	As Read	10	15	As Read	2	5
10:45	3:45	As Read	1	2	3.0E+05	As Read	10	15	As Read	2	5
11:00	4:00	22,635	1.0E+06	2	3.1E+05	5,835	10	15	2,831	2	5
11:15	4:15	20,115	7.2E+05	2	2.3E+05	5,597	10	15	4,892	2	5
11:30	4:30	15,078	4.6E+05	2	1.3E+05	4,347	10	15	4,403	2	5
11:45	4:45	17,641	2.3E+05	2	1.2E+05	5,186	10	15	5,622	2	5
12:00	5:00	12,406	1.1E+05	2	1.1E+05	3,946	10	1.1E+05	5,294	2	5
12:15	5:15	10,923	57,391	2	1.1E+05	3,590	10	57,405	5,209	2	5
12:30	5:30	9,060	34,536	2	1.0E+05	3,048	10	34,550	4,658	2	5
12:45	5:45	7,360	22,527	2	95,343	2,507	10	22,541	3,959	2	5
13:00	6:00	5,724	15,481	2	90,801	1,964	10	15,495	3,185	2	5



BASED ON
891150 RB 441 & 444
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 441' & 444'

Section 8

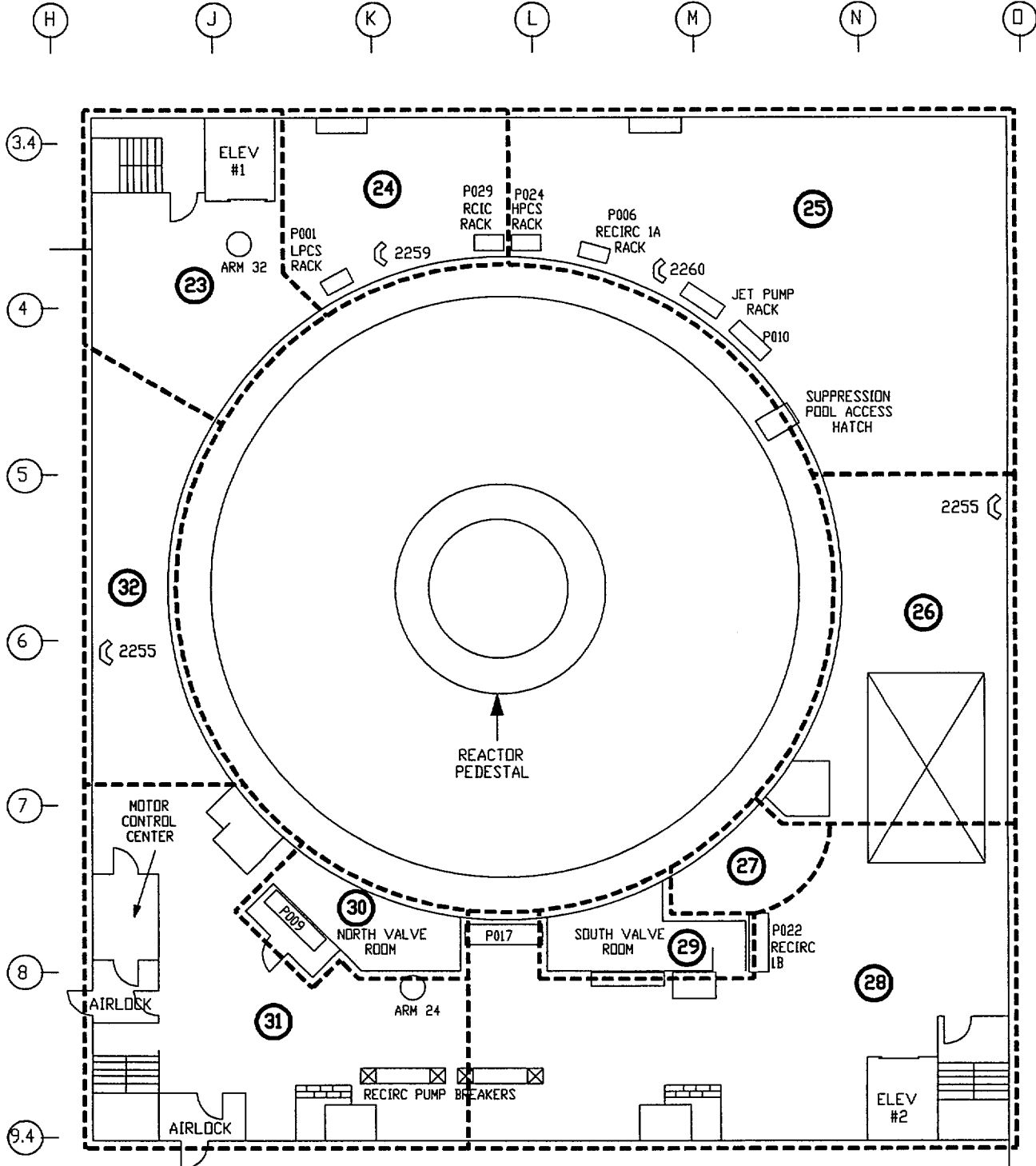
Figure 8-2

JULY 1, 2002

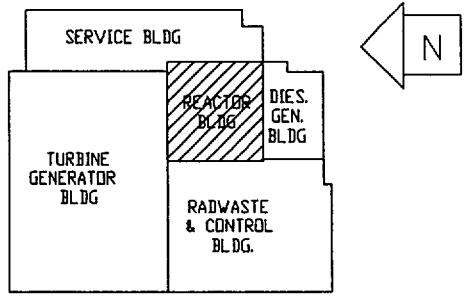
Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 441'									
		12	13	14	15	16	17	18	19	20	21
7:00	0:00	As Read	3	2	1	As Read	7	10	As Read	As Read	4
7:30	0:30	As Read	3	2	1	As Read	7	10	As Read	As Read	4
8:00	1:00	As Read	3	2	1	As Read	7	10	As Read	As Read	4
8:30	1:30	As Read	3	2	1	As Read	7	10	As Read	As Read	4
9:00	2:00	As Read	3	2	1	As Read	7	10	As Read	As Read	4
9:30	2:30	As Read	3	2	1	As Read	7	10	As Read	As Read	4
10:00	3:00	As Read	3	2	1	As Read	7	10	As Read	As Read	4
10:30	3:30	As Read	2	2	5.0E+05	As Read	5	8	As Read	As Read	5
10:45	3:45	As Read	2	2	3.0E+05	As Read	5	8	As Read	As Read	5
11:00	4:00	3.6E+06	6.6E+05	3	3.1E+05	3.4E+06	5	8	1.4E+06	As Read	5
11:15	4:15	1.7E+06	4.7E+05	2	2.3E+05	1.7E+06	5	8	1.0E+06	As Read	5
11:30	4:30	9.1E+05	3.0E+05	2	1.3E+05	9.3E+05	5	8	5.9E+05	As Read	5
11:45	4:45	8.1E+05	1.5E+05	2	1.2E+05	8.4E+05	5	8	6.0E+05	As Read	5
12:00	5:00	2.8E+05	73,865	2	1.1E+05	3.1E+05	5	83,771	2.5E+05	As Read	5
12:15	5:15	1.2E+05	37,889	2	1.1E+05	1.5E+05	5	42,949	1.6E+05	As Read	5
12:30	5:30	64,843	22,842	2	1.0E+05	82,920	5	25,880	94,438	As Read	5
12:45	5:45	43,049	14,924	2	95,343	55,045	5	16,903	64,543	As Read	5
13:00	6:00	28,283	10,273	2	90,801	35,885	5	11,631	43,054	As Read	5



BASED ON
891150 RB 471
Feb 1992



KEY PLAN

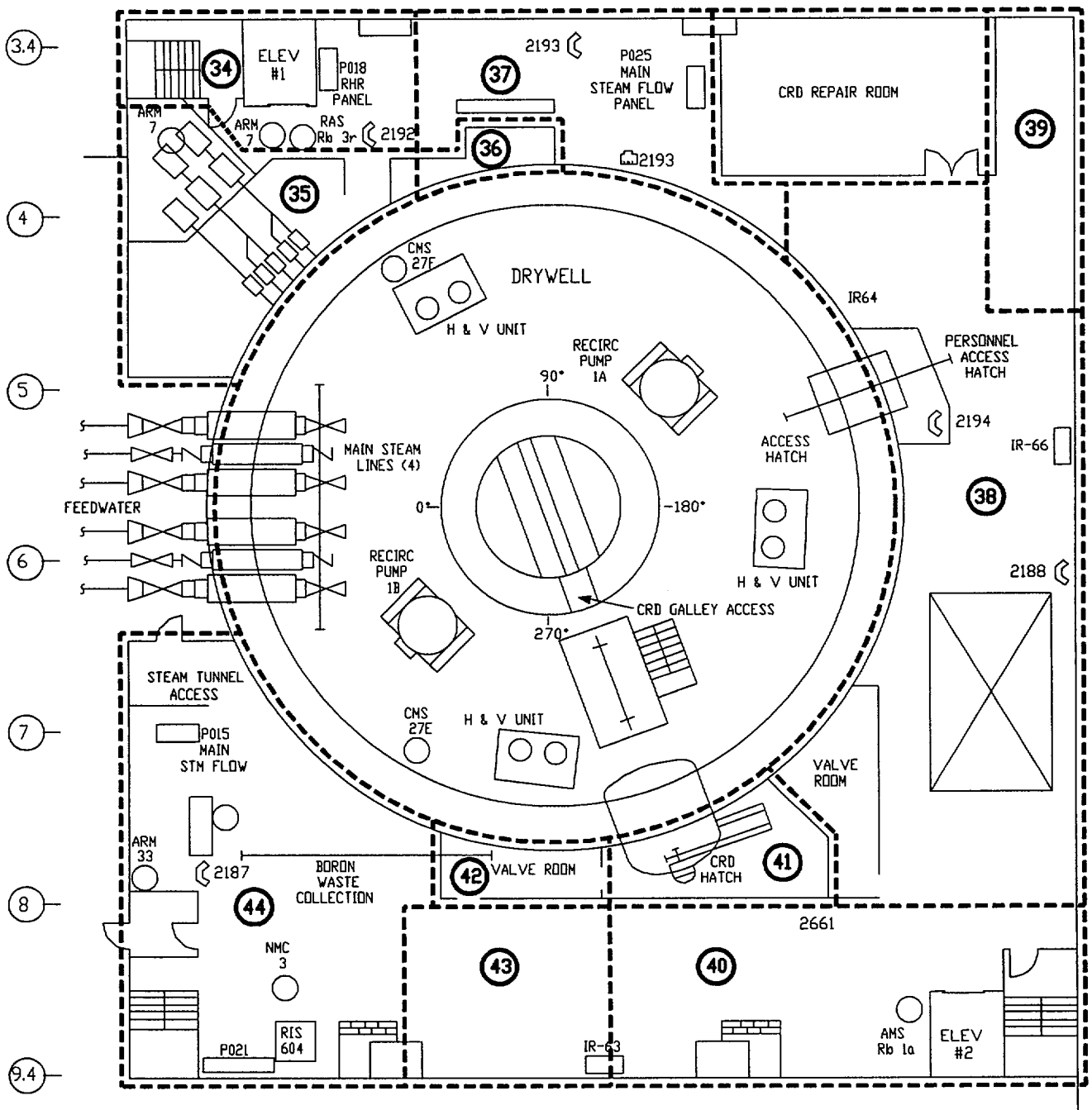
REACTOR BUILDING ELEV. 471'

Columbia Generating Station
Dose Rates (mR/hr)

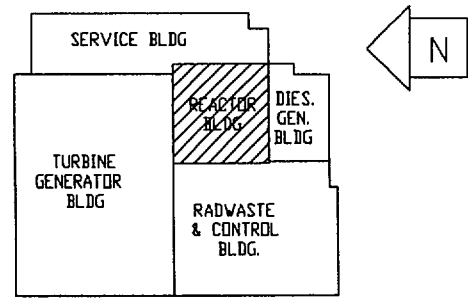
2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 471'									
		23	24	25	26	27	28	29	30	31	32
7:00	0:00	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
7:30	0:30	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
8:00	1:00	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
8:30	1:30	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
9:00	2:00	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
9:30	2:30	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
10:00	3:00	As Read	As Read	1	As Read	As Read	As Read	8	8	As Read	As Read
10:30	3:30	5.9E+05	5.9E+05	1	As Read	As Read	As Read	10	10	As Read	5.9E+05
10:45	3:45	3.5E+05	3.5E+05	1	As Read	As Read	As Read	10	10	As Read	3.6E+05
11:00	4:00	4.6E+08	1.5E+08	4.5E+07	8.1E+07	6.2E+07	1.8E+08	4.3E+07	1.3E+08	4.8E+08	1.4E+09
11:15	4:15	1.6E+08	6.1E+07	2.7E+07	5.0E+07	3.4E+07	8.0E+07	2.3E+07	5.7E+07	1.8E+08	5.1E+08
11:30	4:30	8.3E+07	3.0E+07	1.3E+07	2.4E+07	1.6E+07	4.0E+07	1.1E+07	2.9E+07	9.1E+07	2.7E+08
11:45	4:45	3.8E+07	2.2E+07	1.3E+07	2.4E+07	1.6E+07	3.2E+07	1.1E+07	2.3E+07	4.7E+07	7.5E+07
12:00	5:00	2.0E+07	7.1E+06	3.0E+06	5.5E+06	3.7E+06	9.1E+06	2.6E+06	6.5E+06	2.2E+07	6.6E+07
12:15	5:15	1.3E+06	1.3E+06	1.0E+06	1.9E+06	1.1E+06	1.9E+06	7.9E+05	1.2E+06	2.0E+06	1.5E+06
12:30	5:30	3.0E+05	3.3E+05	2.1E+05	3.8E+05	2.0E+05	3.6E+05	1.6E+05	2.2E+05	3.5E+05	3.4E+05
12:45	5:45	2.0E+05	2.2E+05	1.0E+05	1.8E+05	93,806	1.8E+05	82,303	1.1E+05	1.7E+05	2.2E+05
13:00	6:00	1.5E+05	1.7E+05	53,715	97,710	49,866	93,154	45,927	55,583	88,908	1.6E+05

H J K L M N O



BASED ON
891150 RB 501
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 501'

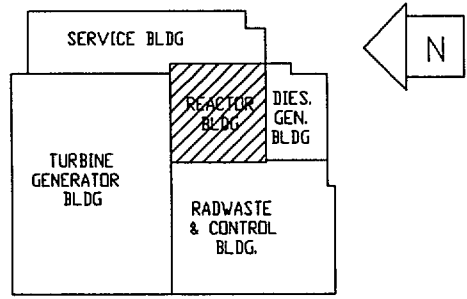
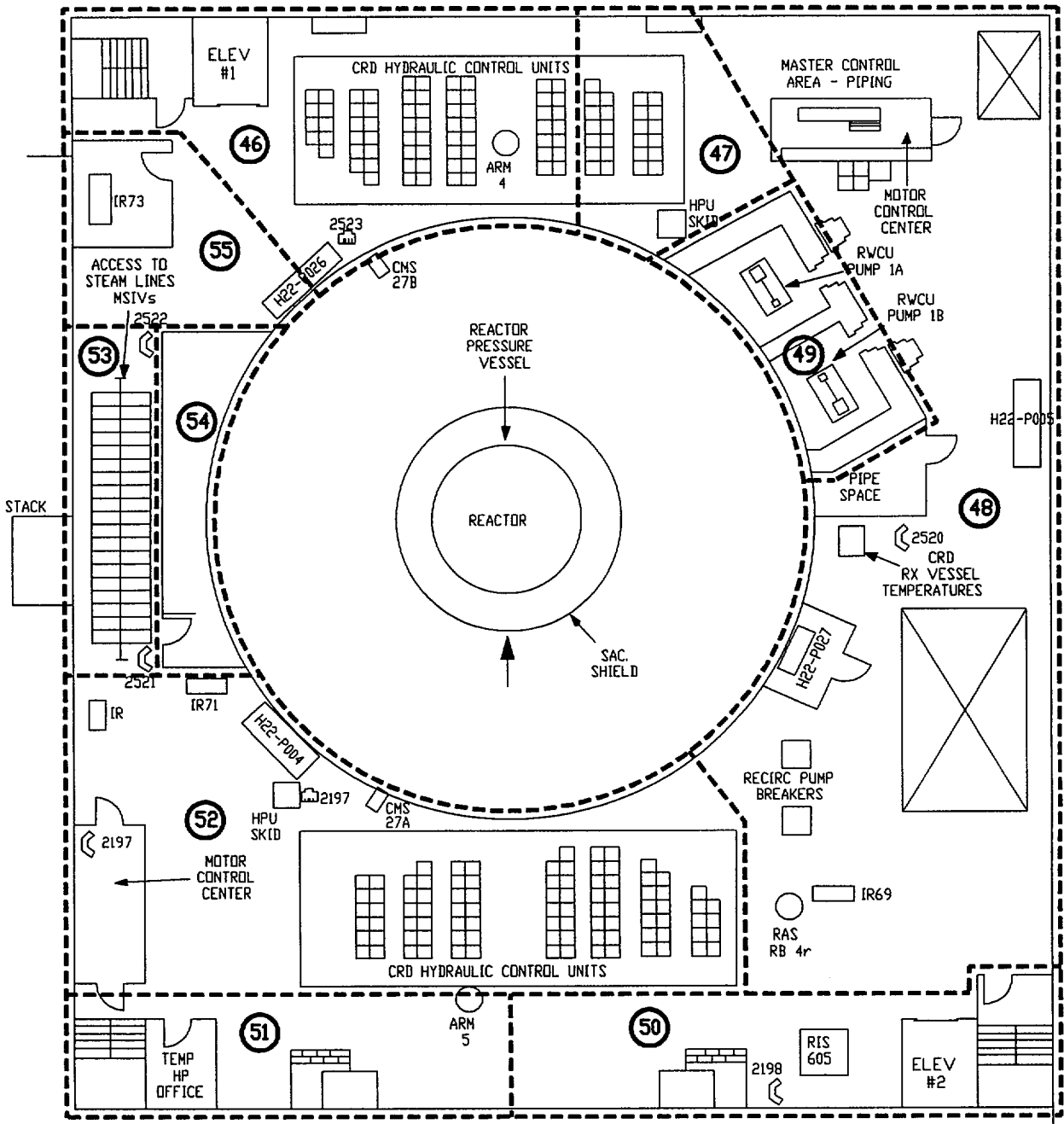
Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 501'										
		34	35	36	37	38	39	40	41	42	43	44
7:00	0:00	4	25	2	4	1	As Read	2	10	20	6	2
7:30	0:30	4	25	2	4	1	As Read	2	10	20	6	2
8:00	1:00	4	25	2	4	1	As Read	2	10	20	6	2
8:30	1:30	4	25	2	4	1	As Read	2	10	20	6	2
9:00	2:00	4	25	2	4	1	As Read	2	10	20	6	2
9:30	2:30	4	25	2	4	1	As Read	2	10	20	6	2
10:00	3:00	4	25	2	4	1	As Read	2	10	20	6	2
10:30	3:30	4	5.9E+05	5.9E+05	4	1	As Read	2	10	20	6	2
10:45	3:45	4	3.5E+05	3.5E+05	4	1	As Read	2	10	20	6	2
11:00	4:00	2.9E+07	8.1E+07	8.4E+05	5.3E+06	1.1E+07	1.8E+07	1.6E+07	10	6.0E+06	3.0E+07	3.5E+07
11:15	4:15	1.3E+07	3.0E+07	1.0E+06	5.2E+06	1.2E+07	1.6E+07	1.2E+07	10	3.7E+06	1.5E+07	1.7E+07
11:30	4:30	6.7E+06	1.5E+07	5.4E+05	2.6E+06	5.6E+06	7.8E+06	6.1E+06	10	1.8E+06	7.7E+06	8.8E+06
11:45	4:45	5.7E+06	8.5E+06	4.8E+05	2.3E+06	5.5E+06	8.0E+06	5.8E+06	10	1.8E+06	6.5E+06	7.6E+06
12:00	5:00	1.7E+06	3.8E+06	2.5E+05	6.9E+05	1.5E+06	1.9E+06	1.6E+06	10	5.4E+05	1.9E+06	2.2E+06
12:15	5:15	4.4E+05	4.9E+05	1.9E+05	3.3E+05	7.4E+05	8.8E+05	6.8E+05	10	2.2E+05	5.7E+05	6.6E+05
12:30	5:30	1.3E+05	2.1E+05	1.4E+05	1.1E+05	2.2E+05	2.2E+05	2.0E+05	10	78,462	1.7E+05	2.1E+05
12:45	5:45	65,843	1.6E+05	1.3E+05	58,099	1.2E+05	1.1E+05	1.1E+05	10	44,392	87,880	1.1E+05
13:00	6:00	36,108	1.3E+05	1.2E+05	33,992	65,805	64,347	59,295	10	26,518	48,599	62,935

H J K L M N O

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BASED ON
891150 RB 522
Feb 1992

REACTOR BUILDING ELEV. 522'

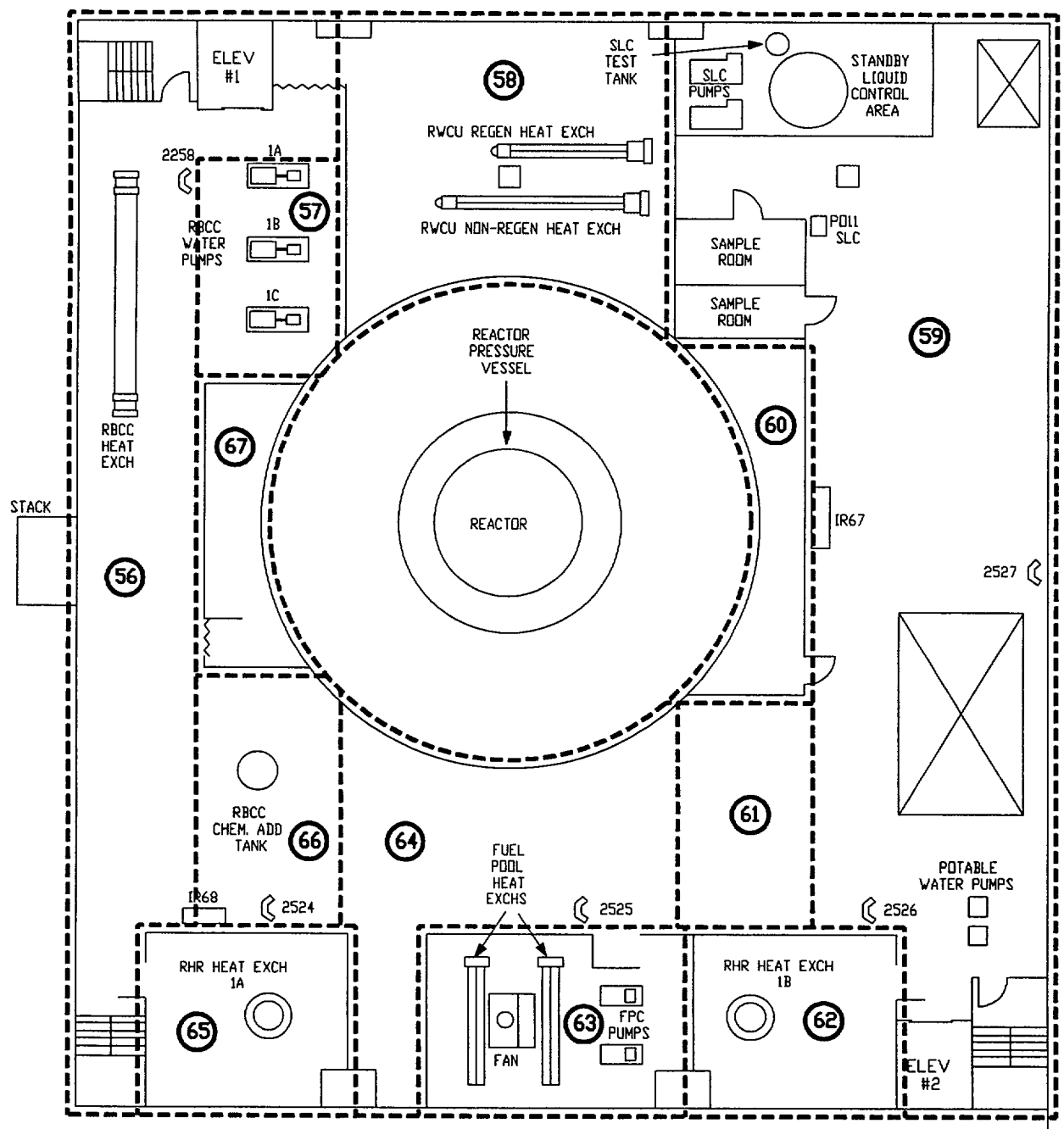
Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

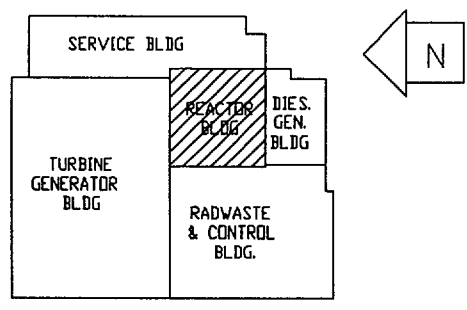
Real Time	Drill Time	Reactor Building Elev. 522'									
		46	47	48	49	50	51	52	53	54	55
7:00	0:00	6	3	As Read	1,000	2	4	7	As Read	100	10
7:30	0:30	6	3	As Read	1,000	2	4	7	As Read	100	10
8:00	1:00	6	3	As Read	1,000	2	4	7	As Read	100	10
8:30	1:30	6	3	As Read	1,000	2	4	7	As Read	100	10
9:00	2:00	6	3	As Read	1,000	2	4	7	As Read	100	10
9:30	2:30	6	3	As Read	1,000	2	4	7	As Read	100	10
10:00	3:00	6	3	As Read	1,000	2	4	7	As Read	100	10
10:30	3:30	6	3	As Read	1,000	3	6	8	As Read	100	10
10:45	3:45	6	3	As Read	1,000	3	6	8	As Read	100	10
11:00	4:00	1.0E+06	1.0E+06	2.2E+06	1.1E+05	1.0E+06	8.9E+05	1.4E+06	7.8E+05	15,379	3.5E+06
11:15	4:15	8.4E+05	1.5E+06	4.0E+06	4.7E+05	2.5E+06	1.4E+06	2.3E+06	7.4E+05	26,277	1.5E+06
11:30	4:30	4.9E+05	8.2E+05	2.1E+06	2.8E+05	1.4E+06	8.1E+05	1.3E+06	4.1E+05	18,950	8.0E+05
11:45	4:45	4.8E+05	6.2E+05	1.8E+06	2.2E+05	1.2E+06	7.0E+05	1.1E+06	3.5E+05	19,288	6.3E+05
12:00	5:00	2.1E+05	2.9E+05	7.3E+05	1.3E+05	5.9E+05	3.7E+05	5.1E+05	1.5E+05	13,550	2.3E+05
12:15	5:15	1.3E+05	1.7E+05	4.3E+05	85,707	3.7E+05	2.3E+05	3.0E+05	83,924	10,345	73,259
12:30	5:30	79,884	86,408	1.9E+05	46,658	1.9E+05	1.3E+05	1.5E+05	42,943	7,256	36,667
12:45	5:45	53,497	54,003	1.1E+05	28,776	1.1E+05	79,723	91,630	26,645	5,027	23,966
13:00	6:00	34,993	34,608	68,410	17,818	69,920	49,704	56,834	16,717	3,329	15,564

H J K L M N O

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BASED ON
891150 RB 548
FEB 1992



KEY PLAN

REACTOR BUILDING ELEV. 548'

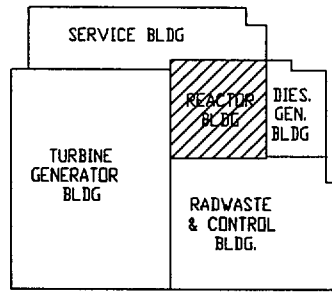
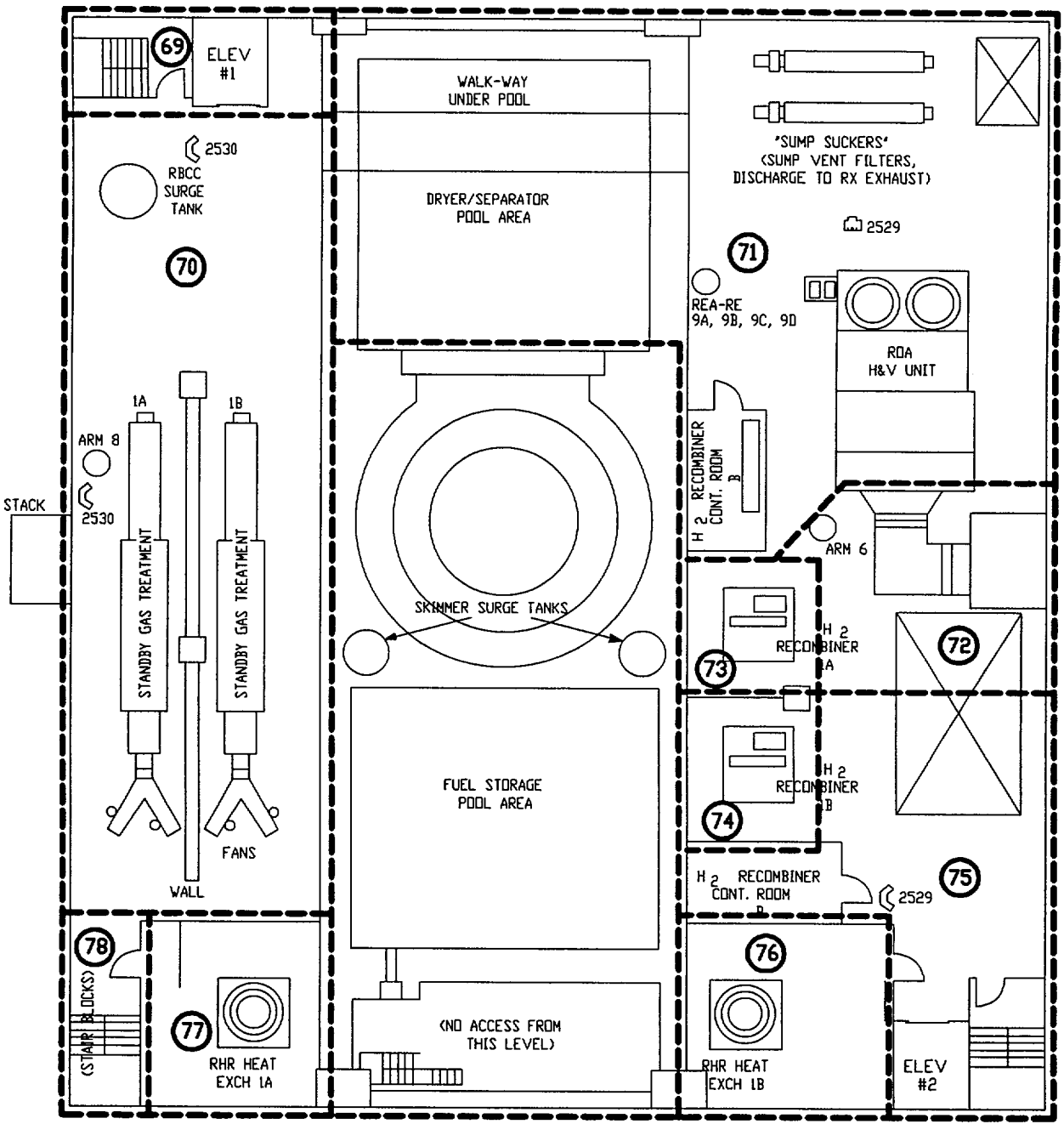
Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

		Reactor Building Elev. 548'											
Real	Drill	56	57	58	59	60	61	62	63	64	65	66	67
Time	Time	56	57	58	59	60	61	62	63	64	65	66	67
7:00	0:00	As Read	As Read	100	1	100	10	100	100	10	100	4	10
7:30	0:30	As Read	As Read	100	1	100	10	100	100	10	100	4	10
8:00	1:00	As Read	As Read	100	1	100	10	100	100	10	100	4	10
8:30	1:30	As Read	As Read	100	1	100	10	100	100	10	100	4	10
9:00	2:00	As Read	As Read	100	1	100	10	100	100	10	100	4	10
9:30	2:30	As Read	As Read	100	1	100	10	100	100	10	100	4	10
10:00	3:00	As Read	As Read	100	1	100	10	100	100	10	100	4	10
10:30	3:30	As Read	As Read	100	1	100	10	100	100	10	100	4	2
10:45	3:45	As Read	As Read	100	1	100	10	100	100	10	100	4	2
11:00	4:00	42,978	6,468	5,163	3.7E+05	3,633	46,425	32,046	7,909	11,261	4,849	8,492	4,784
11:15	4:15	1.6E+05	36,156	34,794	1.5E+06	58,711	4.1E+05	3.2E+05	65,533	1.0E+05	30,273	67,558	29,441
11:30	4:30	1.2E+05	31,027	33,764	8.8E+05	53,076	2.5E+05	2.1E+05	54,716	80,629	27,754	57,839	26,732
11:45	4:45	1.3E+05	32,390	38,271	7.0E+05	55,355	1.9E+05	1.6E+05	51,238	71,795	30,222	56,368	28,922
12:00	5:00	1.2E+05	31,356	39,683	4.3E+05	54,191	1.4E+05	1.8E+05	45,651	63,180	30,387	53,409	28,926
12:15	5:15	1.0E+05	27,563	36,280	2.8E+05	45,873	94,142	1.1E+05	35,796	48,478	27,271	44,452	25,881
12:30	5:30	81,054	22,518	30,471	1.6E+05	35,540	57,586	68,005	26,344	35,239	22,612	34,930	21,412
12:45	5:45	62,500	17,504	23,983	1.0E+05	26,105	38,095	44,309	18,808	25,113	17,686	26,324	16,732
13:00	6:00	45,730	12,882	17,776	65,825	18,166	25,098	29,300	12,927	17,311	13,061	18,945	12,349

H J K L M N O

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BASED ON
891150 RB 572
Feb 1992

REACTOR BUILDING

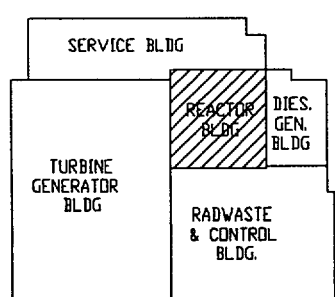
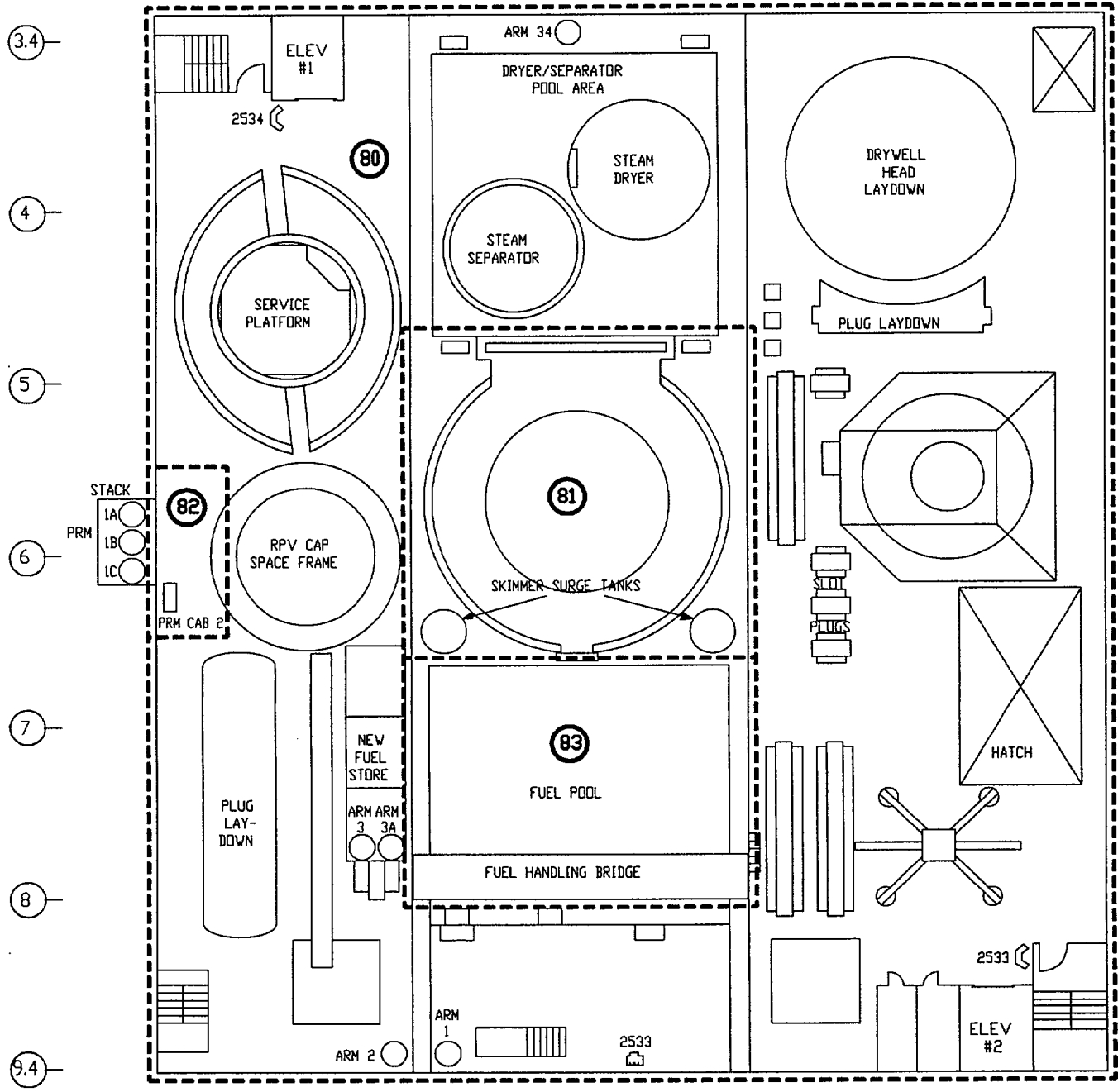
ELEV. 572'

Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 572'									
		69	70	71	72	73	74	75	76	77	78
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	100	100	As Read
11:00	4:00	137	3,081	33,431	35,559	280	560	32,415	100	100	323
11:15	4:15	9,659	2.5E+05	4.3E+05	4.9E+05	12,386	16,710	3.4E+05	2,535	100	1.0E+05
11:30	4:30	17,082	4.0E+05	3.1E+05	3.5E+05	9,613	11,844	2.3E+05	2,848	257	1.5E+05
11:45	4:45	29,788	5.5E+05	2.6E+05	2.8E+05	7,982	9,423	1.9E+05	3,535	649	2.1E+05
12:00	5:00	42,233	7.0E+05	2.1E+05	2.4E+05	7,268	8,314	1.5E+05	73,391	1,099	2.3E+05
12:15	5:15	47,840	7.9E+05	1.5E+05	1.8E+05	5,507	6,322	1.1E+05	39,564	1,388	2.1E+05
12:30	5:30	47,754	8.5E+05	1.0E+05	1.3E+05	4,048	4,673	82,853	25,073	1,476	1.8E+05
12:45	5:45	43,051	8.9E+05	69,938	91,948	2,960	3,526	62,305	17,078	1,385	1.3E+05
13:00	6:00	35,955	9.0E+05	46,668	65,665	2,122	2,618	46,126	12,088	1,184	94,081

H J K L M N O



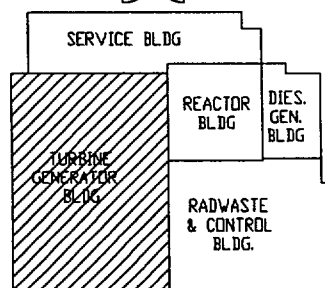
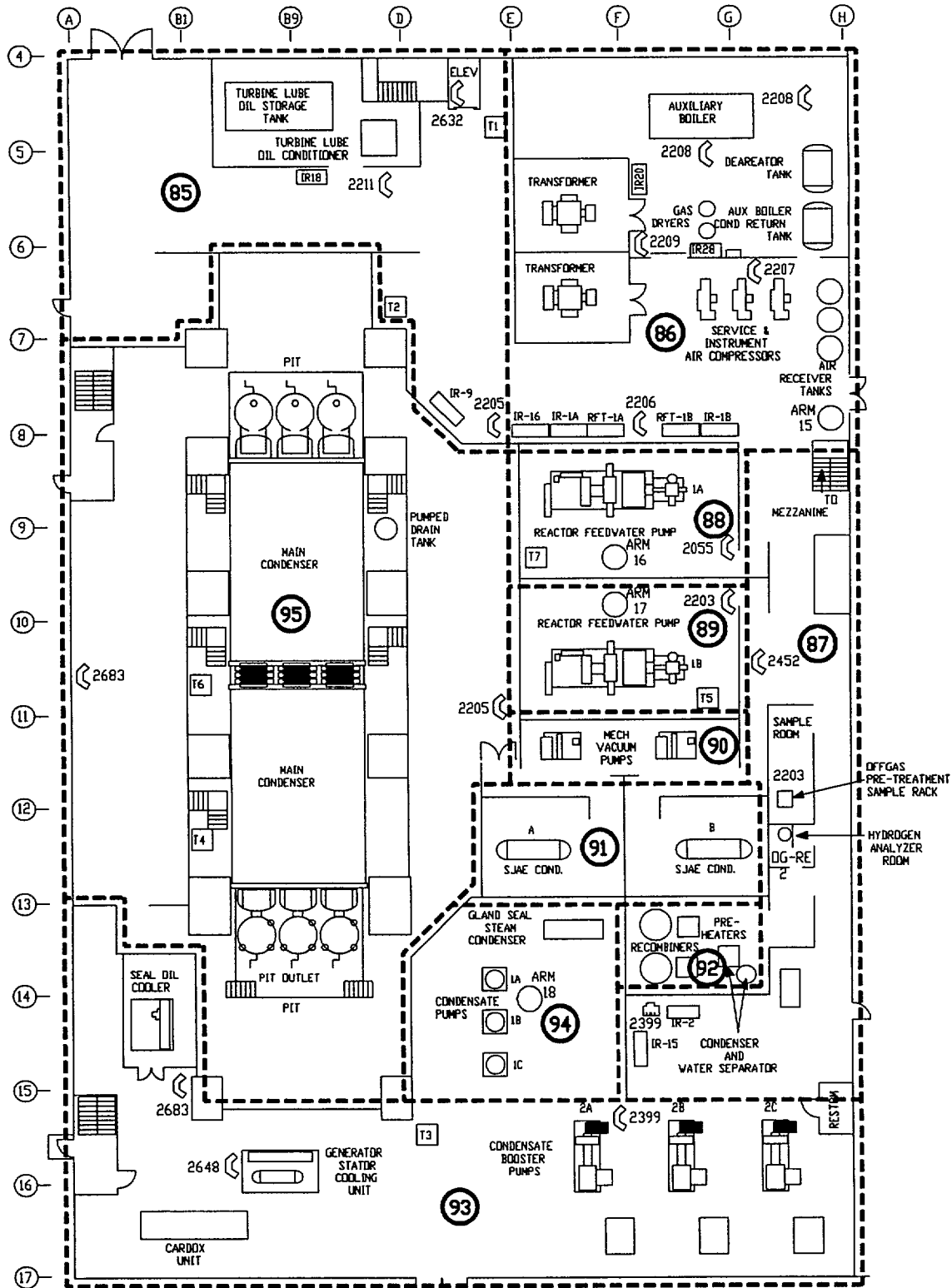
BASED ON
891150 RX 606
Feb 1992

REACTOR BUILDING ELEV. 606'

Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 606'			
		80	81	82	83
7:00	0:00	As Read	2	As Read	2
7:30	0:30	As Read	2	As Read	2
8:00	1:00	As Read	2	As Read	2
8:30	1:30	As Read	2	As Read	2
9:00	2:00	As Read	2	As Read	2
9:30	2:30	As Read	2	As Read	2
10:00	3:00	As Read	2	As Read	2
10:30	3:30	As Read	2	As Read	2
10:45	3:45	As Read	2	As Read	2
11:00	4:00	605	66	65	66
11:15	4:15	41,321	27,152	20,769	27,152
11:30	4:30	45,887	34,826	25,150	34,826
11:45	4:45	53,364	42,718	29,886	42,718
12:00	5:00	63,513	53,083	36,546	53,083
12:15	5:15	63,362	54,294	36,913	54,294
12:30	5:30	58,889	51,481	34,734	51,481
12:45	5:45	50,971	45,056	30,269	45,056
13:00	6:00	41,621	37,081	24,843	37,081



KEY PLAN

BASED ON
891150 RB 572
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 441'

Section 8

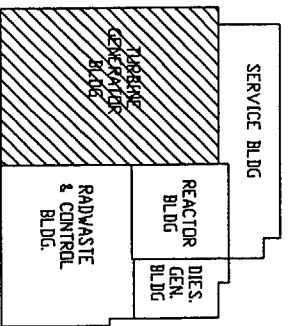
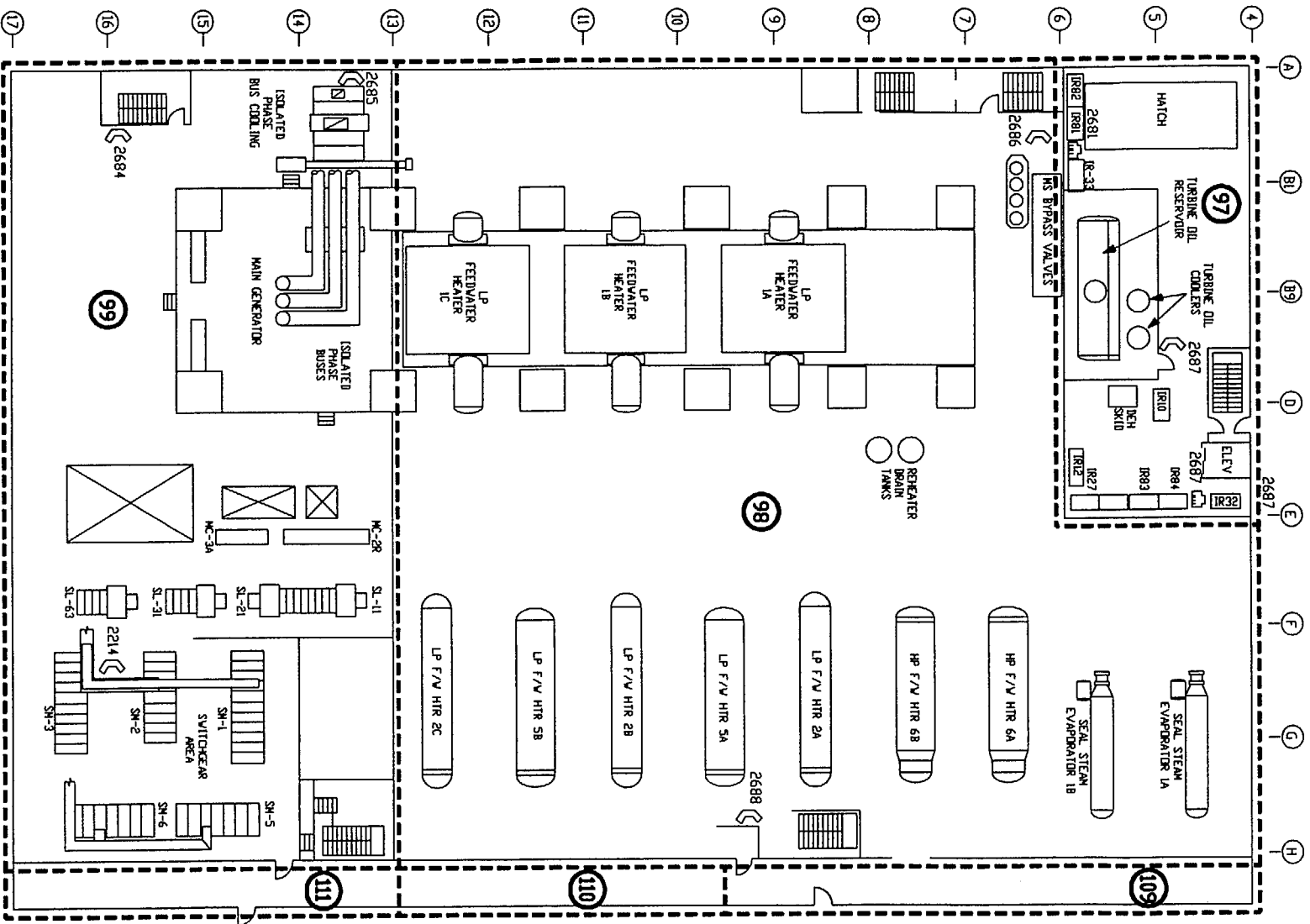
Figure 8-9

JULY 1, 2002

Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Turbine Generator Bldg. Elev. 441'										
		85	86	87	88	89	90	91	92	93	94	95
7:00	0:00	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	2	60
7:30	0:30	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	2	60
8:00	1:00	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	2	60
8:30	1:30	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	2	60
9:00	2:00	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	2	60
9:30	2:30	As Read	As Read	As Read	153	153	As Read	100	1,000	As Read	1,580	1,638
10:00	3:00	As Read	As Read	As Read	1,222	1,222	As Read	100	1,000	As Read	13,937	13,995
10:30	3:30	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	8,316	8,319
10:45	3:45	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	7,567	7,570
11:00	4:00	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	6,930	6,933
11:15	4:15	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	6,387	6,390
11:30	4:30	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	5,922	5,925
11:45	4:45	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	5,522	5,525
12:00	5:00	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	5,177	5,180
12:15	5:15	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	4,877	4,880
12:30	5:30	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	4,615	4,618
12:45	5:45	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	4,385	4,388
13:00	6:00	As Read	As Read	As Read	10	10	As Read	100	1,000	As Read	4,182	4,185



BASED ON
891150 TGB 471
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 471'

Section 8

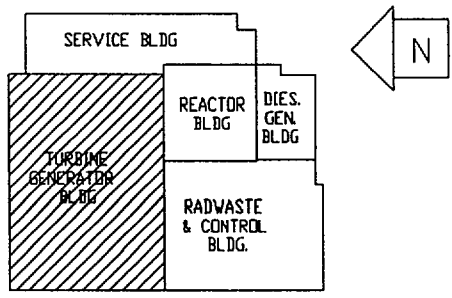
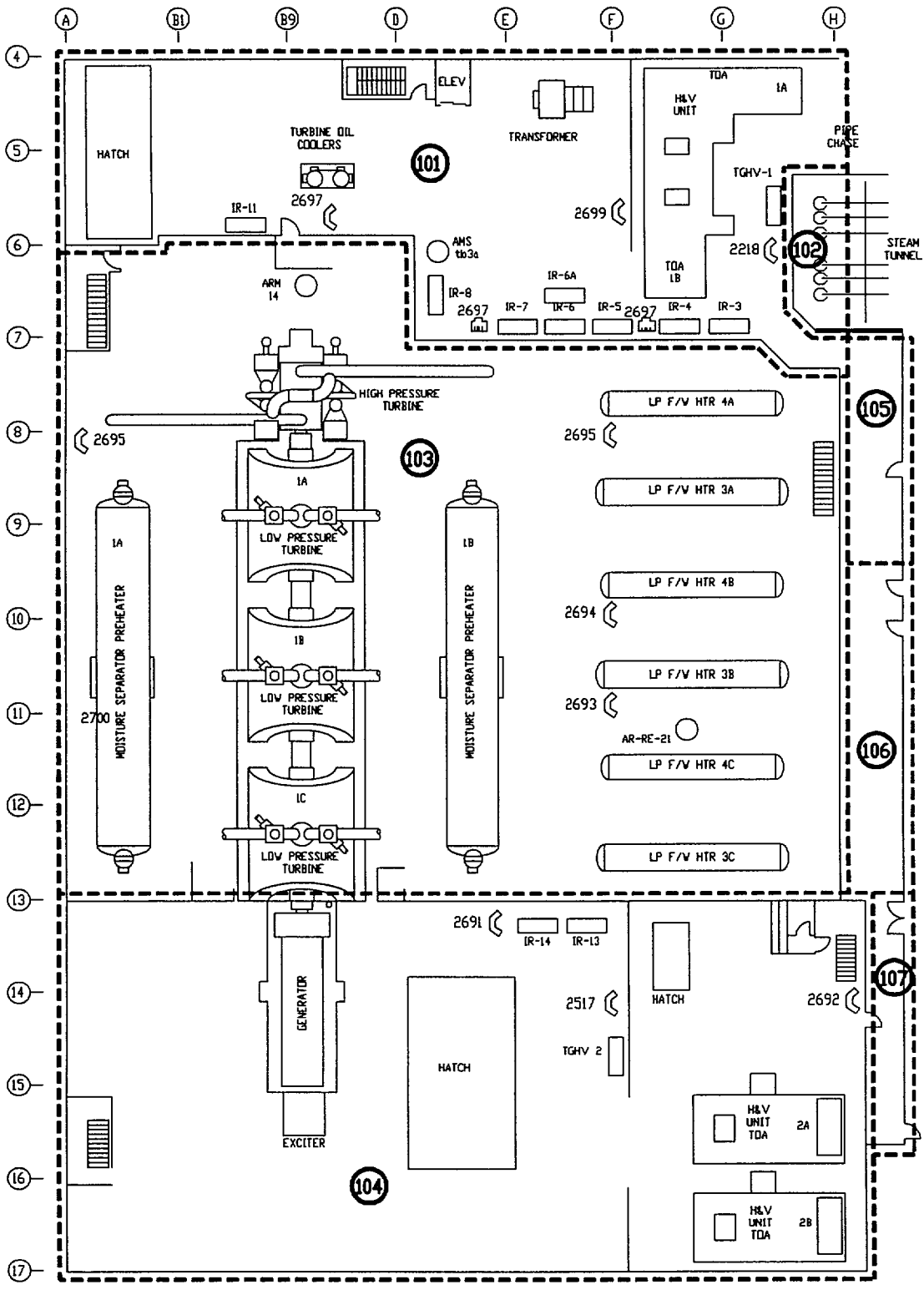
Figure 8-10

JULY 1, 2002

Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Turbine Generator Bldg. Elev. 471'					
		97	98	99	109	110	111
7:00	0:00	As Read	1,000	As Read	As Read	As Read	As Read
7:30	0:30	As Read	1,000	As Read	As Read	As Read	As Read
8:00	1:00	As Read	1,000	As Read	As Read	As Read	As Read
8:30	1:30	As Read	1,000	As Read	As Read	As Read	As Read
9:00	2:00	As Read	1,000	As Read	As Read	As Read	As Read
9:30	2:30	As Read	1,684	As Read	As Read	As Read	As Read
10:00	3:00	As Read	7,219	As Read	As Read	As Read	As Read
10:30	3:30	As Read	2	As Read	As Read	As Read	As Read
10:45	3:45	As Read	2	As Read	As Read	As Read	As Read
11:00	4:00	As Read	2	As Read	1	As Read	As Read
11:15	4:15	As Read	2	As Read	As Read	As Read	As Read
11:30	4:30	As Read	2	As Read	As Read	As Read	As Read
11:45	4:45	As Read	2	As Read	As Read	As Read	As Read
12:00	5:00	As Read	2	As Read	As Read	As Read	As Read
12:15	5:15	As Read	2	As Read	As Read	As Read	As Read
12:30	5:30	As Read	2	As Read	As Read	As Read	As Read
12:45	5:45	As Read	2	As Read	As Read	As Read	As Read
13:00	6:00	As Read	2	As Read	As Read	As Read	As Read



BASED ON
891150 TGB 501
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 501'

Section 8

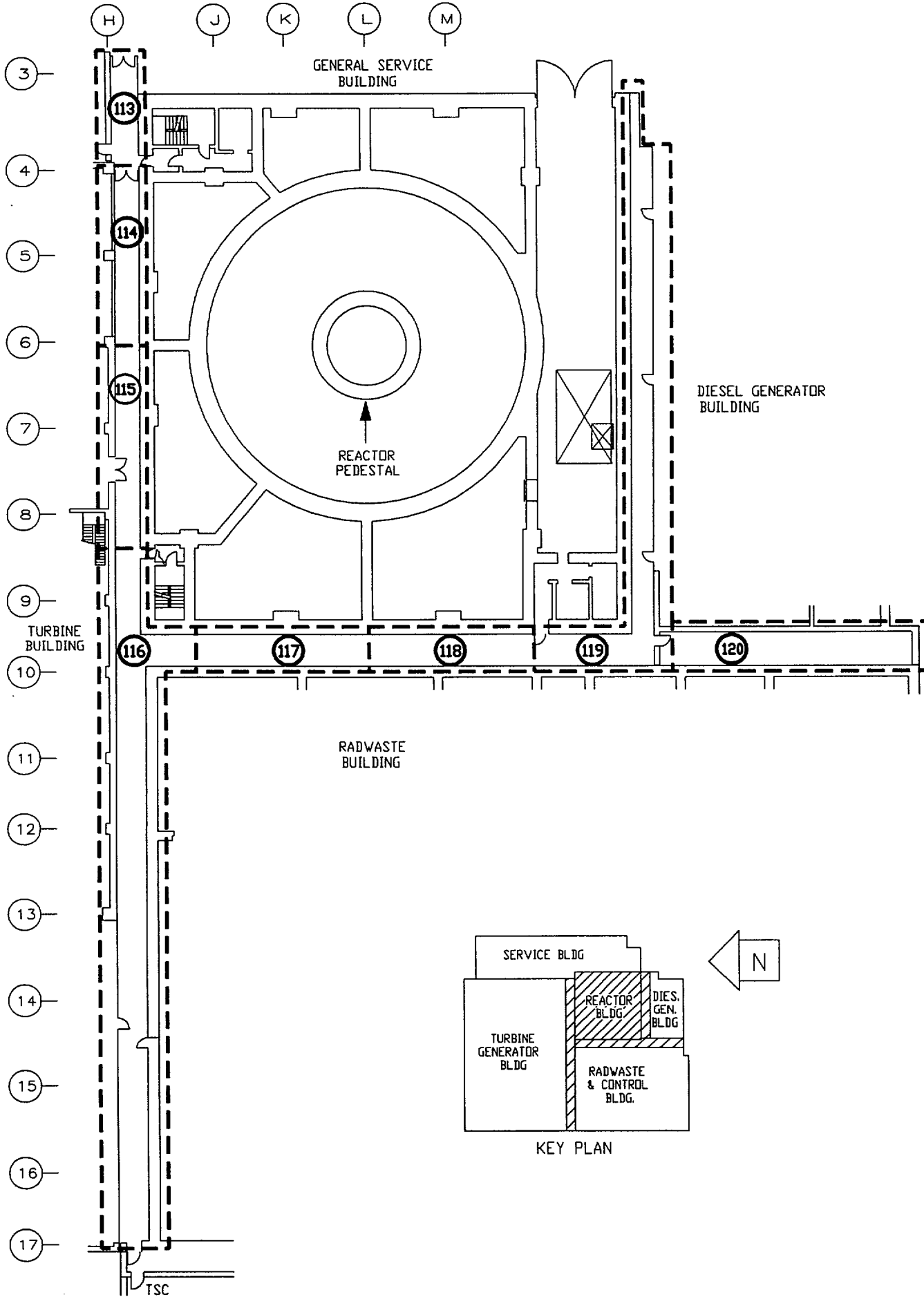
Figure 8-11

JULY 1, 2002

Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Turbine Generator Bldg. 501'						
		101	102	103	104	105	106	107
7:00	0:00	As Read	1,000	80	As Read	As Read	As Read	As Read
7:30	0:30	As Read	1,000	80	As Read	As Read	As Read	As Read
8:00	1:00	As Read	1,000	80	As Read	As Read	As Read	As Read
8:30	1:30	As Read	1,000	80	As Read	As Read	As Read	As Read
9:00	2:00	As Read	1,000	80	As Read	As Read	As Read	As Read
9:30	2:30	As Read	4,823	531	As Read	As Read	As Read	As Read
10:00	3:00	As Read	35,613	4,119	As Read	As Read	As Read	As Read
10:30	3:30	As Read	10	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	10	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	11	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	10	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	10	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	10	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	10	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	10	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	10	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	10	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	10	As Read	As Read	As Read	As Read	As Read



GROUND FLOOR CORRIDORS ELEV. 441'

Section 8

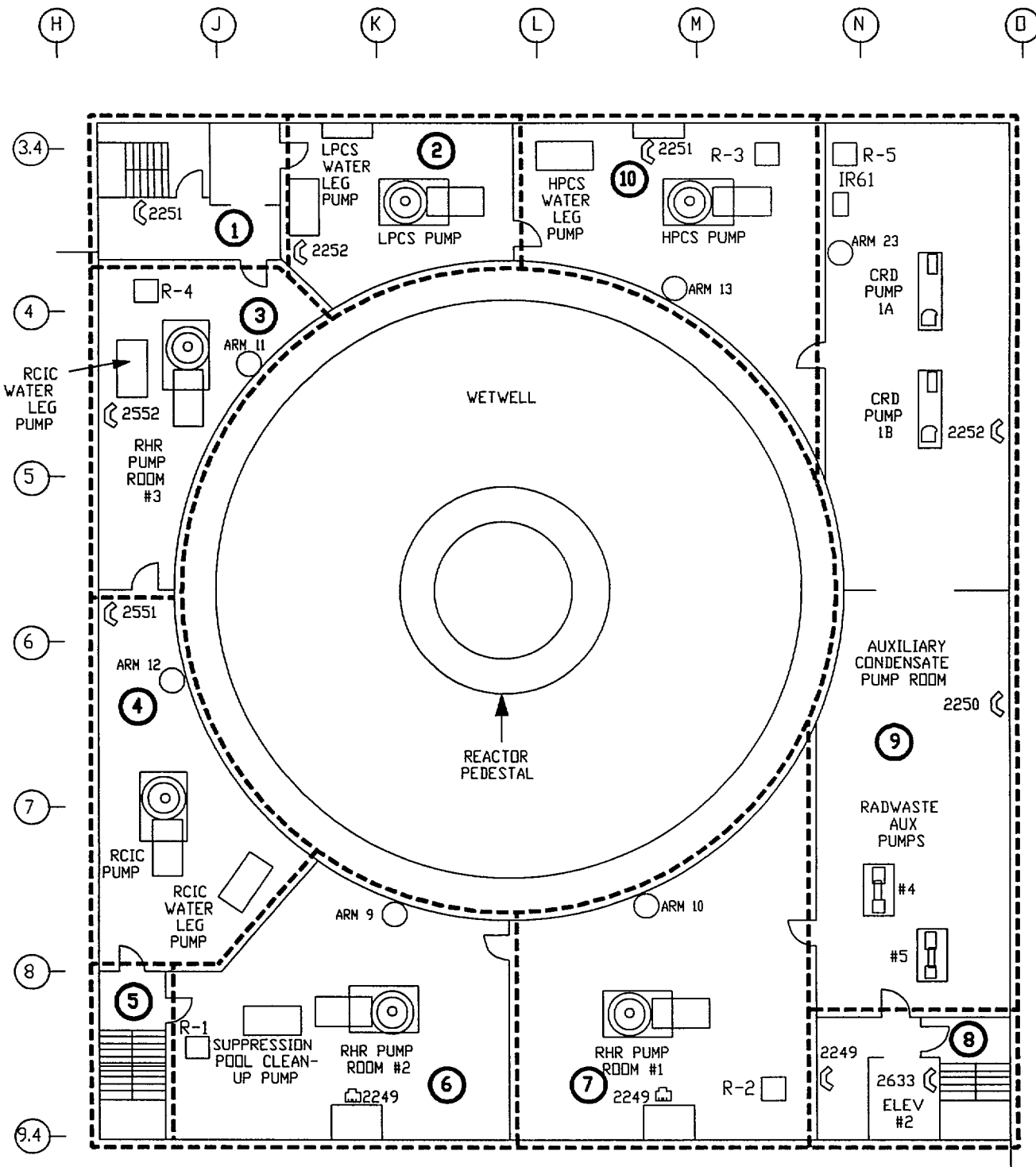
Figure 8-12

JULY 1, 2002

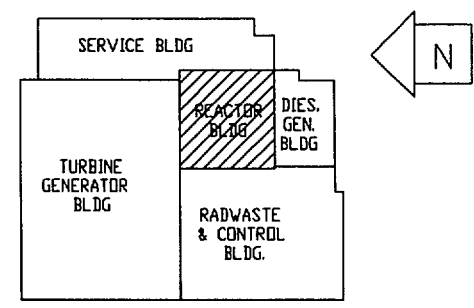
Columbia Generating Station
Dose Rates (mR/hr)

2002 Exercise

Real Time	Drill Time	Ground Floor Corridors 441'							
		113	114	115	116	117	118	119	120
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read



BASED ON
891150 RB 422
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 422'

Section 8

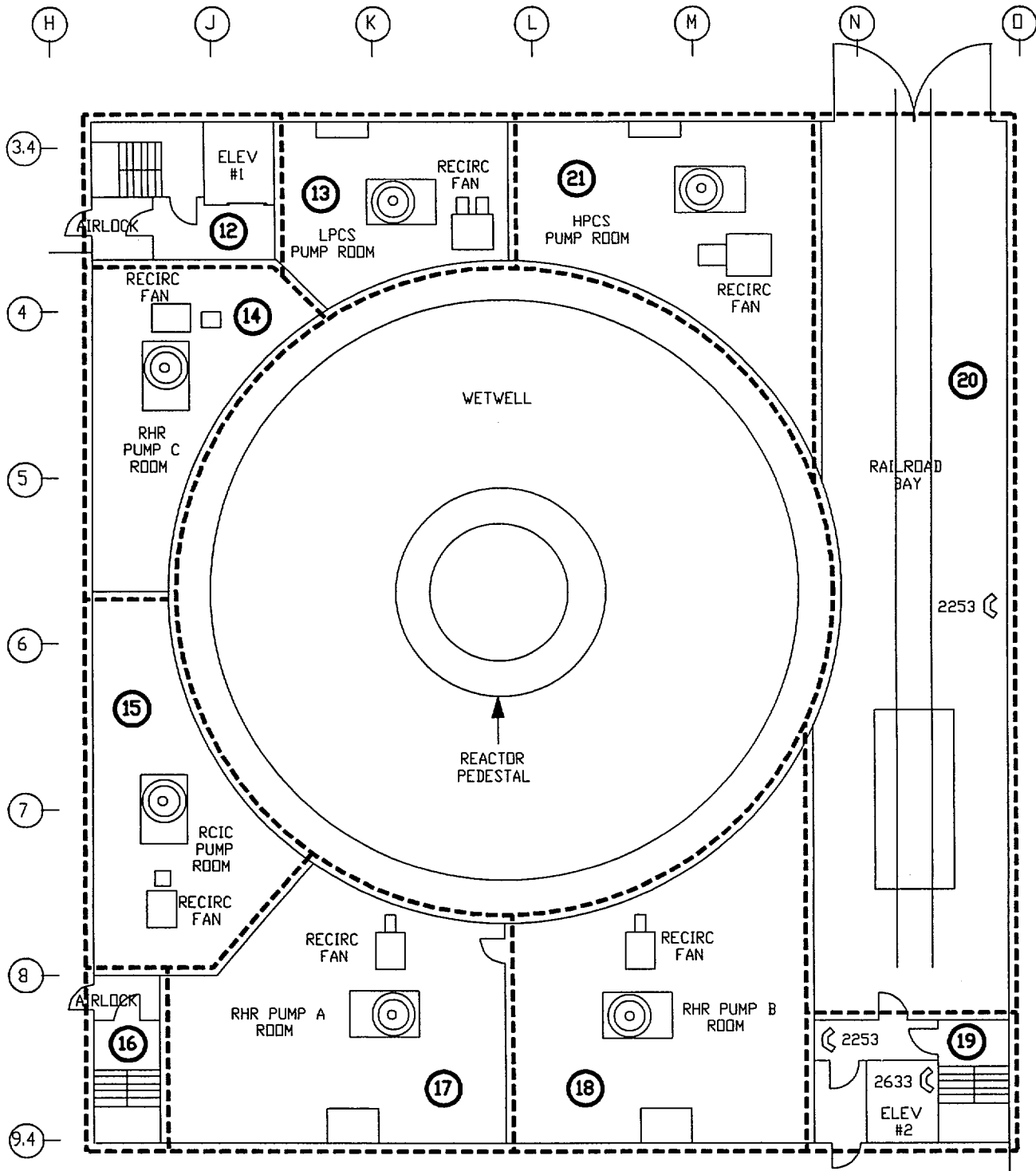
Figure 8-1

JULY 1, 2002

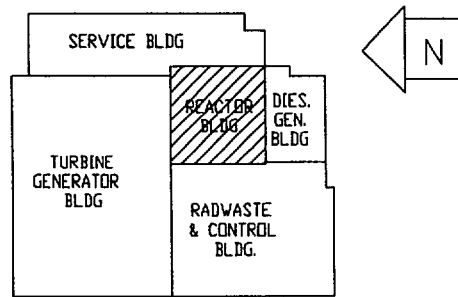
Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	1	2	3	4	5	6	7	8	9	10
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	1 7E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	3 0E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	4 0E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	5 1E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	5 0E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	4 7E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	4 0E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	3 3E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	2 5E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Reactor Building Elev. 422'



BASED ON
891150 RB 441 & 444
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 441' & 444'

Section 8

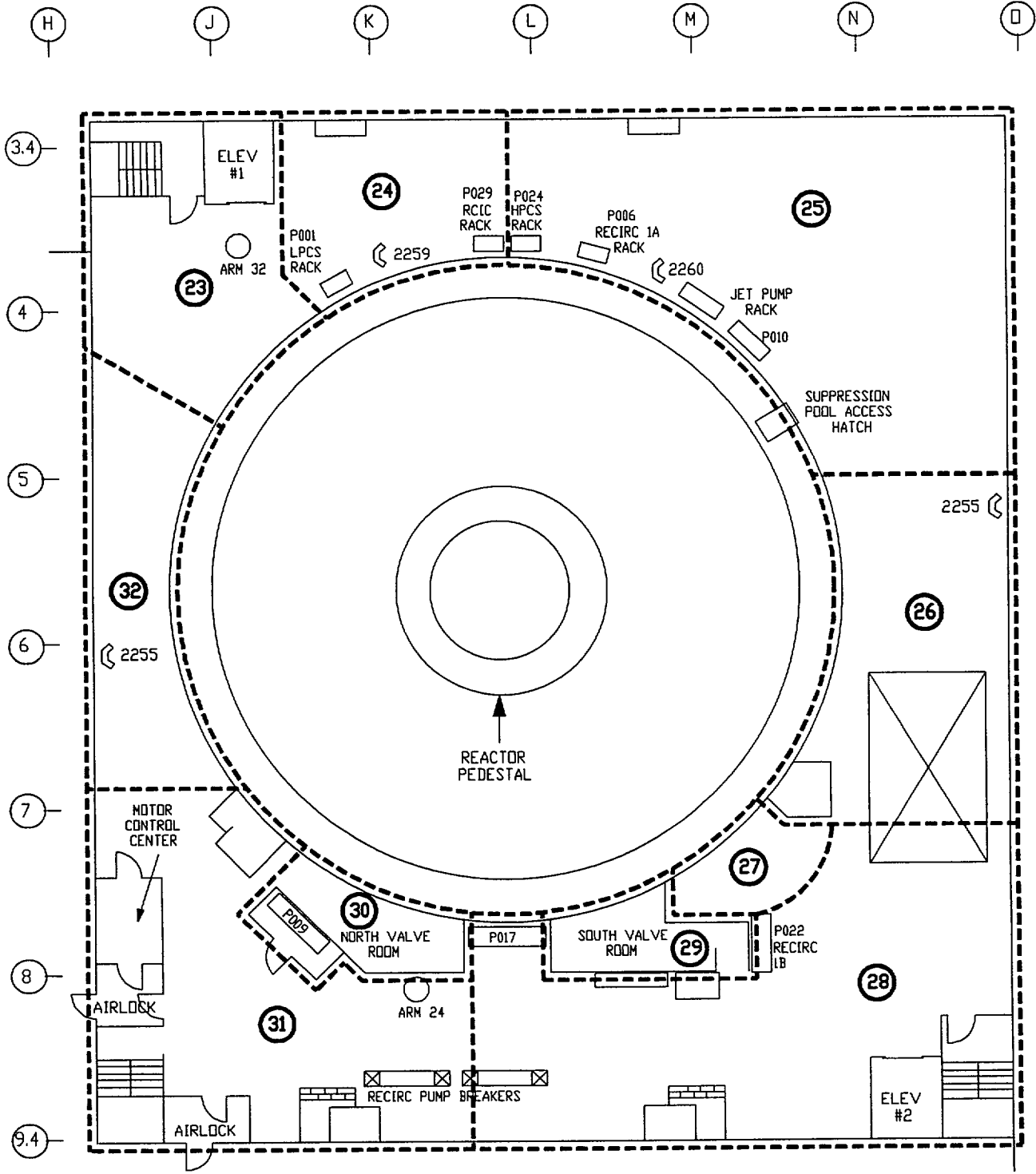
Figure 8-2

JULY 1, 2002

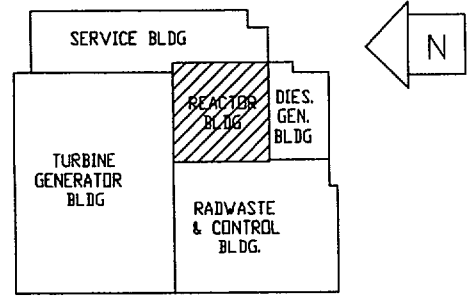
Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	12	13	14	15	16	17	18	19	20	21
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	2.7E+11	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	1.8E+11	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	1.3E+11	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	1.2E+11	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	6.8E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	4.3E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	2.9E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	1.9E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	1.3E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Reactor Building Elev. 441'



BASED ON
891150 RB 471
Feb 1992



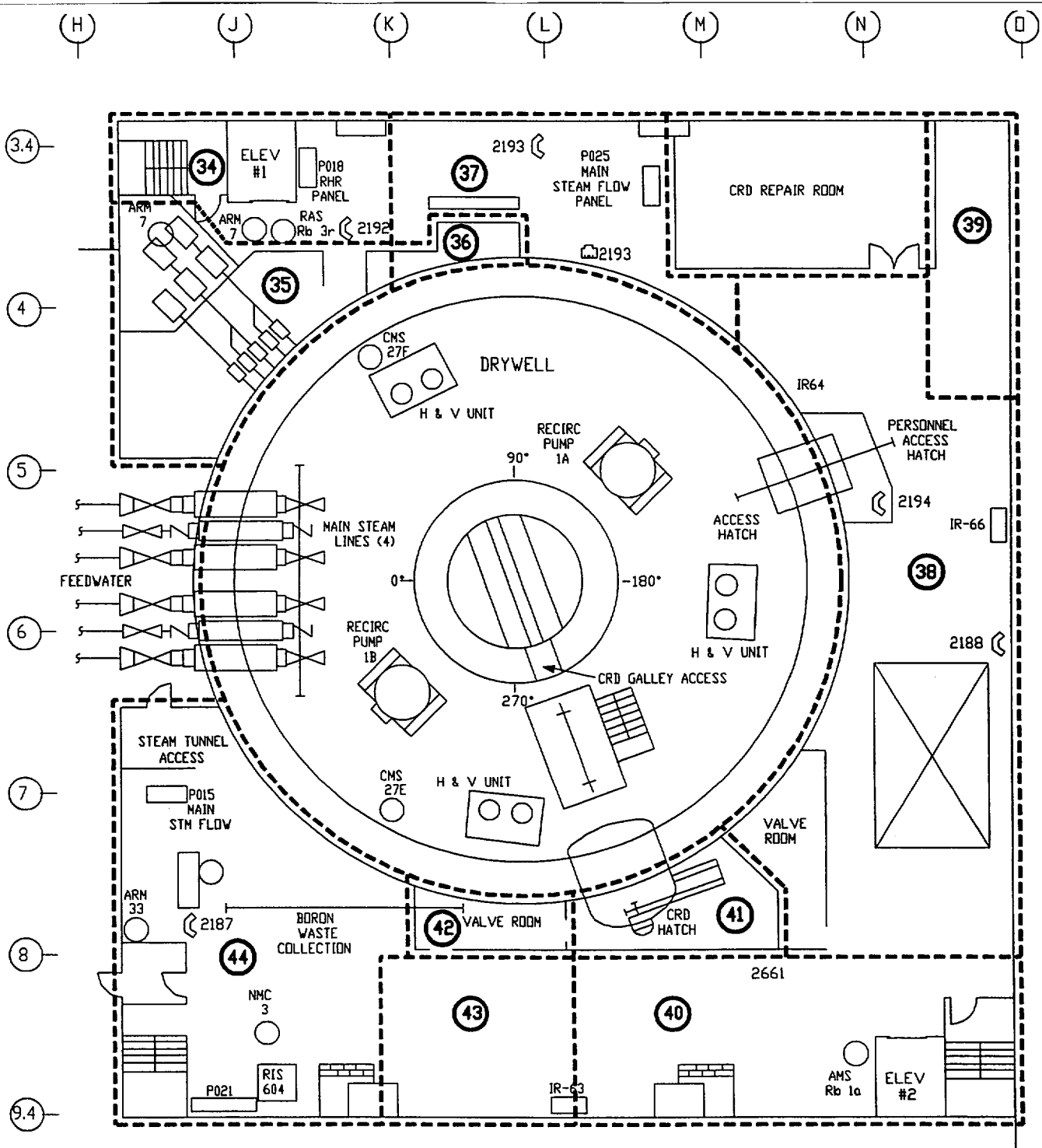
KEY PLAN

REACTOR BUILDING ELEV. 471'

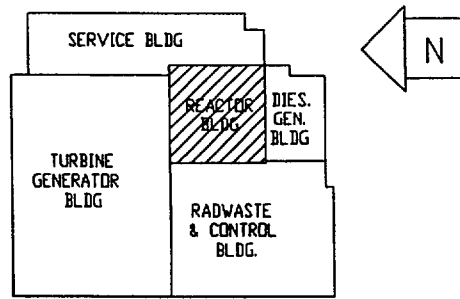
Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	23	24	25	26	27	28	29	30	31	32
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	3.4E+13	1.1E+13	3.4E+12	3.4E+12	6.0E+12	4.6E+12	1.3E+13	3.2E+12	9.9E+12	3.5E+13
11:15	4:15	1.3E+13	5.0E+12	2.5E+12	4.5E+12	3.0E+12	6.9E+12	2.1E+12	4.9E+12	1.4E+13	3.9E+13
11:30	4:30	6.9E+12	2.7E+12	1.4E+12	2.5E+12	1.7E+12	3.8E+12	1.2E+12	2.7E+12	7.8E+12	2.1E+13
11:45	4:45	3.4E+12	2.1E+12	1.4E+12	2.5E+12	1.6E+12	3.2E+12	1.1E+12	2.3E+12	4.4E+12	6.5E+12
12:00	5:00	1.9E+12	7.8E+11	4.6E+11	8.2E+11	5.0E+11	1.1E+12	3.6E+11	7.8E+11	2.2E+12	5.7E+12
12:15	5:15	2.2E+11	2.2E+11	2.1E+11	3.9E+11	2.1E+11	3.9E+11	1.5E+11	2.5E+11	3.9E+11	2.6E+11
12:30	5:30	7.3E+10	8.1E+10	8.6E+10	1.5E+11	8.1E+10	1.5E+11	5.8E+10	9.1E+10	1.4E+11	9.0E+10
12:45	5:45	3.7E+10	4.1E+10	4.4E+10	8.0E+10	4.1E+10	7.8E+10	3.0E+10	4.6E+10	7.4E+10	4.6E+10
13:00	6:00	2.0E+10	2.2E+10	2.4E+10	4.3E+10	2.2E+10	4.1E+10	1.6E+10	2.5E+10	3.9E+10	2.4E+10

Reactor Building Elev. 471'



BASED ON
891150 RB 501
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 501'

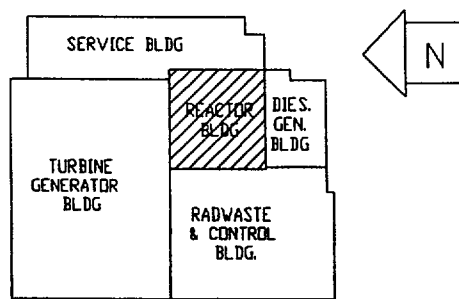
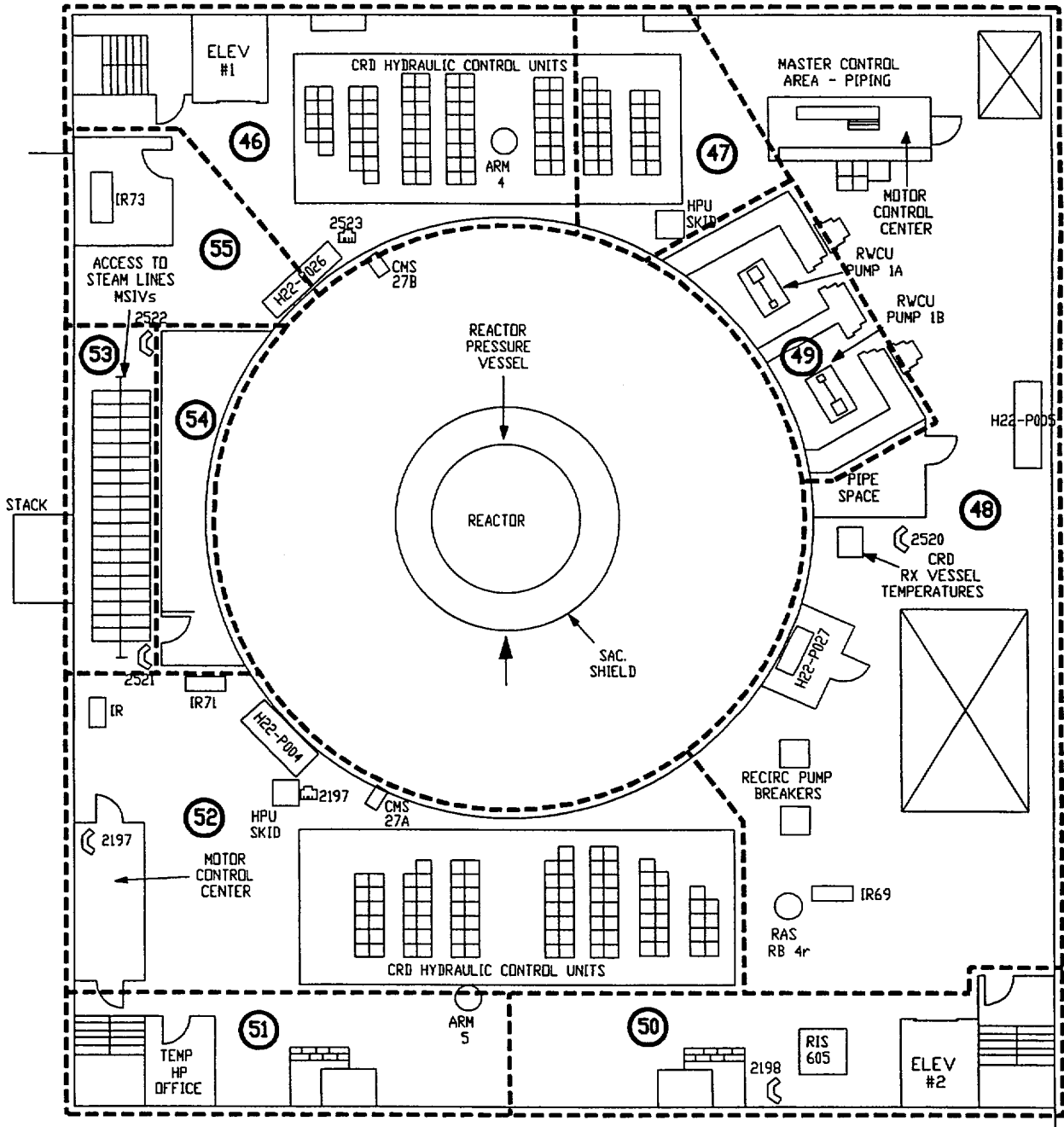
Columbia Generating Station
Airborne Count Rate (cpm)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 501'											
		34	35	36	37	38	39	40	41	42	43	44	
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	2.2E+12	6.0E+12	3.8E+10	3.6E+11	8.5E+11	1.4E+12	1.2E+12	As Read	4.6E+11	2.2E+12	2.7E+12	
11:15	4:15	1.3E+12	2.5E+12	8.0E+10	4.8E+11	1.1E+12	1.5E+12	1.2E+12	As Read	3.6E+11	1.4E+12	1.7E+12	
11:30	4:30	7.6E+11	1.4E+12	5.5E+10	3.1E+11	7.2E+11	9.2E+11	7.5E+11	As Read	2.3E+11	8.5E+11	1.0E+12	
11:45	4:45	6.6E+11	8.5E+11	4.8E+10	2.8E+11	6.8E+11	8.9E+11	7.0E+11	As Read	2.2E+11	7.4E+11	9.0E+11	
12:00	5:00	2.7E+11	4.1E+11	2.6E+10	1.3E+11	3.1E+11	3.5E+11	3.1E+11	As Read	9.1E+10	3.1E+11	3.9E+11	
12:15	5:15	1.2E+11	8.9E+10	1.6E+10	7.8E+10	1.8E+11	2.0E+11	1.7E+11	As Read	4.9E+10	1.5E+11	1.9E+11	
12:30	5:30	5.4E+10	3.6E+10	8.2E+09	3.8E+10	9.1E+10	9.2E+10	8.5E+10	As Read	2.4E+10	7.1E+10	9.2E+10	
12:45	5:45	2.9E+10	1.9E+10	4.6E+09	2.1E+10	5.1E+10	5.1E+10	4.7E+10	As Read	1.3E+10	3.9E+10	5.0E+10	
13:00	6:00	1.6E+10	1.0E+10	2.6E+09	1.2E+10	2.9E+10	2.9E+10	2.6E+10	As Read	7.3E+09	2.2E+10	2.8E+10	

H J K L M N O

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BASED ON
891150 RB 522
Feb 1992

REACTOR BUILDING ELEV. 522'

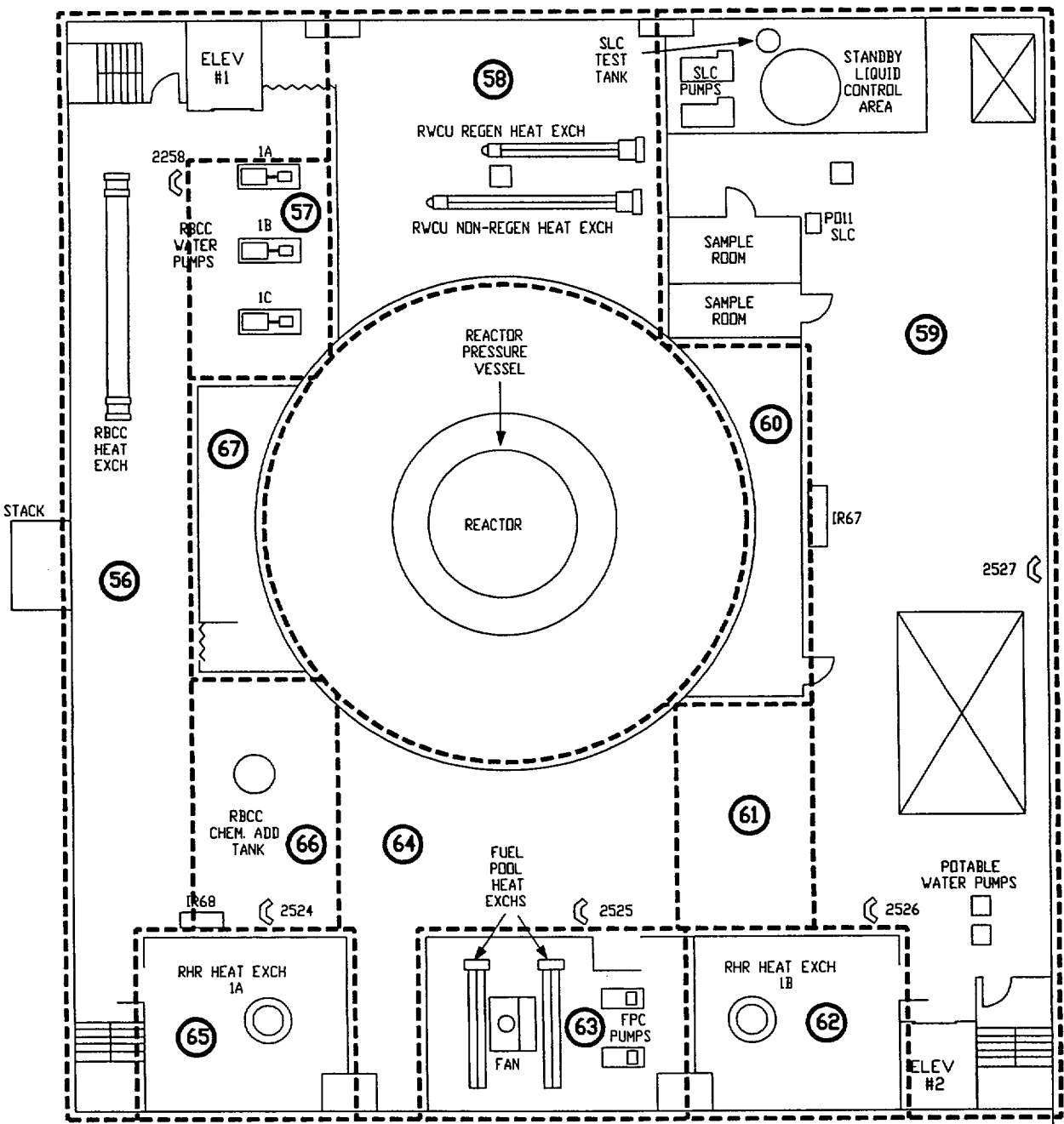
Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	46	47	48	49	50	51	52	53	54	55
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	8.0E+10	3.9E+10	1.6E+11	7.9E+09	7.7E+10	6.7E+10	1.1E+11	5.8E+10	1.2E+09	2.6E+11
11:15	4:15	9.3E+10	1.2E+11	4.1E+11	5.2E+10	2.7E+11	1.5E+11	2.4E+11	7.5E+10	3.1E+09	1.4E+11
11:30	4:30	8.5E+10	9.7E+10	3.2E+11	5.4E+10	2.5E+11	1.5E+11	2.1E+11	6.2E+10	4.4E+09	9.0E+10
11:45	4:45	9.0E+10	9.1E+10	2.9E+11	5.1E+10	2.3E+11	1.5E+11	2.0E+11	6.0E+10	5.4E+09	7.9E+10
12:00	5:00	6.5E+10	6.4E+10	1.9E+11	4.1E+10	1.7E+11	1.1E+11	1.4E+11	4.0E+10	5.0E+09	4.2E+10
12:15	5:15	4.9E+10	4.6E+10	1.3E+11	3.0E+10	1.2E+11	8.3E+10	1.0E+11	2.8E+10	4.2E+09	2.4E+10
12:30	5:30	3.5E+10	3.0E+10	7.9E+10	2.0E+10	7.9E+10	5.5E+10	6.4E+10	1.8E+10	3.2E+09	1.6E+10
12:45	5:45	2.4E+10	1.9E+10	4.9E+10	1.3E+10	5.0E+10	3.5E+10	4.1E+10	1.2E+10	2.2E+09	1.1E+10
13:00	6:00	1.6E+10	1.2E+10	3.0E+10	7.9E+09	3.1E+10	2.2E+10	2.5E+10	7.4E+09	1.5E+09	6.9E+09

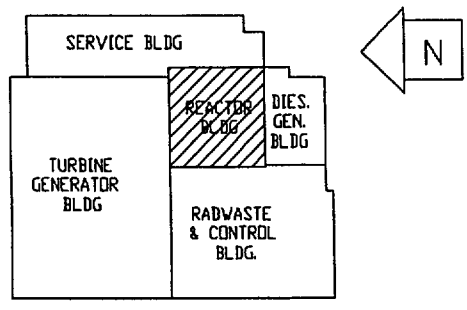
Reactor Building Elev. 522'

H J K L M N O

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BASED ON
891150 RB 548
FEB 1992



KEY PLAN

REACTOR BUILDING ELEV. 548'

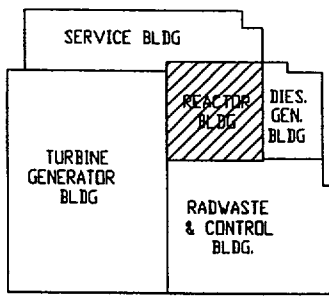
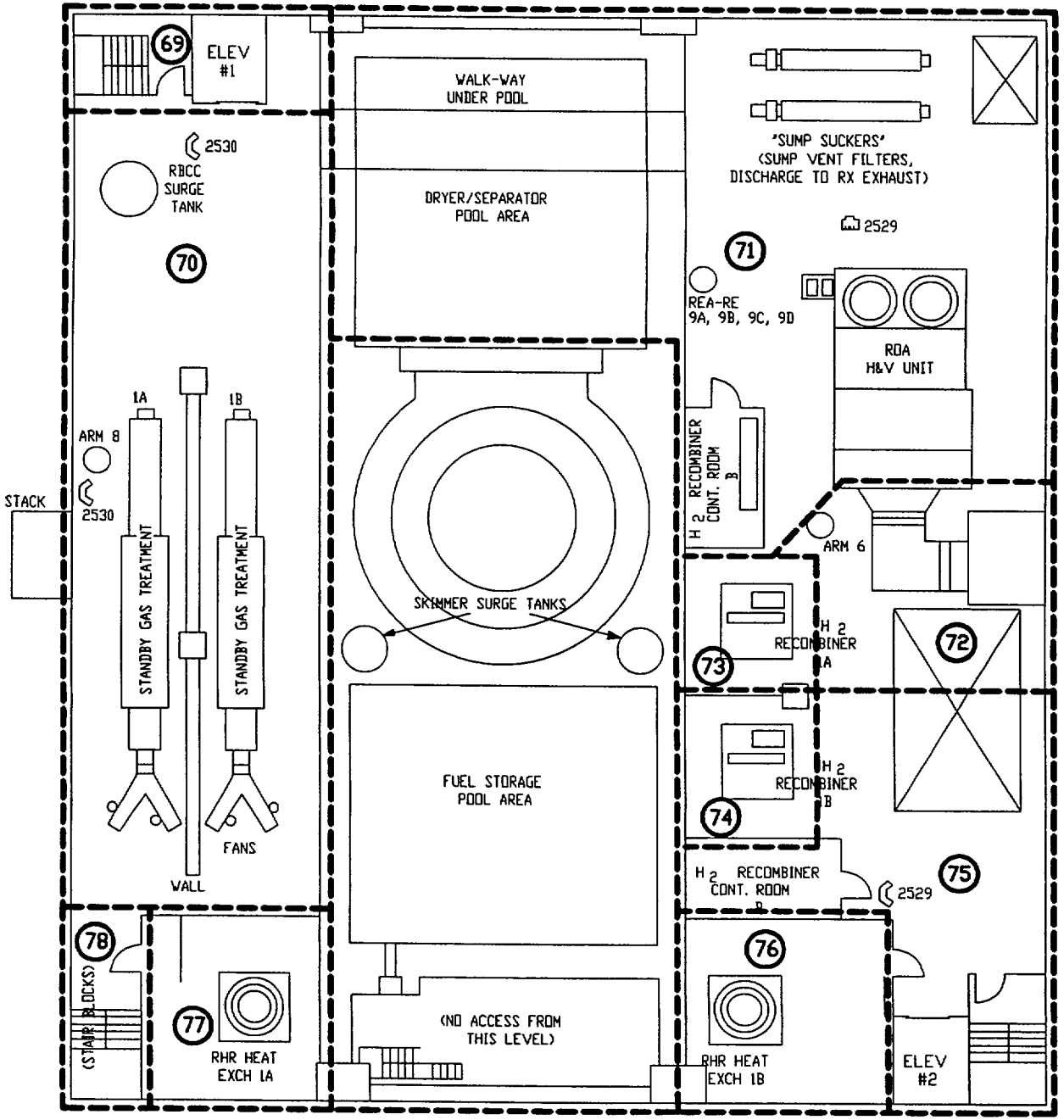
Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	56	57	58	59	60	61	62	63	64	65	66	67
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	3.2E+09	4.8E+08	3.9E+08	2.7E+10	2.7E+08	3.4E+09	2.4E+09	5.9E+08	8.4E+08	3.6E+08	6.3E+08	3.6E+08
11:15	4:15	1.8E+10	4.1E+09	4.2E+09	1.6E+11	7.1E+09	4.3E+10	3.5E+10	7.4E+09	1.1E+10	3.6E+09	7.5E+09	3.4E+09
11:30	4:30	3.0E+10	7.5E+09	8.8E+09	1.6E+11	1.4E+10	4.8E+10	4.1E+10	1.3E+10	1.8E+10	7.0E+09	1.3E+10	6.7E+09
11:45	4:45	4.1E+10	1.1E+10	1.3E+10	1.6E+11	2.0E+10	4.9E+10	4.1E+10	1.6E+10	1.8E+10	1.0E+10	1.8E+10	9.8E+09
12:00	5:00	4.4E+10	1.2E+10	1.6E+10	1.3E+11	2.1E+10	4.4E+10	3.6E+10	1.7E+10	2.3E+10	1.2E+10	2.0E+10	1.1E+10
12:15	5:15	4.2E+10	1.2E+10	1.5E+10	9.8E+10	1.9E+10	3.4E+10	2.8E+10	1.5E+10	2.0E+10	1.1E+10	1.8E+10	1.1E+10
12:30	5:30	3.5E+10	9.9E+09	1.3E+10	6.8E+10	1.6E+10	2.5E+10	2.0E+10	1.1E+10	1.5E+10	9.9E+09	1.5E+10	9.4E+09
12:45	5:45	2.8E+10	7.8E+09	1.1E+10	4.5E+10	1.2E+10	1.7E+10	1.3E+10	8.3E+09	1.1E+10	7.8E+09	1.2E+10	7.4E+09
13:00	6:00	2.0E+10	5.7E+09	7.9E+09	2.9E+10	8.1E+09	1.1E+10	8.8E+09	5.7E+09	7.7E+09	5.8E+09	8.4E+09	5.5E+09

Reactor Building Elev. 548'

H J K L M N O

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BASED ON
891150 RB 572
Feb 1992

REACTOR BUILDING ELEV. 572'

Columbia Generating Station
Airborne Count Rate (cpm)

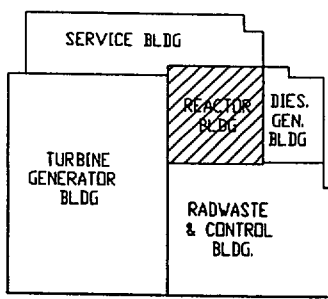
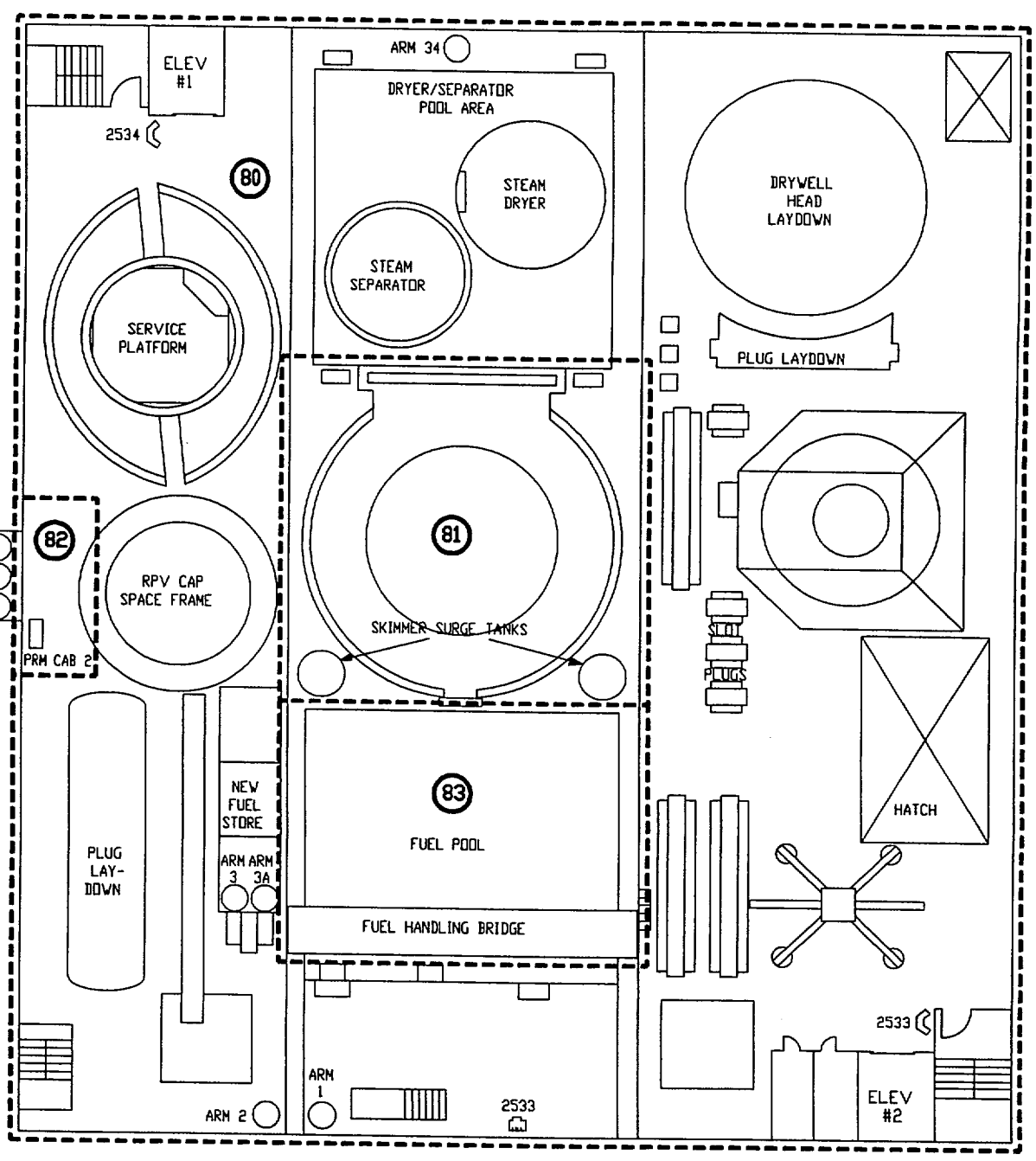
2002 Exercise

Real Time	Drill Time	69	70	71	72	73	74	75	76	77	78
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	1.0E+07	2.0E+08	2.5E+09	2.6E+09	2.0E+07	4.1E+07	2.4E+09	3.0E+06	2.890	2.4E+07
11:15	4:15	1.2E+09	1.7E+10	4.7E+10	5.2E+10	1.3E+09	1.8E+09	3.7E+10	3.0E+08	1.0E+07	1.2E+10
11:30	4:30	5.3E+09	3.2E+10	6.7E+10	7.2E+10	2.1E+09	2.4E+09	4.6E+10	7.9E+08	8.8E+07	4.5E+10
11:45	4:45	1.2E+10	4.1E+10	7.5E+10	8.2E+10	2.4E+09	2.7E+09	5.1E+10	1.3E+09	2.7E+08	8.0E+10
12:00	5:00	1.8E+10	4.2E+10	7.2E+10	8.1E+10	2.5E+09	2.8E+09	5.1E+10	1.7E+09	4.8E+08	9.5E+10
12:15	5:15	2.1E+10	3.6E+10	5.9E+10	7.0E+10	2.2E+09	2.5E+09	4.4E+10	1.8E+09	6.1E+08	9.2E+10
12:30	5:30	2.1E+10	2.8E+10	4.4E+10	5.5E+10	1.7E+09	2.0E+09	3.6E+10	1.6E+09	6.5E+08	7.7E+10
12:45	5:45	1.9E+10	2.0E+10	3.1E+10	4.1E+10	1.3E+09	1.6E+09	2.8E+10	1.4E+09	6.1E+08	5.9E+10
13:00	6:00	1.6E+10	1.4E+10	2.1E+10	2.9E+10	9.4E+08	1.2E+09	2.0E+10	1.1E+09	5.3E+08	4.2E+10

Reactor Building Elev. 572'

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BASED ON
891150 RX 606
Feb 1992

REACTOR BUILDING ELEV. 606'

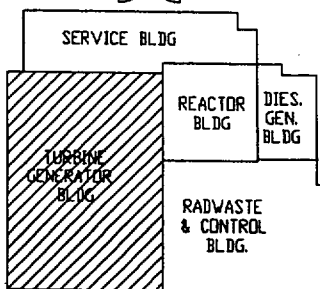
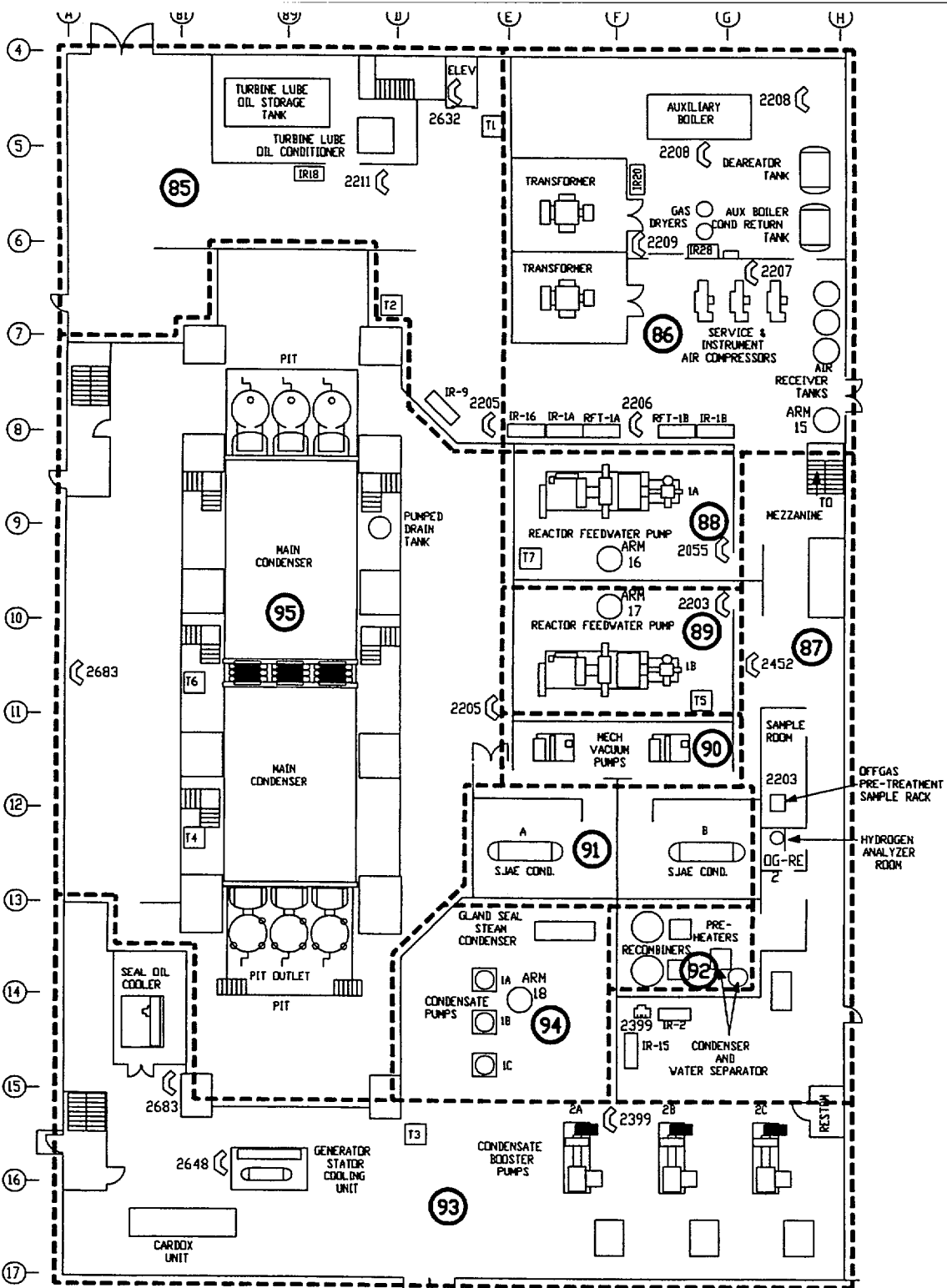
Section 8

Figure 8-8

JULY 1, 2002

Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	80	81	82	83
7:00	0:00	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read
11:00	4:00	4.4E+07	4.8E+06	4.7E+06	4.8E+06
11:15	4:15	4.5E+09	2.9E+09	2.2E+09	2.9E+09
11:30	4:30	1.1E+10	8.5E+09	6.1E+09	8.5E+09
11:45	4:45	1.9E+10	1.6E+10	1.1E+10	1.6E+10
12:00	5:00	2.5E+10	2.1E+10	1.4E+10	2.1E+10
12:15	5:15	2.7E+10	2.3E+10	1.6E+10	2.3E+10
12:30	5:30	2.6E+10	2.3E+10	1.5E+10	2.3E+10
12:45	5:45	2.3E+10	2.0E+10	1.3E+10	2.0E+10
13:00	6:00	1.8E+10	1.6E+10	1.1E+10	1.6E+10



KEY PLAN

TURBINE GENERATOR BUILDING ELEV. 441'

Section 8

Figure 8-9

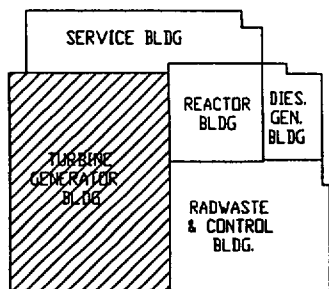
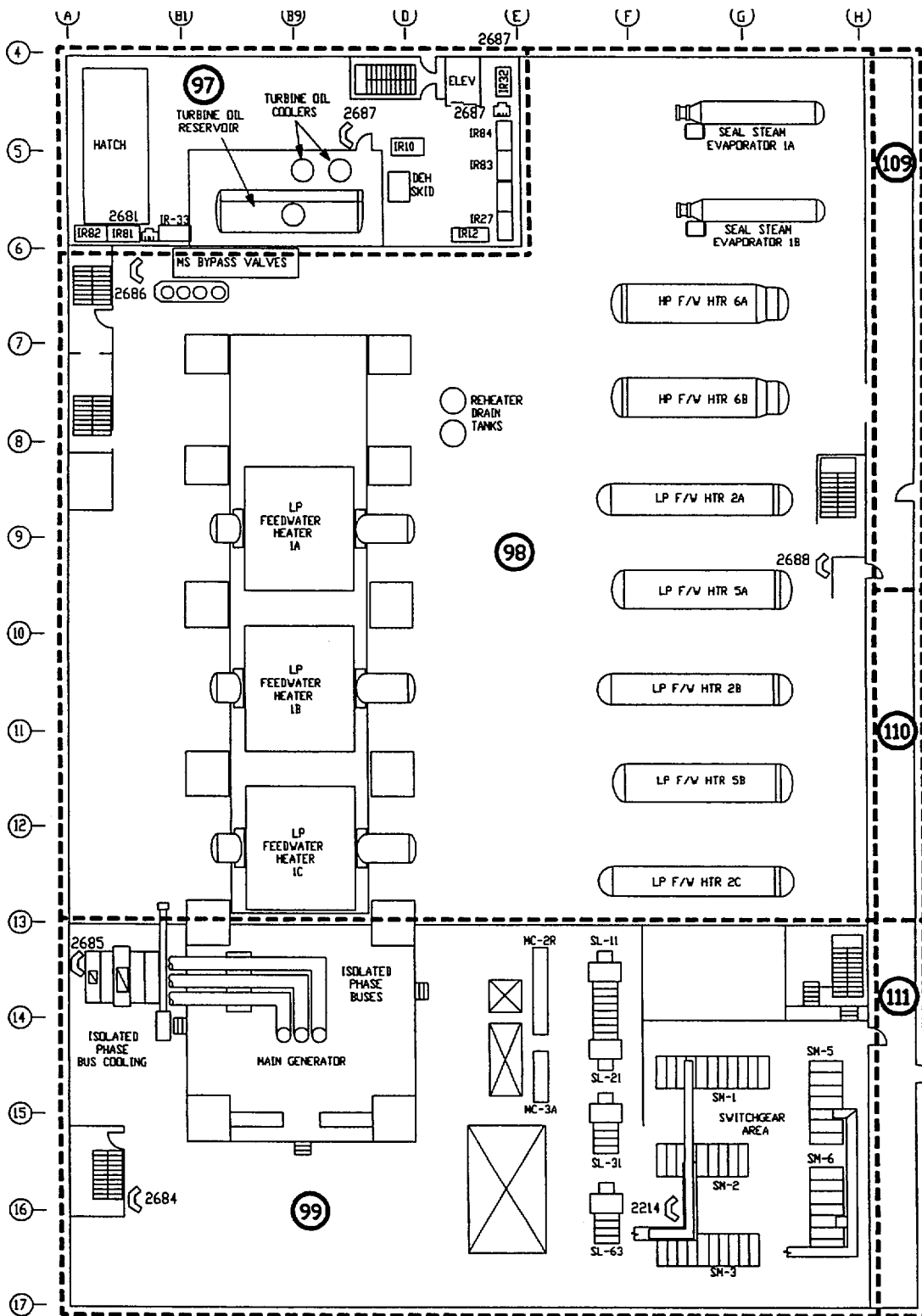
JULY 1, 2002

BASED ON
891150 RB 572
Feb 1992

Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	85	86	87	88	89	90	91	92	93	94	95
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Turbine Generator Bldg, Elev. 441'

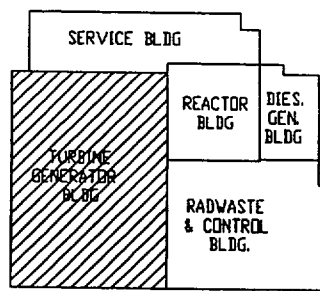
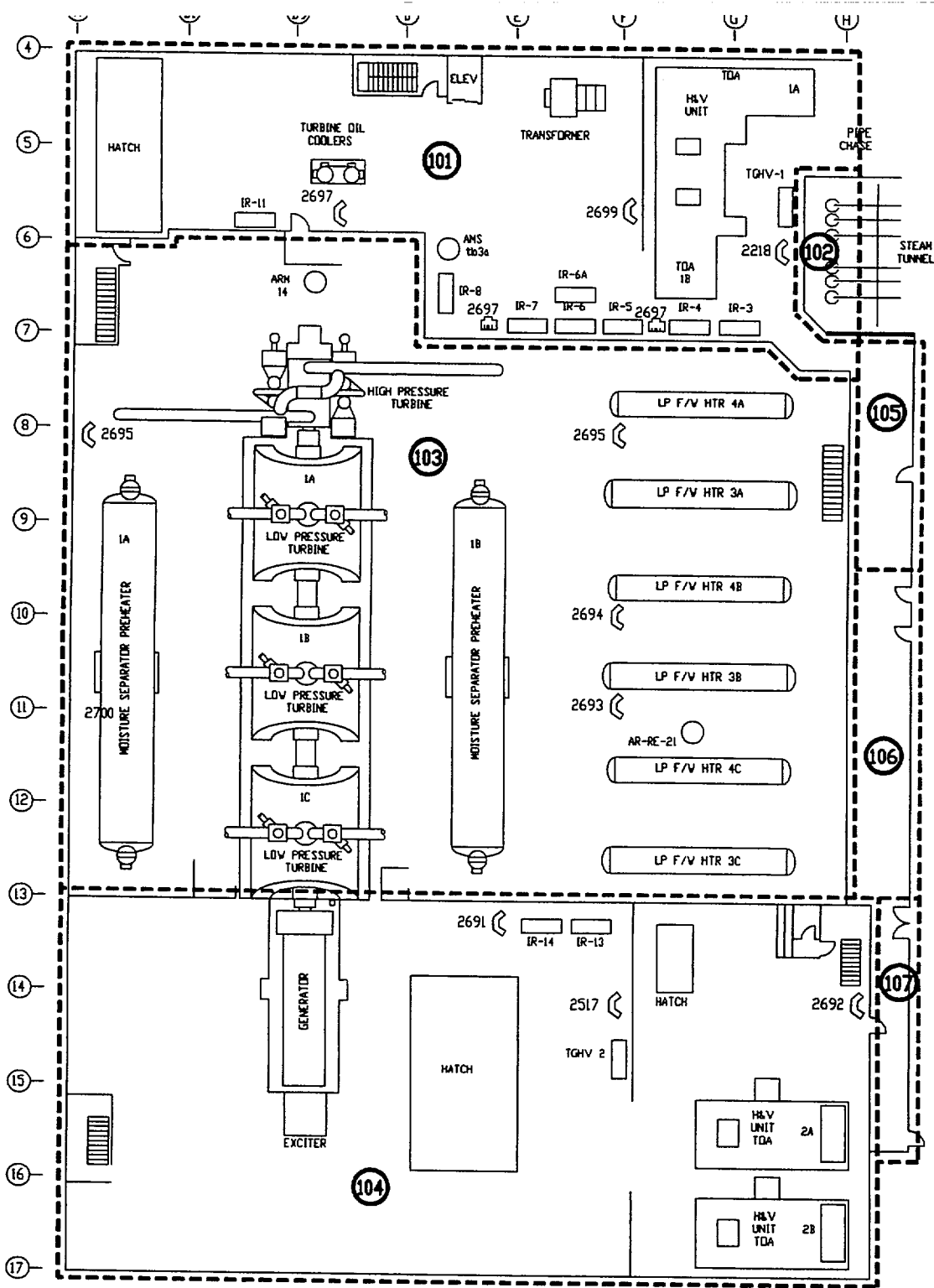


BASED ON
891150 TGB 471
Feb 1992

KEY PLAN
TURBINE GENERATOR BUILDING ELEV. 471'

Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	97	98	99	109	110	111
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read



BASED ON
891150 TGB 501
Feb 1992

TURBINE GENERATOR BUILDING

ELEV. 501'

Section 8

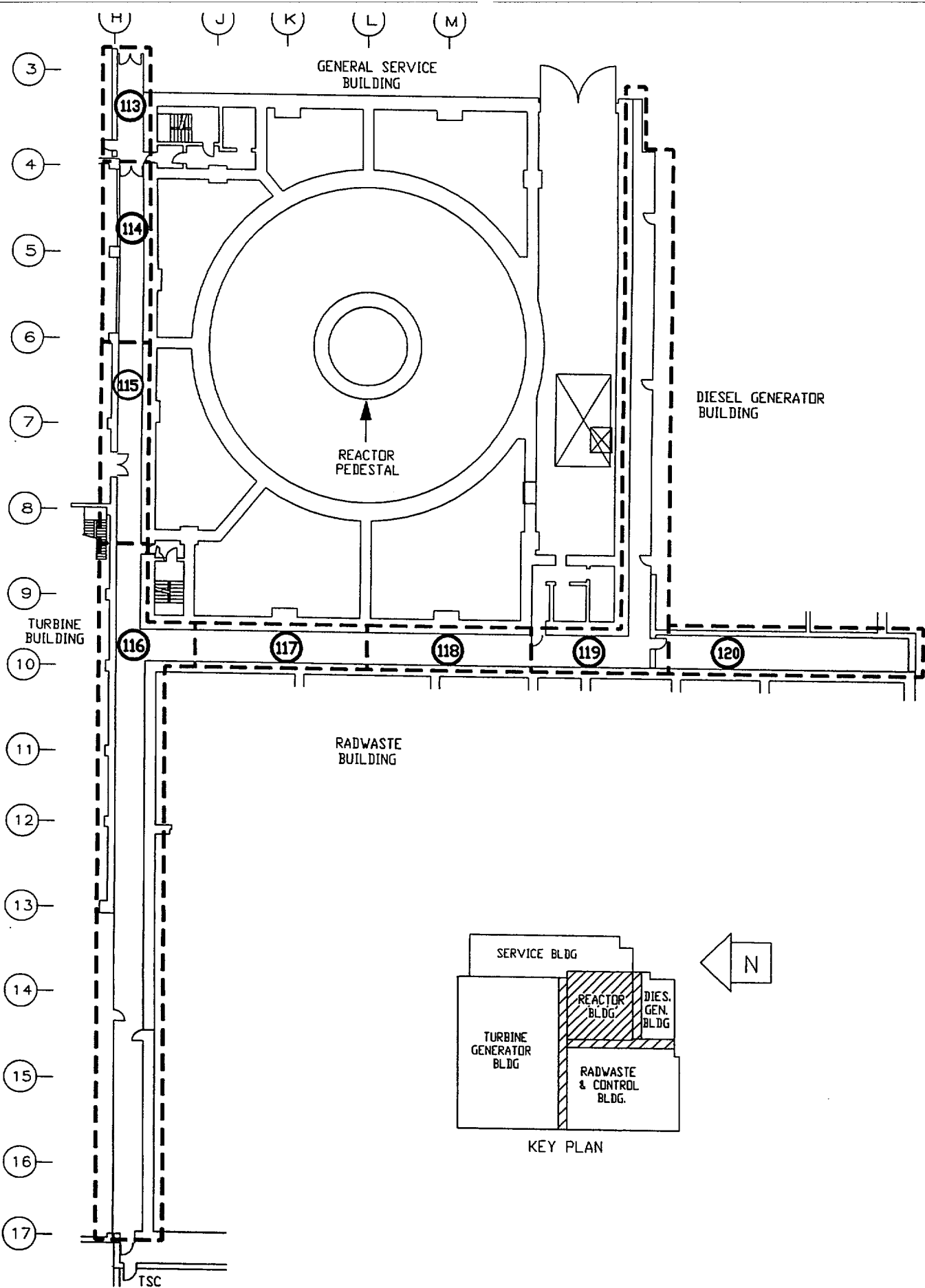
Figure 8-11

JULY 1, 2002

Columbia Generating Station
Airborne Count Rate (cpm)

Real Time	Drill Time	101	102	103	104	105	106	107
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Turbine Generator Bldg, 501



GROUND FLOOR CORRIDORS ELEV. 441'

Section 8

Figure 8-12

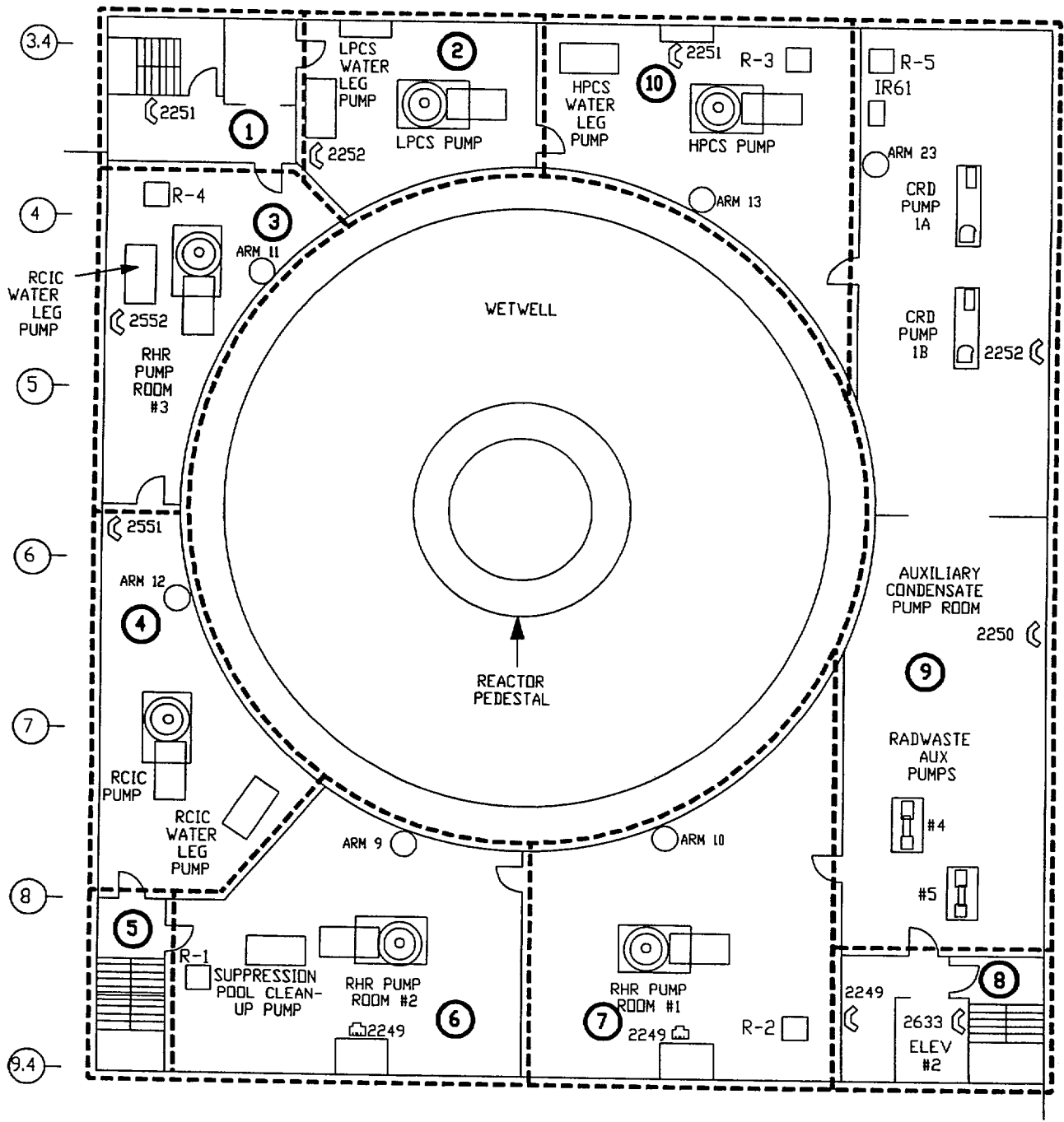
JULY 1, 2002

Columbia Generating Station
Airborne Count Rate (cpm)

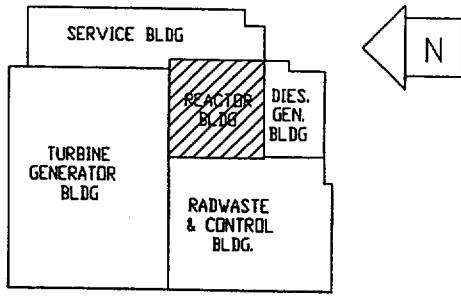
2002 Exercise

Real Time	Drill Time	113	114	115	116	117	118	119	120
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Ground Floor Corridors 441'



BASED ON
891150 RB 422
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 422'

Section 8

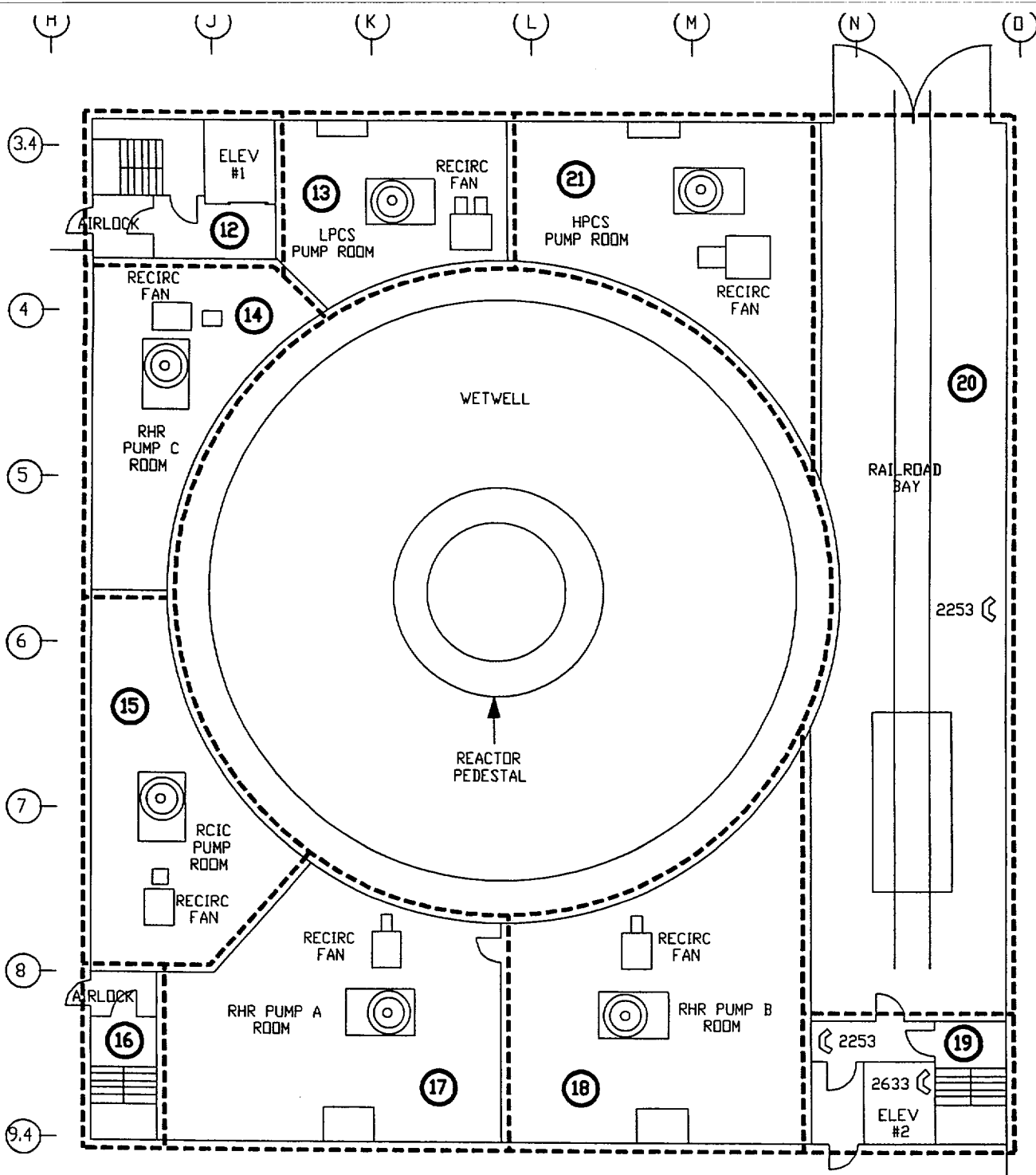
Figure 8-1

JULY 1, 2002

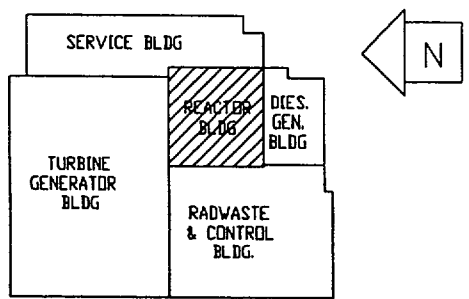
Columbia Generating Station
Airborne Concentration (uCi/mi)

Real Time	Drill Time	1	2	3	4	5	6	7	8	9	10
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Reactor Building Elev. 422'



BASED ON
891150 RB 441 & 444
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 441' & 444'

Section 8

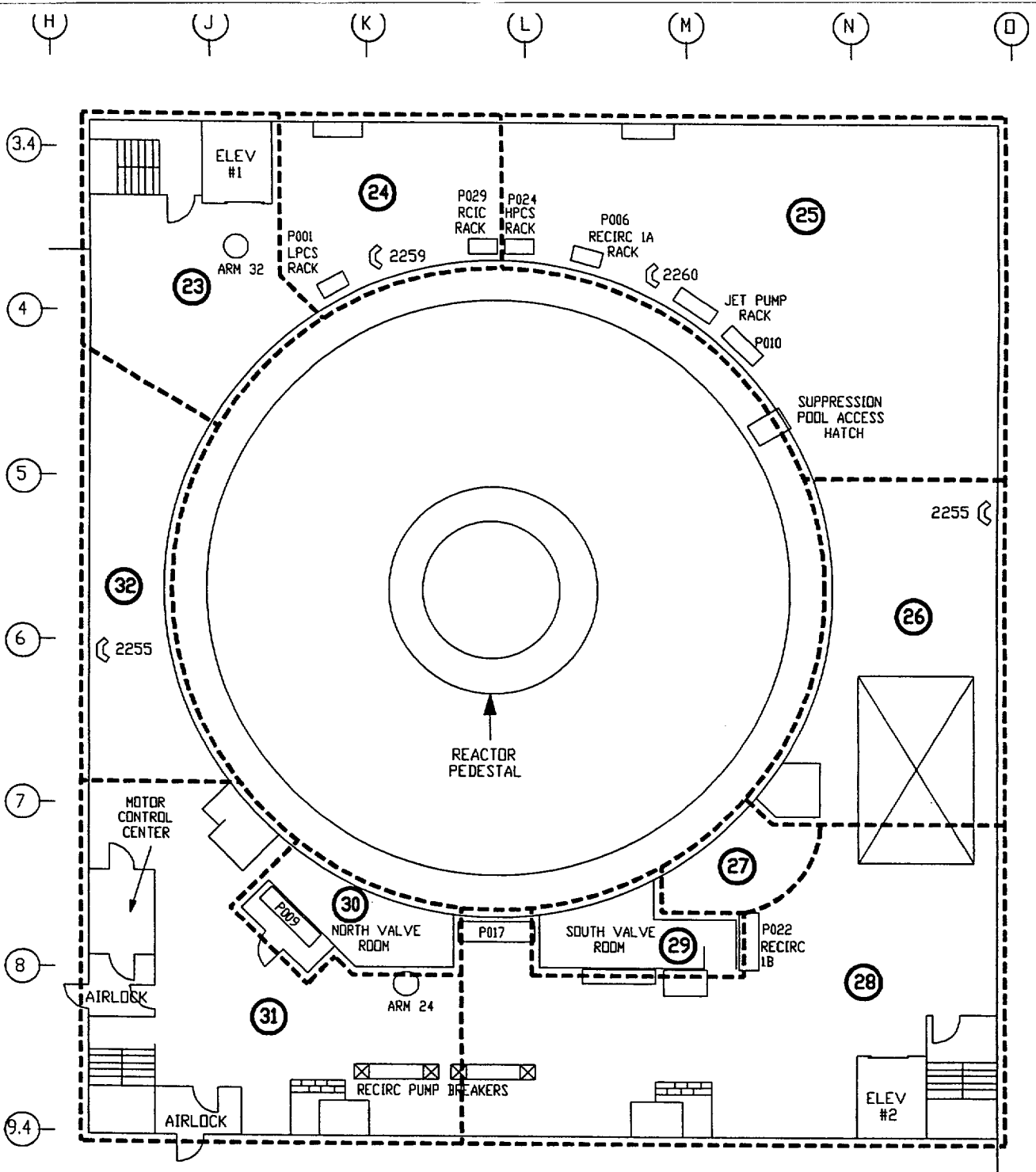
Figure 8-2

JULY 1, 2002

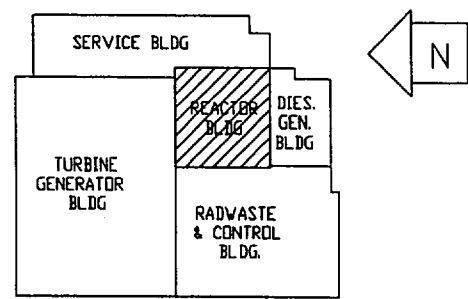
Columbia Generating Station
Airborne Concentration (uCi/m)

Real Time	DHLL Time	12	13	14	15	16	17	18	19	20	21
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	4.8E+00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	3.1E+00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	2.3E+00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	2.1E+00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	1.2E+00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	7.7E-01	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	5.1E-01	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	3.4E-01	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	2.2E-01	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Reactor Building Elev. 441'



BASED ON
891150 RB 471
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 471'

Section 8

Figure 8-3

JULY 1, 2002

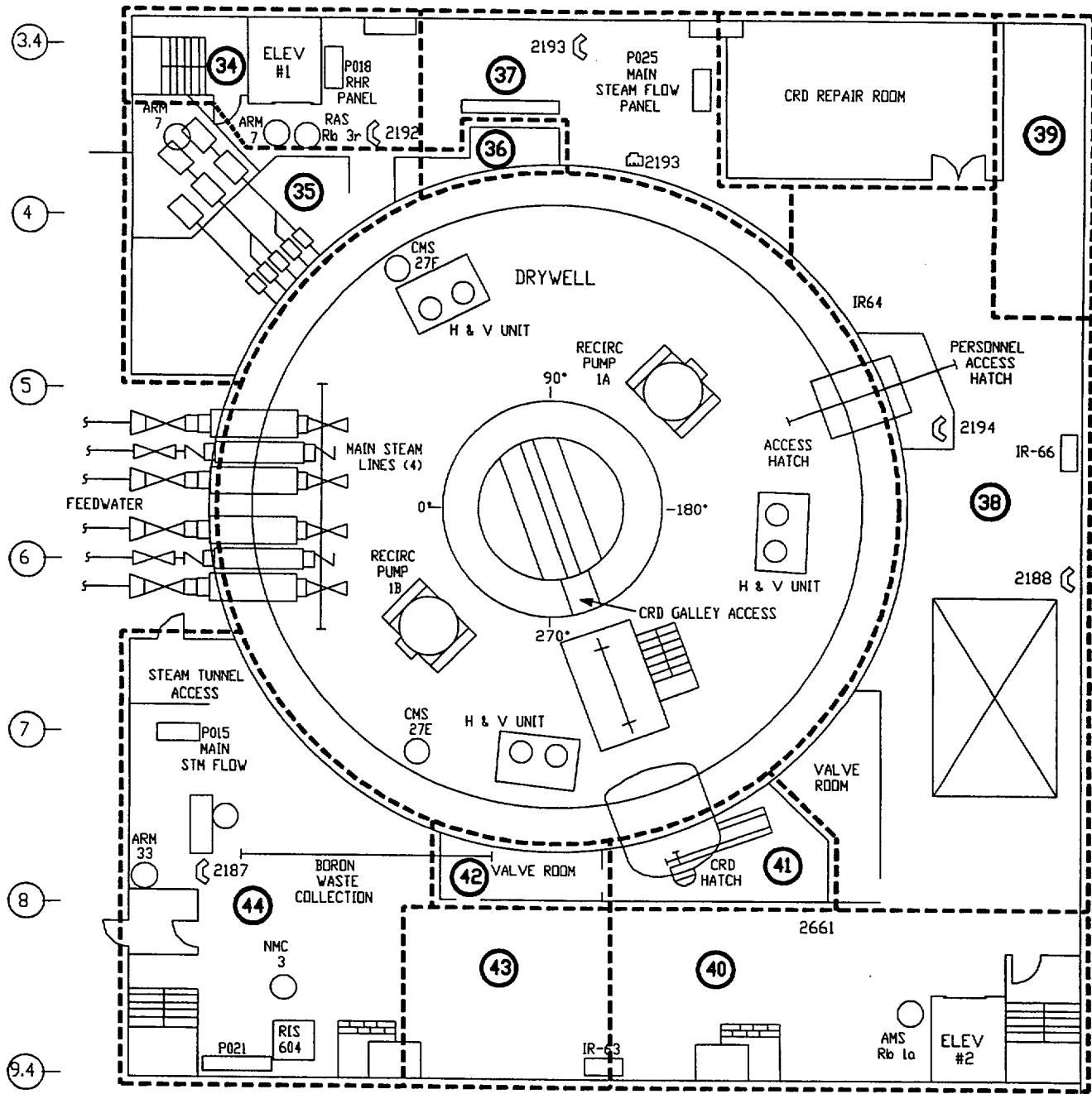
Columbia Generating Station
Airborne Concentration (uCi/mi)

2002 Exercise

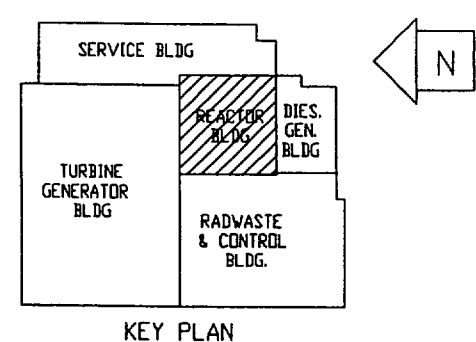
Real Time	D-III	Time	23	24	25	26	27	28	29	30	31	32
7:00	As Read	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	As Read	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	As Read	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	As Read	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	As Read	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	As Read	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	As Read	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	As Read	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	As Read	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	As Read	4:00	6.0E+02	1.9E+02	5.9E+01	1.1E+02	8.1E+01	2.4E+02	5.7E+01	1.8E+02	6.2E+02	1.7E+03
11:15	4:15	2.2E+02	8.9E+01	4.4E+01	7.9E+01	5.3E+01	1.2E+02	3.7E+01	8.7E+01	2.5E+02	6.8E+02	
11:30	4:30	1.2E+02	4.8E+01	2.5E+01	4.5E+01	2.9E+01	6.8E+01	2.1E+01	4.7E+01	1.4E+02	3.8E+02	
11:45	4:45	6.1E+01	3.7E+01	2.4E+01	4.4E+01	2.8E+01	5.7E+01	2.0E+01	4.0E+01	7.8E+01	1.2E+02	
12:00	5:00	3.3E+01	1.4E+01	8.1E+00	1.5E+01	8.9E+00	2.0E+01	6.3E+00	1.4E+01	3.9E+01	1.0E+02	
12:15	5:15	3.9E+00	3.9E+00	3.8E+00	6.8E+00	3.8E+00	6.9E+00	2.7E+00	4.4E+00	7.0E+00	4.7E+00	
12:30	5:30	1.3E+00	1.4E+00	1.5E+00	2.7E+00	1.4E+00	2.7E+00	1.0E+00	1.6E+00	2.6E+00	1.6E+00	
12:45	5:45	6.6E-01	7.3E-01	7.9E-01	1.4E+00	7.3E-01	1.4E+00	5.3E-01	8.2E-01	1.3E+00	8.1E-01	
13:00	6:00	3.5E-01	3.9E-01	4.2E-01	7.7E-01	3.9E-01	7.3E-01	2.8E-01	4.4E-01	7.0E-01	4.3E-01	

Reactor Building Elev. 471'

(P) (J) (K) (L) (M) (N) (O)



BASED ON
891150 RB 501
Feb 1992



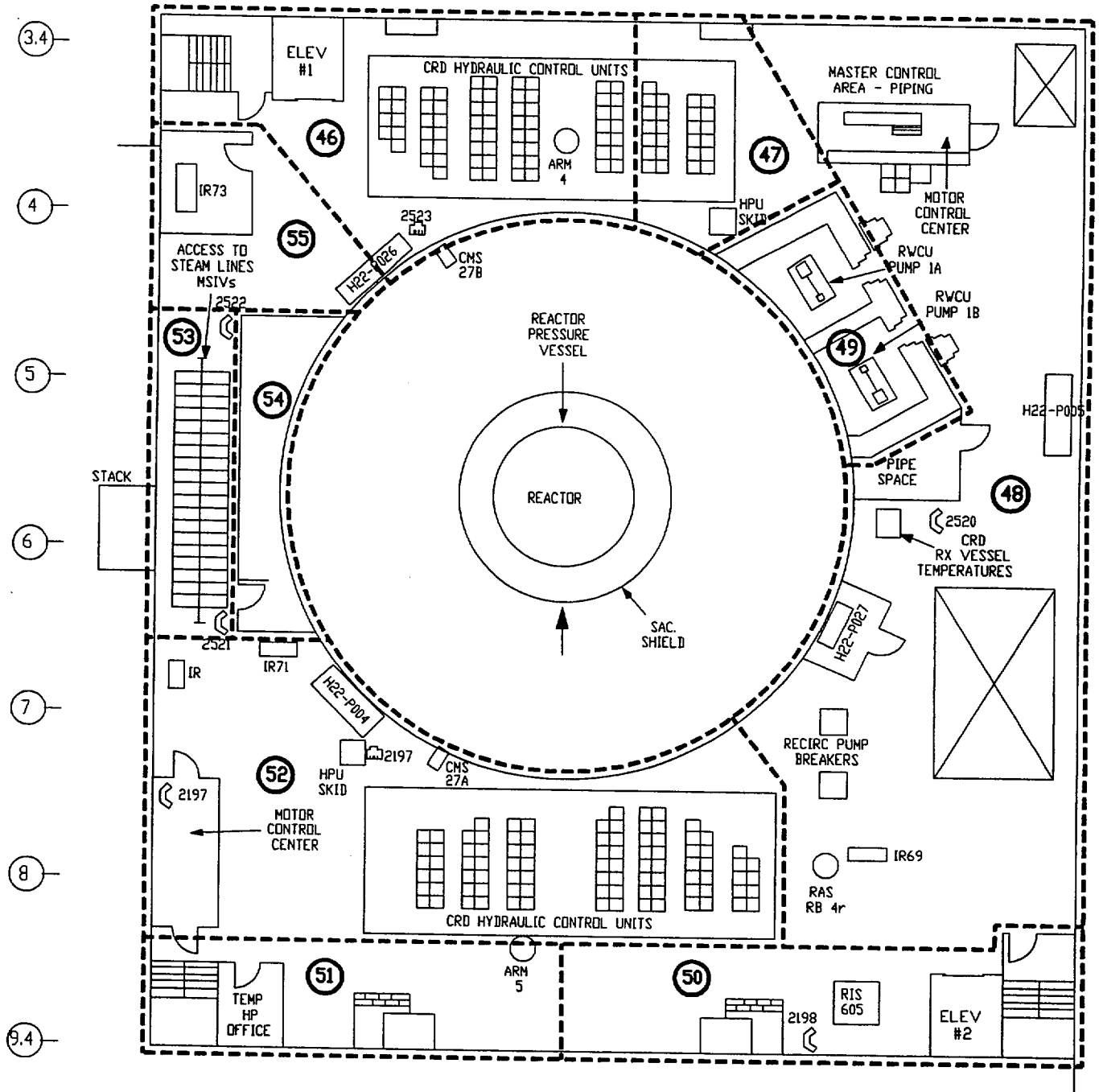
REACTOR BUILDING ELEV. 501'

FILE NAME: S:\EPWORK\GRAPHICS\fl_plan\ERO-DRILL-MAPS\RX501.TCW

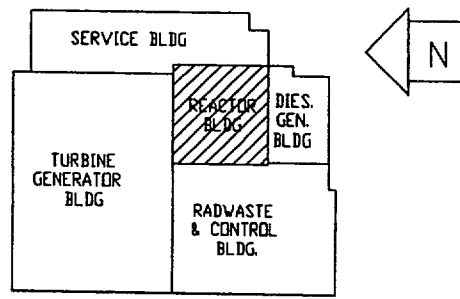
Columbia Generating Station
Airborne Concentration (uCi/m)

Real Time	D-Till	34	35	36	37	38	39	40	41	42	43	44
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	3.8E+01	1.1E+02	6.8E-01	1.5E+01	2.4E+01	2.1E+01	2.1E+01	8.1E+00	4.0E+00	4.7E+01	As Read
11:15	4:15	2.3E+01	4.4E+01	1.4E+00	2.0E+01	2.7E+01	2.1E+01	2.1E+01	6.4E+00	2.5E+01	4.7E+01	2.9E+01
11:30	4:30	1.4E+01	2.5E+01	9.6E-01	1.3E+01	1.6E+01	1.3E+01	1.3E+01	4.0E+00	1.5E+01	1.8E+01	1.8E+01
11:45	4:45	1.2E+01	1.5E+01	8.4E-01	1.2E+01	1.6E+01	1.2E+01	1.2E+01	3.9E+00	1.3E+01	1.6E+01	1.6E+01
12:00	5:00	4.7E+00	7.2E+00	4.6E-01	2.3E+00	6.3E+00	5.5E+00	5.5E+00	1.6E+00	5.5E+00	6.8E+00	6.8E+00
12:15	5:15	2.1E+00	1.6E+00	2.8E-01	1.4E+00	3.3E+00	3.3E+00	3.3E+00	1.6E+00	3.1E+00	3.3E+00	3.3E+00
12:30	5:30	9.6E-01	6.4E-01	1.4E-01	6.8E-01	1.6E+00	1.6E+00	1.6E+00	8.6E-01	2.6E+00	3.3E+00	3.3E+00
12:45	5:45	5.2E-01	3.3E-01	8.1E-02	3.8E-01	9.1E-01	8.9E-01	8.3E-01	2.3E-01	4.2E-01	1.6E+00	1.6E+00
13:00	6:00	2.8E-01	1.8E-01	4.6E-02	2.2E-01	5.2E-01	5.1E-01	4.7E-01	As Read	1.3E-01	3.8E-01	4.9E-01

Reactor Building Elev. 501'



BASED ON
891150 RB 522
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 522'

Section 8

Figure 8-5

June 16, 2000

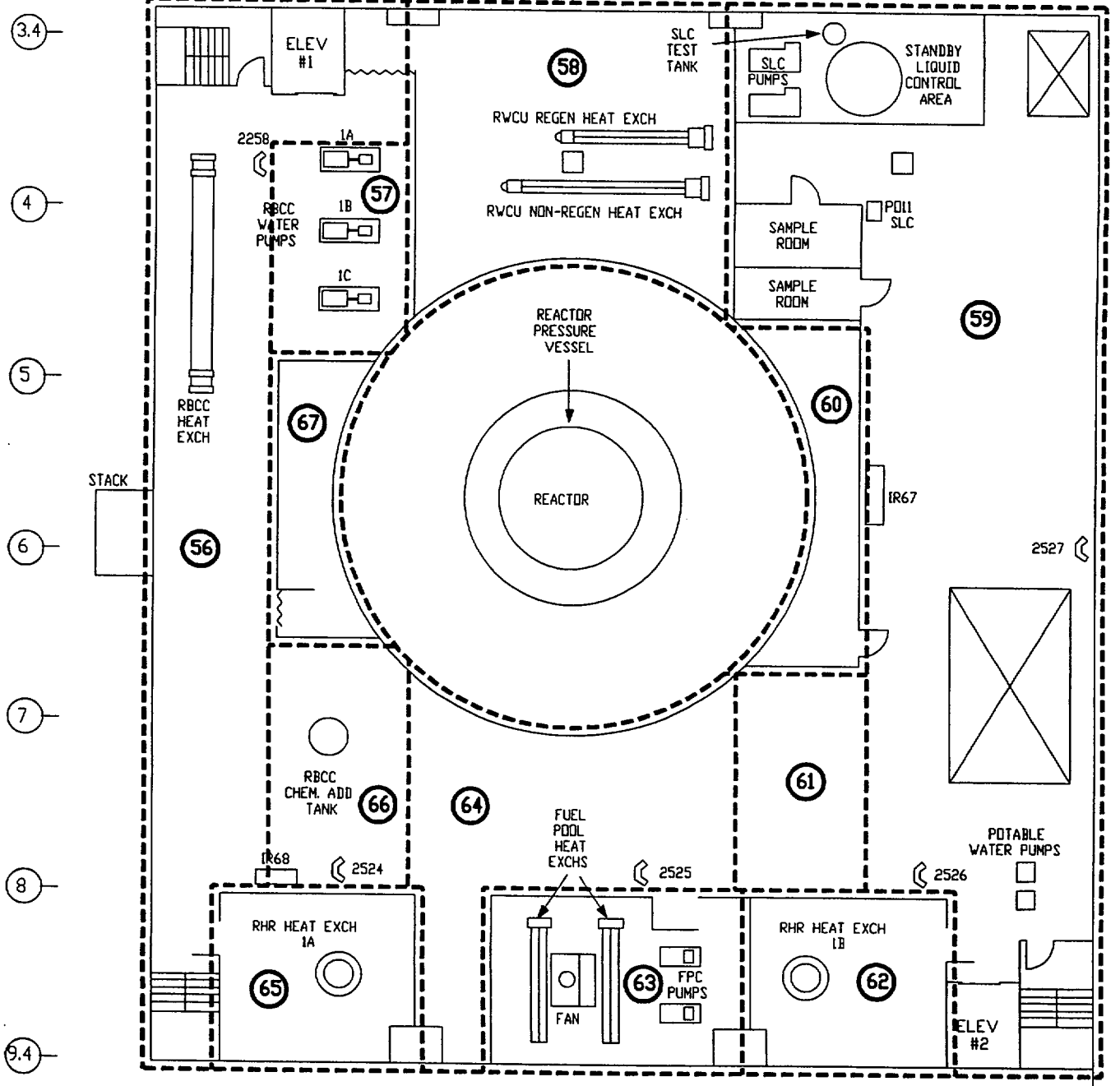
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Columbia Generating Station
Airborne Concentration (uCi/m)

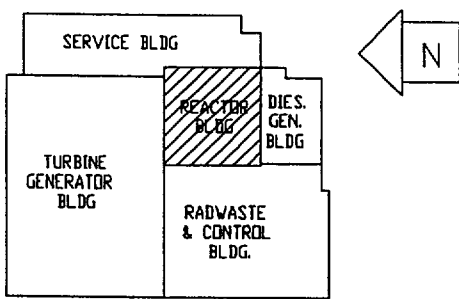
Real Time	Drill Time	46	47	48	49	50	51	52	53	54	55
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	1.4E+00	6.8E-01	2.9E+00	1.4E-01	1.4E+00	1.2E+00	1.9E+00	1.0E+00	2.1E-02	4.7E+00
11:15	4:15	1.7E+00	2.1E+00	7.2E+00	9.1E-01	4.8E+00	2.6E+00	4.3E+00	1.3E+00	5.5E-02	2.5E+00
11:30	4:30	1.5E+00	1.7E+00	5.6E+00	9.6E-01	4.4E+00	2.7E+00	3.8E+00	1.1E+00	7.7E-02	1.6E+00
11:45	4:45	1.6E+00	1.6E+00	5.2E+00	9.1E-01	4.1E+00	2.6E+00	3.5E+00	1.1E+00	9.5E-02	1.4E+00
12:00	5:00	1.2E+00	1.1E+00	3.3E+00	7.3E-01	3.0E+00	2.0E+00	2.5E+00	7.1E-01	8.8E-02	7.5E-01
12:15	5:15	8.8E-01	8.2E-01	2.3E+00	5.4E-01	2.2E+00	1.5E+00	1.8E+00	5.0E-01	7.4E-02	4.3E-01
12:30	5:30	6.2E-01	5.2E-01	1.4E+00	3.5E-01	1.4E+00	9.7E-01	1.1E+00	3.2E-01	5.6E-02	2.8E-01
12:45	5:45	4.2E-01	3.4E-01	8.7E-01	2.3E-01	8.9E-01	6.2E-01	7.2E-01	2.1E-01	3.9E-02	1.9E-01
13:00	6:00	2.8E-01	2.1E-01	5.4E-01	1.4E-01	5.5E-01	3.9E-01	4.5E-01	1.3E-01	2.6E-02	1.2E-01

Reactor Building Elev. 522'

M J K L M N O



BASED ON
891150 RB 548
FEB 1992

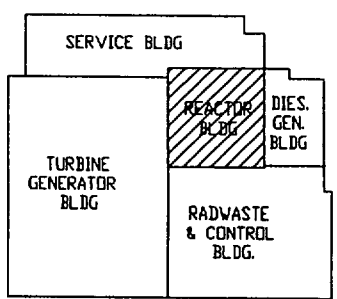
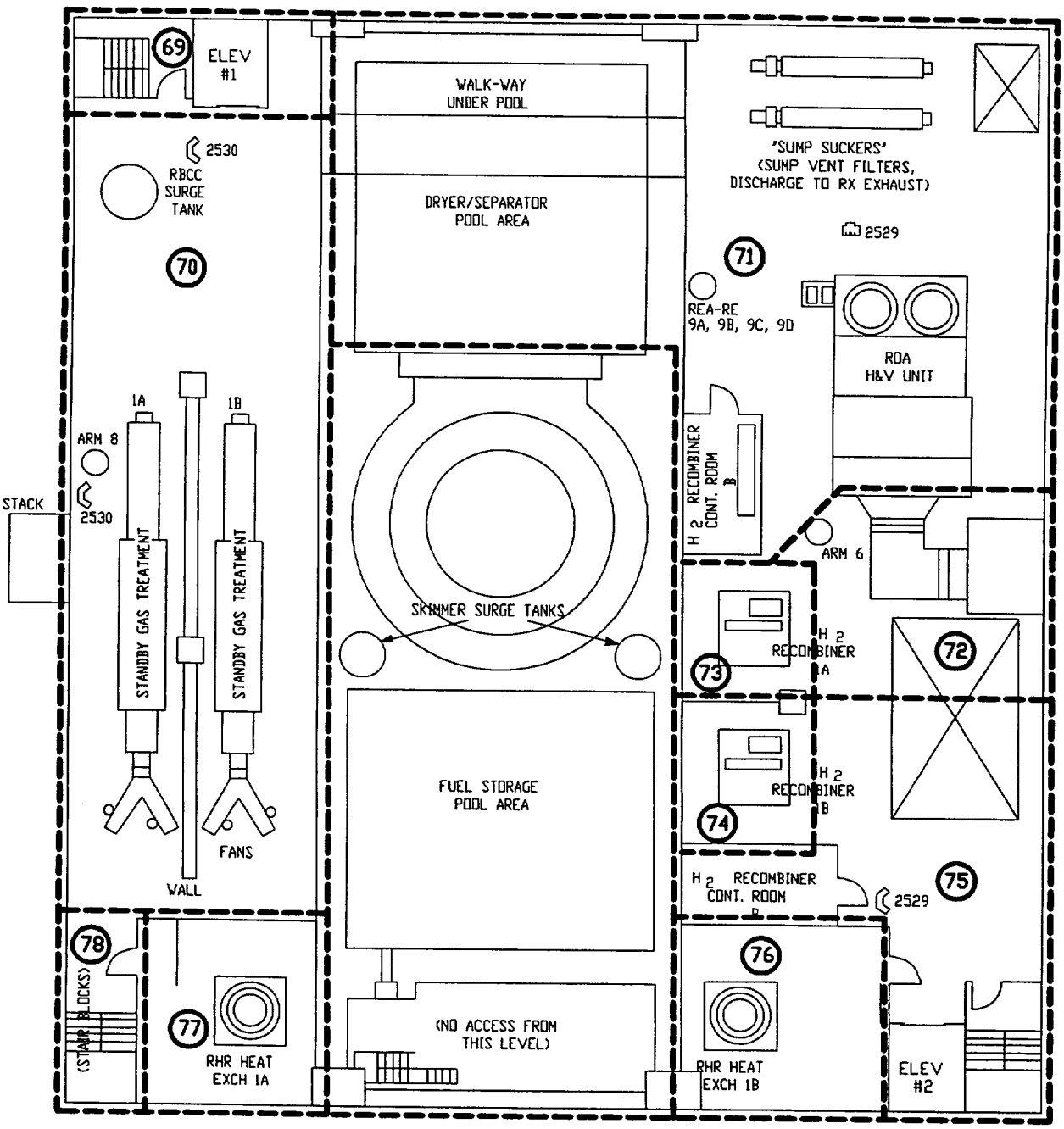


KEY PLAN

REACTOR BUILDING ELEV. 548'

U J K L M N O

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9.4



BASED ON
891150 RB 572
Feb 1992

REACTOR BUILDING ELEV. 572'

Section 8

Figure 8-7

JULY 1, 2002

FILE NAME: S:\EP\WORK\GRAPHICS\FI_plan\ERO-DRILL-MAPS\RIS572.TCW

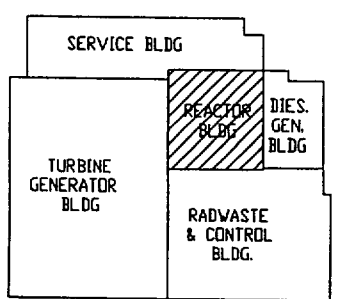
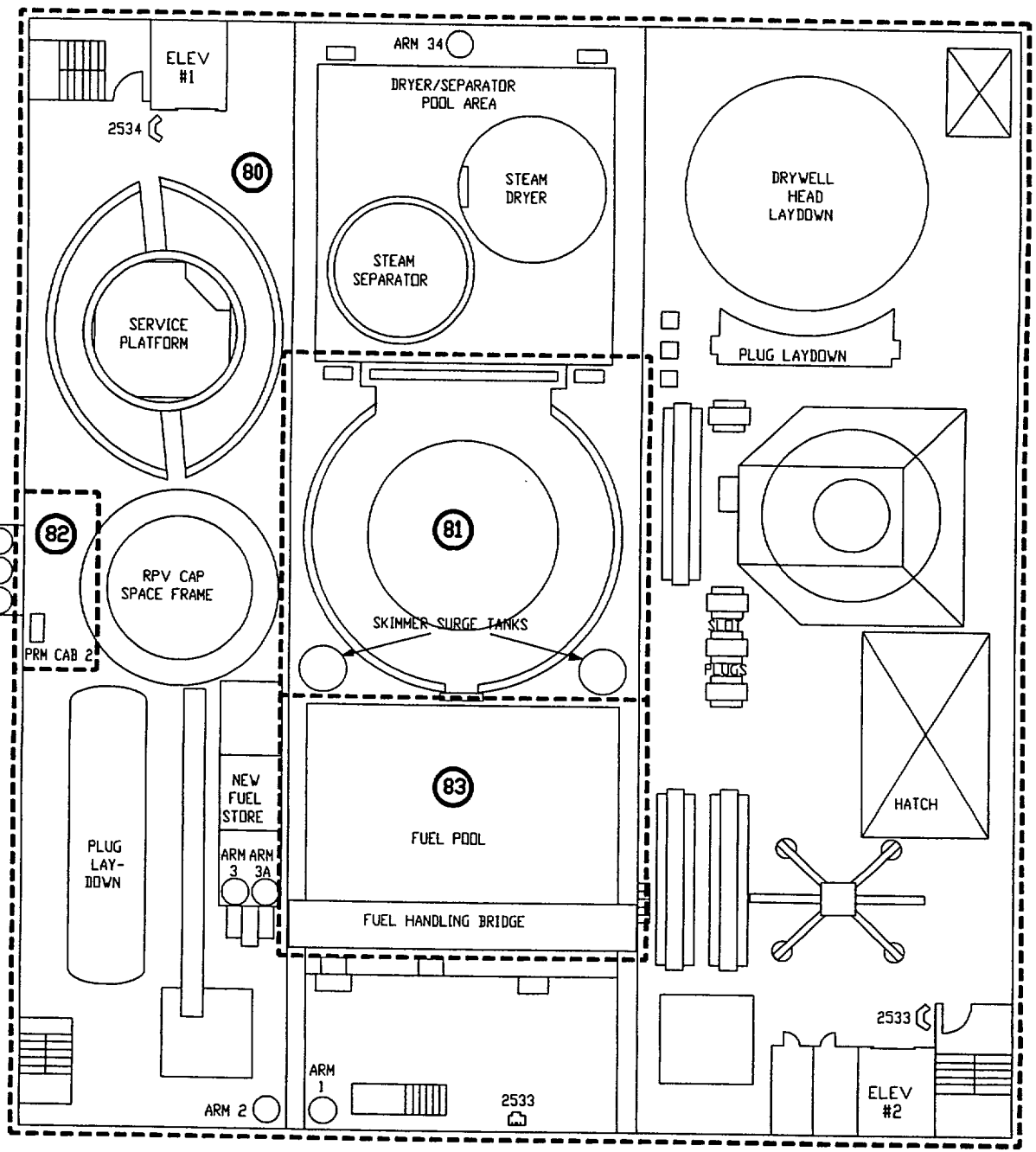
Columbia Generating Station
Airborne Concentration (uCi/m)

Real Time	Drill Time	70	71	72	73	74	75	76	77	78
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	1.8E-04	3.6E-03	4.3E-02	4.6E-02	3.6E-04	7.2E-04	5.4E-05	5.1E-08	4.2E-04
11:15	4:15	2.1E-02	2.9E-01	8.3E-01	9.3E-01	2.3E-02	3.1E-02	6.5E-01	1.8E-04	2.2E-01
11:30	4:30	9.5E-02	5.7E-01	1.2E+00	1.3E+00	4.3E-02	8.2E-01	1.4E-02	1.6E-03	8.0E-01
11:45	4:45	2.1E-01	7.3E-01	1.3E+00	1.4E+00	4.8E-02	9.1E-01	2.4E-02	4.9E-03	1.4E+00
12:00	5:00	3.2E-01	7.4E-01	1.3E+00	1.4E+00	5.0E-02	9.0E-01	3.0E-02	8.4E-03	1.7E+00
12:15	5:15	3.7E-01	6.4E-01	1.1E+00	1.2E+00	4.4E-02	7.9E-01	3.1E-02	1.1E-02	1.6E+00
12:30	5:30	3.7E-01	5.0E-01	7.8E-01	9.7E-01	3.6E-02	6.3E-01	2.9E-02	1.2E-02	1.4E+00
12:45	5:45	3.4E-01	3.6E-01	5.5E-01	7.2E-01	2.8E-02	4.9E-01	2.5E-02	1.1E-02	1.0E+00
13:00	6:00	2.8E-01	2.4E-01	3.7E-01	5.2E-01	1.7E-02	3.6E-01	2.0E-02	9.3E-03	7.4E-01

Reactor Building Elev. 572'

N J K L M N O

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9.4



BASED ON
891150 RX 606
Feb 1992

REACTOR BUILDING ELEV. 606'

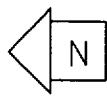
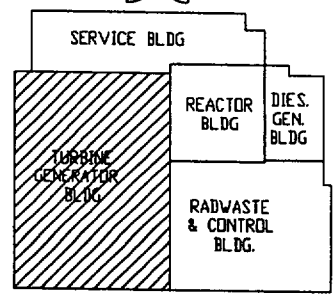
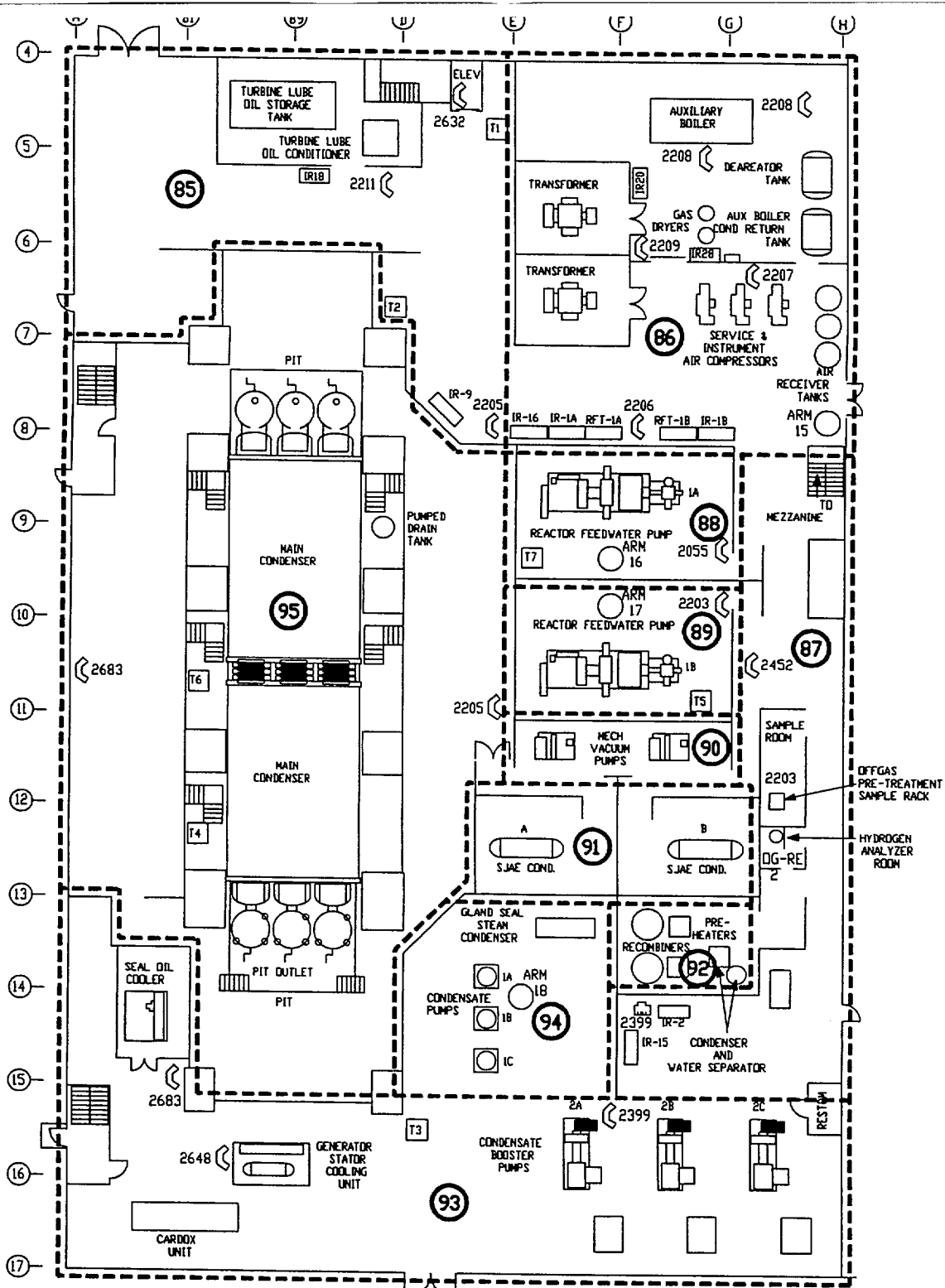
Section 8

Figure 8-8

JULY 1, 2002

Columbia Generating Station
Airborne Concentration (uCi/mi)

Real Time	Drill Time	80	81	82	83
7:00	0:00	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read
11:00	4:00	7.8E-04	8.4E-05	8.3E-05	8.4E-05
11:15	4:15	8.0E-02	5.1E-02	3.9E-02	5.1E-02
11:30	4:30	2.0E-01	1.5E-01	1.1E-01	1.5E-01
11:45	4:45	3.4E-01	2.8E-01	1.9E-01	2.8E-01
12:00	5:00	4.4E-01	3.7E-01	2.5E-01	3.7E-01
12:15	5:15	4.8E-01	4.1E-01	2.8E-01	4.1E-01
12:30	5:30	4.6E-01	4.0E-01	2.7E-01	4.0E-01
12:45	5:45	4.0E-01	3.5E-01	2.4E-01	3.5E-01
13:00	6:00	3.3E-01	2.9E-01	2.0E-01	2.9E-01



BASED ON
891150 RB 572
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 441'

Section 8

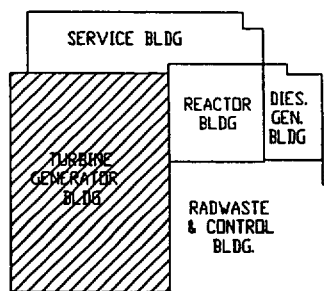
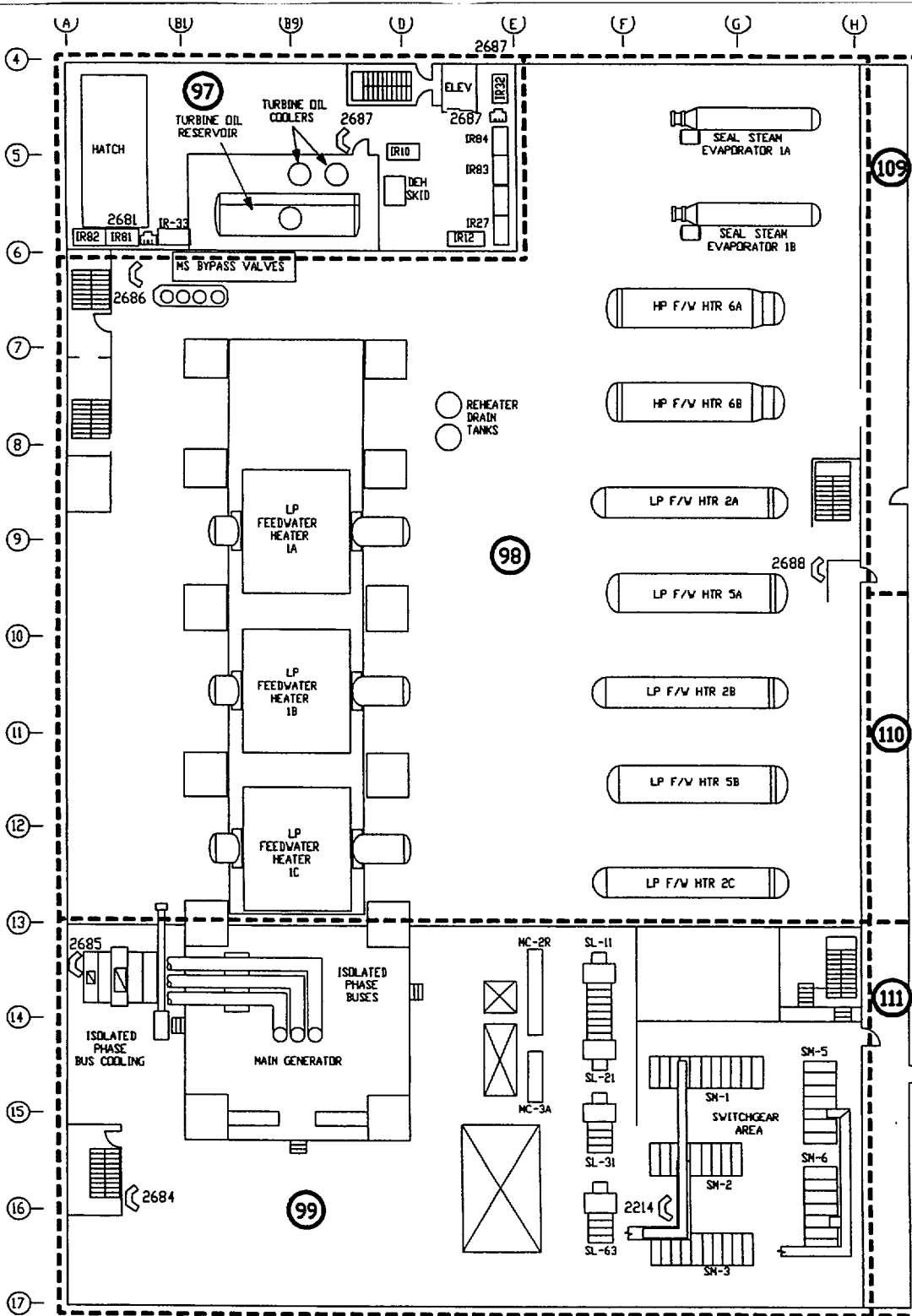
Figure 8-9

JULY 1, 2002

Columbia Generating Station
Airborne Concentration (uCi/mi)

Real Time	Drill Time	85	86	87	88	89	90	91	92	93	94	95
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Turbine Generator Bldg, Elev. 441'



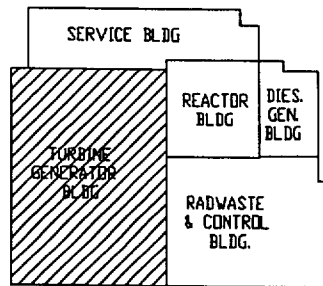
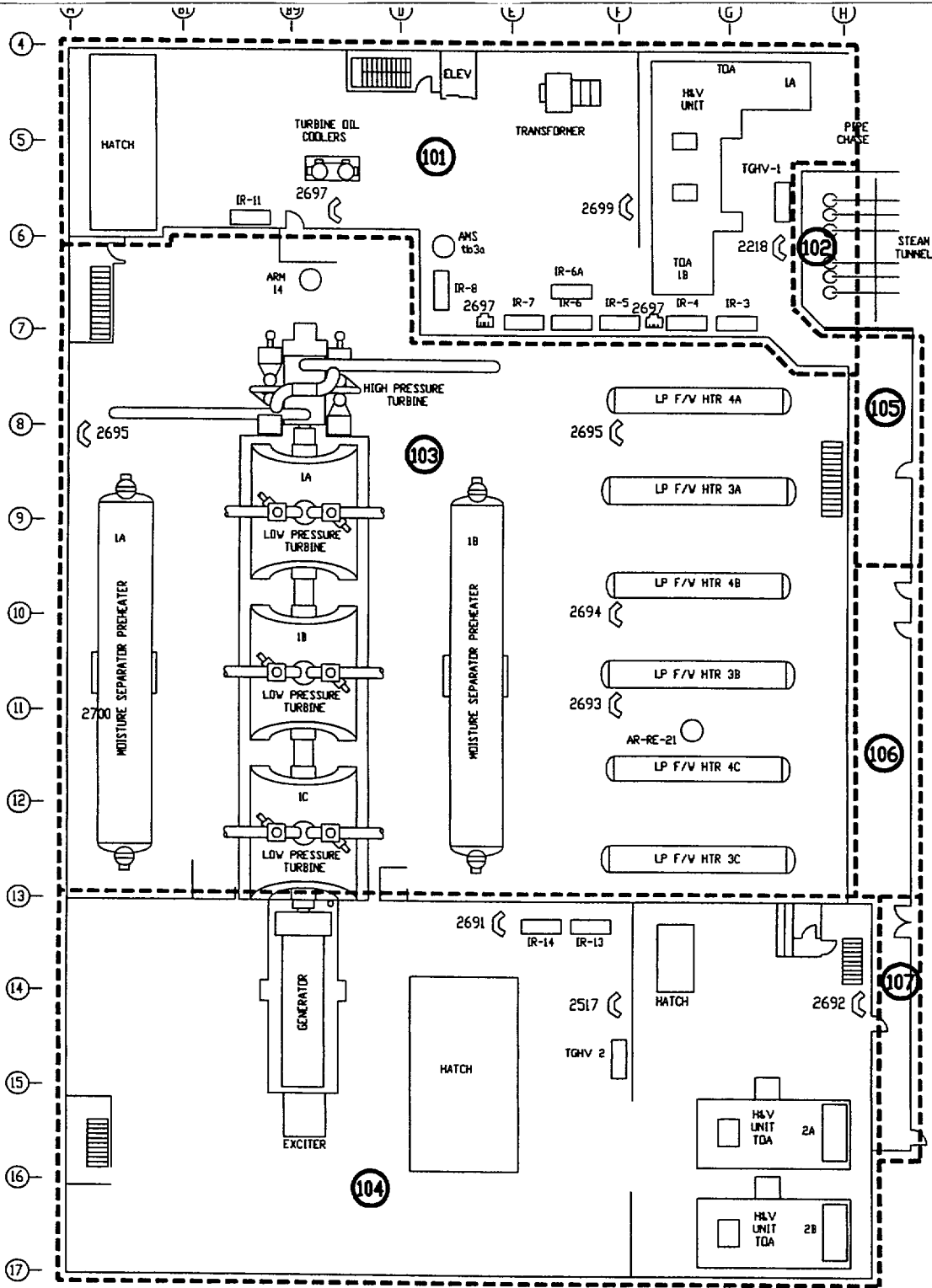
BASED ON
891150 TGB 471
Feb 1992

KEY PLAN
TURBINE GENERATOR BUILDING ELEV. 471'

Columbia Generating Station
Airborne Concentration (uCi/mi)

Real Time	Drill Time	97	98	99	109	110	111
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read

Turbine Generator Bldg, Elev. 471'



BASED ON
891150 TGB 501
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 501'

Section 8

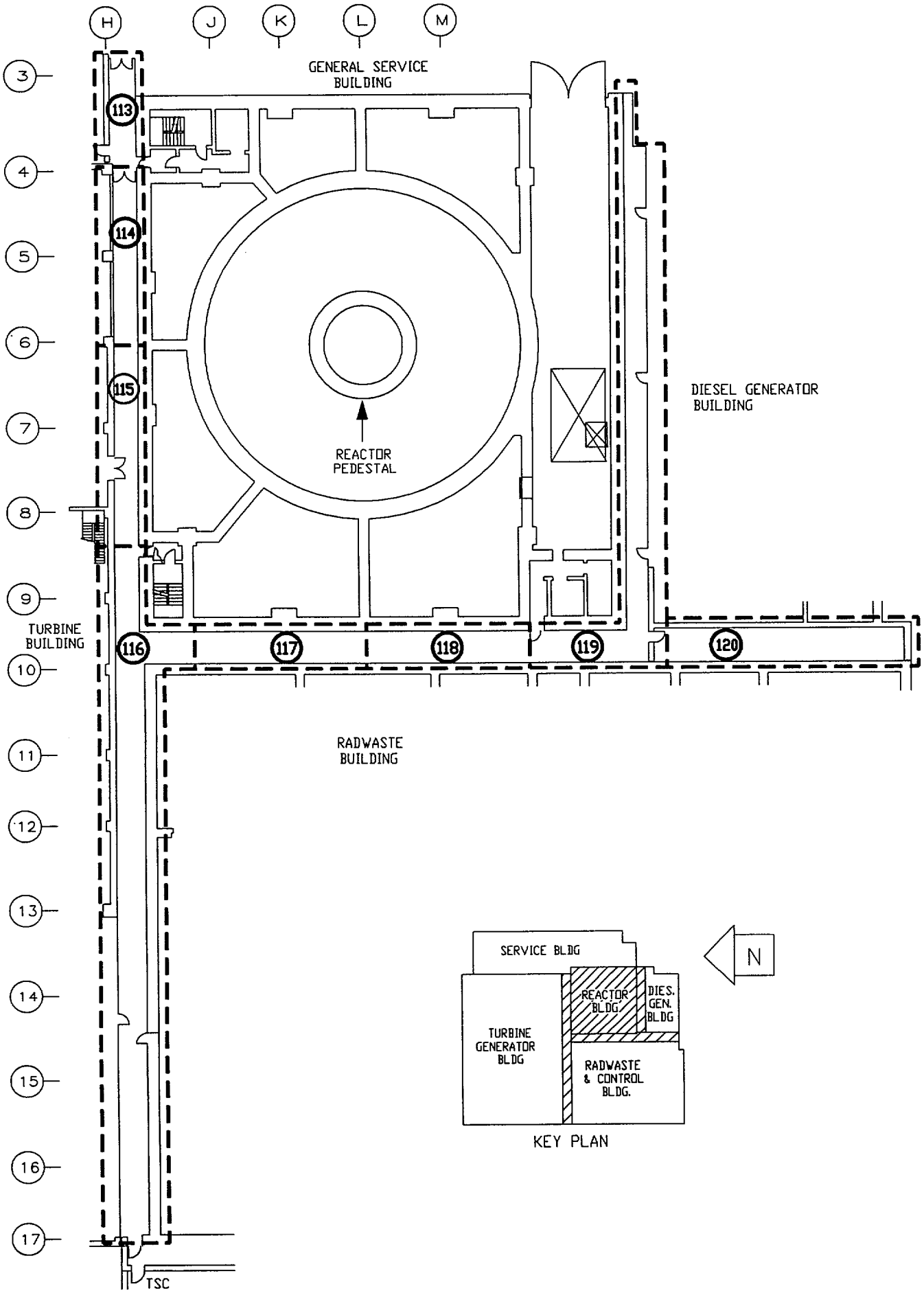
Figure 8-11

JULY 1, 2002

Columbia Generating Station
Airborne Concentration (uCi/ml)

2002 Exercise

Real Time	Drill Time	Turbine Generator Bldg. 501'						
		101	102	103	104	105	106	107
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read



GROUND FLOOR CORRIDORS ELEV. 441'

Section 8

Figure 8-12

JULY 1, 2002

Columbia Generating Station
Airborne Concentration (uCi/m)

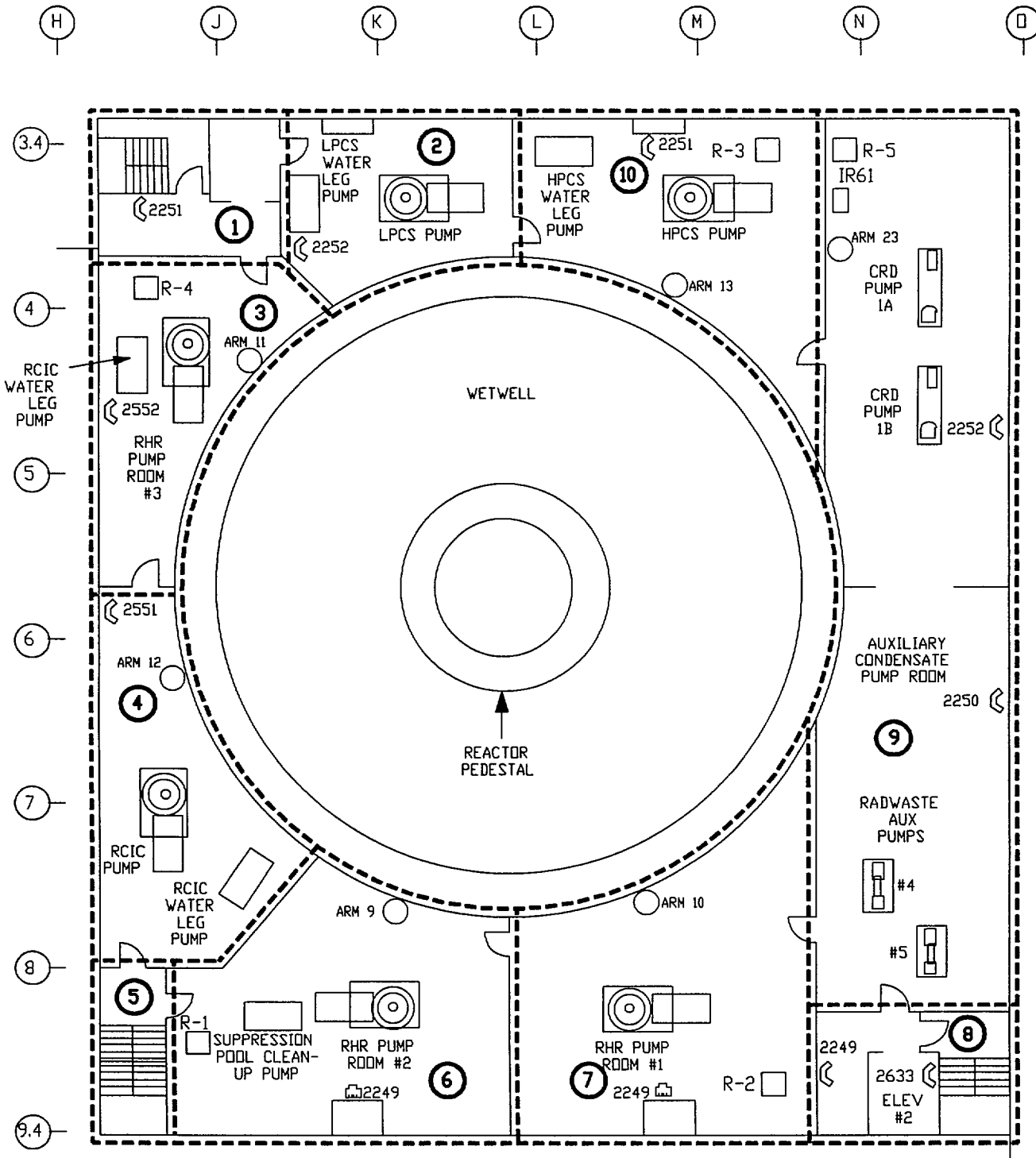
2002 Exercise

Real Time	113	114	115	116	117	118	119	120
7:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

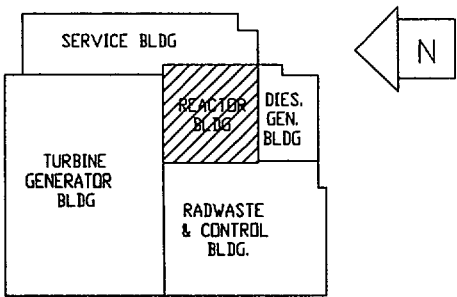
Ground Floor Corridors 441'

8-6-12

Rev. 7/1/2002



BASED ON
891150 RB 422
Feb 1992



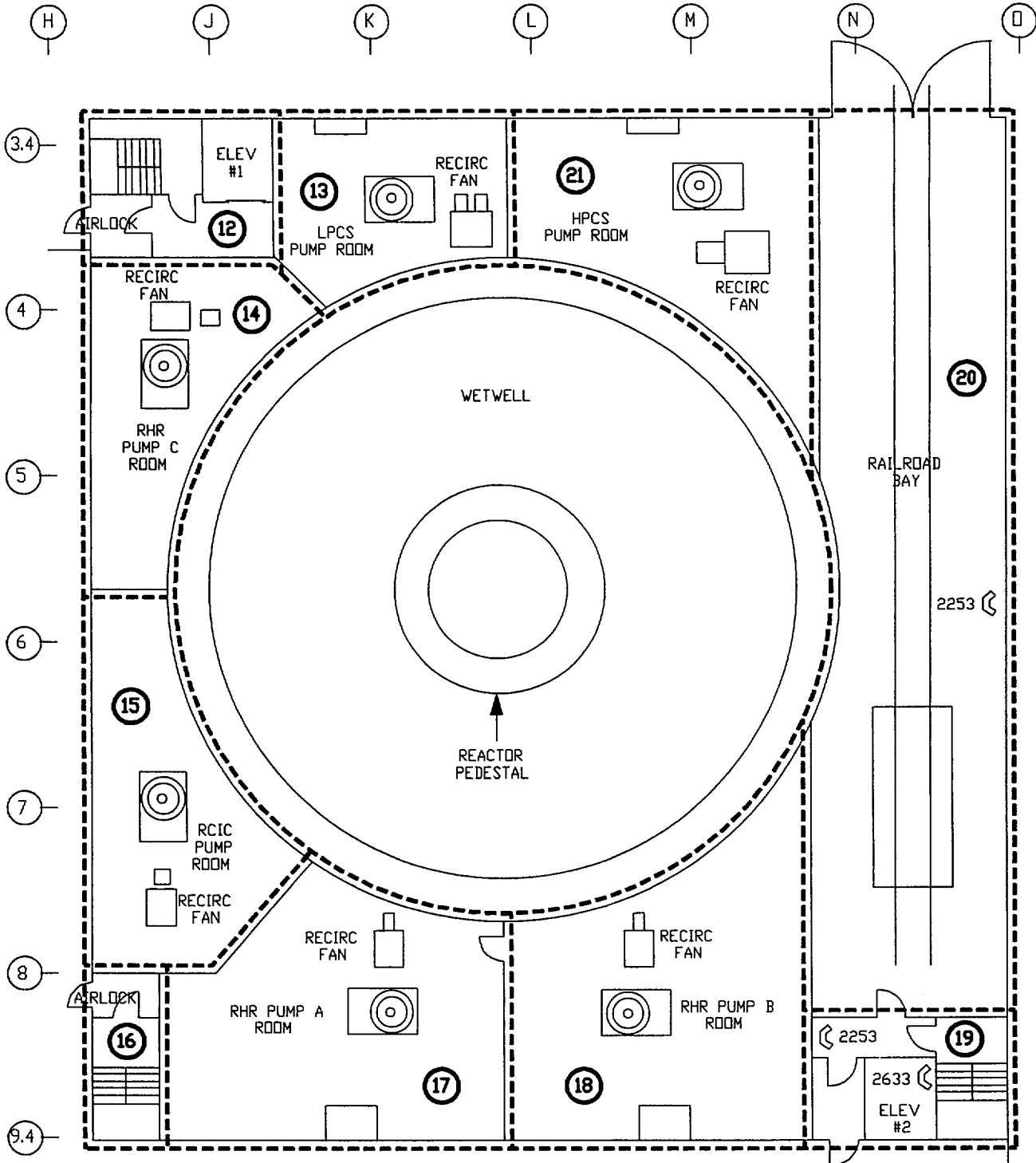
KEY PLAN

REACTOR BUILDING ELEV. 422'

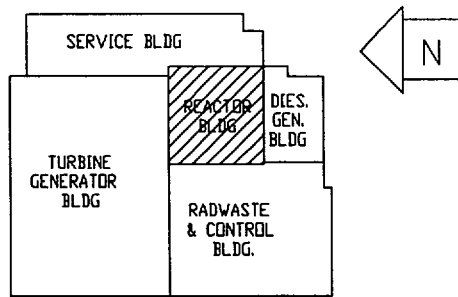
Columbia Generating Station
Contamination (dpm/100cm²)

Real Time	Drill Time	1	2	3	4	5	6	7	8	9	10
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	4 4E+09	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	2 2E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	3 0E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	3 4E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	3 6E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	3 6E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	3 5E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	3 4E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	3 3E+10	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Reactor Building Elev. 422'



BASED ON
891150 RB 441 & 444
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 441' & 444'

Section 8

Figure 8-2

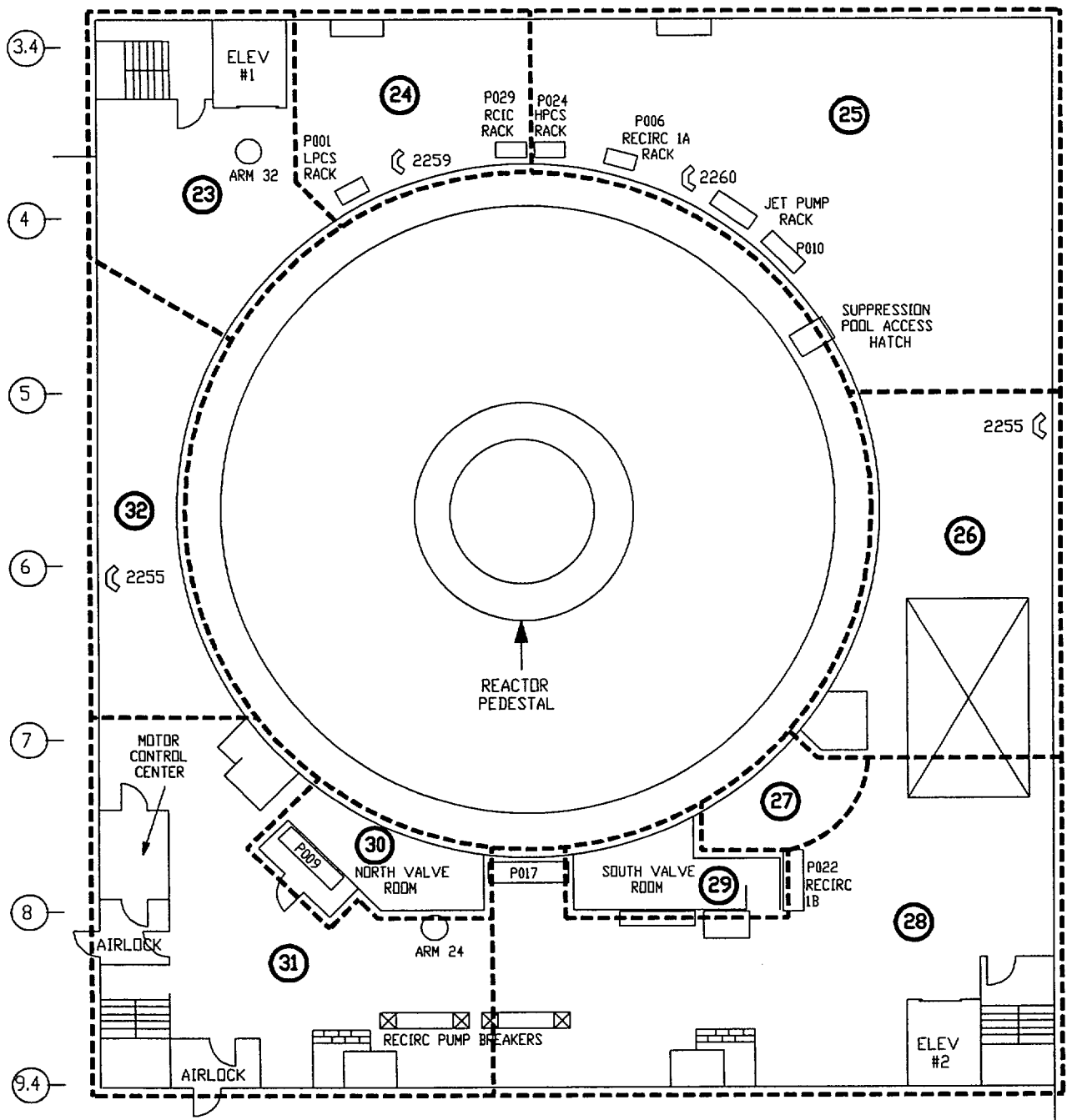
JULY 1, 2002

Columbia Generating Station
Contamination (dpm/100cm²)

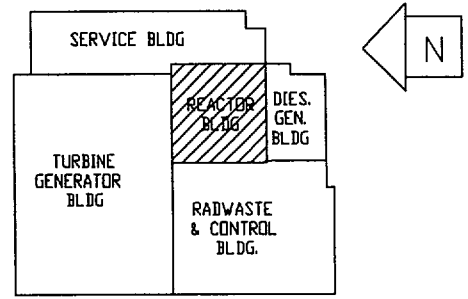
Real	D/Hll	Time	12	13	14	15	16	17	18	19	20	21
		7:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		7:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		8:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		8:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		9:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		9:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		10:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		10:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		10:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		11:00	1.2E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		11:15	4.15	3.7E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		11:30	4.30	4.6E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		11:45	4.45	5.2E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		12:00	5.00	5.3E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		12:15	5.15	5.3E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		12:30	5.30	5.1E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		12:45	5.45	5.0E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
		13:00	6:00	4.9E+12	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Reactor Building Elev. 441'

H J K L M N O



BASED ON
891150 RB 471
Feb 1992



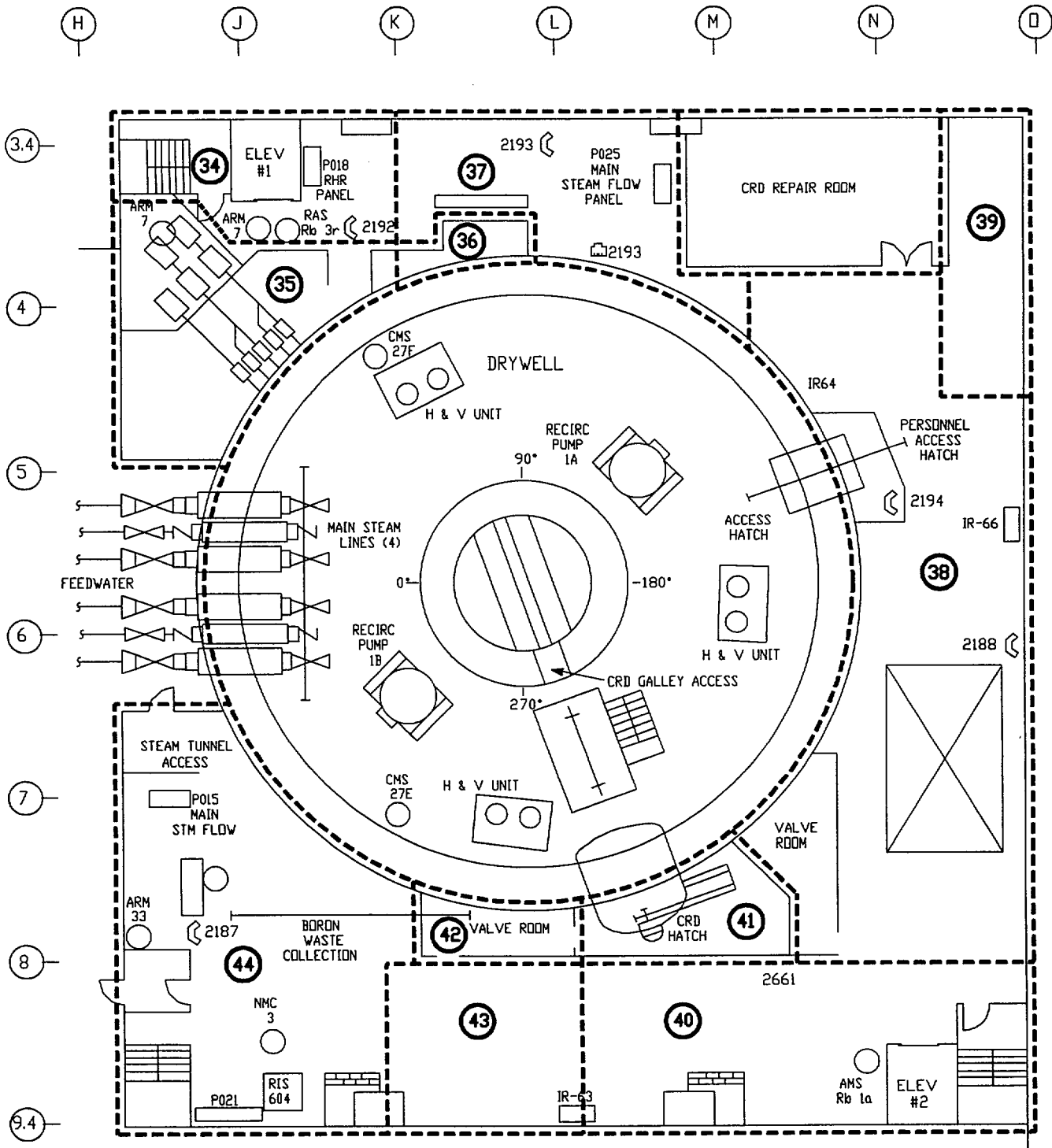
KEY PLAN

REACTOR BUILDING ELEV. 471'

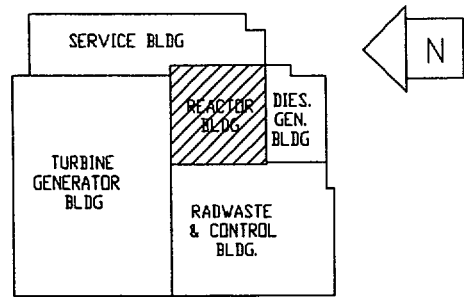
Columbia Generating Station
Contamination (dpm/100cm²)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 471'										
		23	24	25	26	27	28	29	30	31	32	
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	2.8E+14	6.5E+13	1.4E+13	2.5E+13	2.0E+13	7.4E+13	1.4E+13	5.5E+13	2.8E+14	1.2E+15	
11:15	4:15	5.6E+14	1.7E+14	5.6E+13	1.0E+14	7.4E+13	2.1E+14	5.1E+13	1.5E+14	5.9E+14	2.0E+15	
11:30	4:30	6.7E+14	2.1E+14	7.3E+13	1.3E+14	9.6E+13	2.6E+14	6.6E+13	1.9E+14	7.0E+14	2.3E+15	
11:45	4:45	7.5E+14	2.4E+14	8.4E+13	1.5E+14	1.1E+14	3.0E+14	7.5E+13	2.2E+14	7.9E+14	2.6E+15	
12:00	5:00	7.5E+14	2.4E+14	8.7E+13	1.6E+14	1.1E+14	3.0E+14	7.8E+13	2.2E+14	8.0E+14	2.6E+15	
12:15	5:15	7.4E+14	2.4E+14	8.6E+13	1.6E+14	1.1E+14	3.0E+14	7.7E+13	2.2E+14	7.9E+14	2.6E+15	
12:30	5:30	7.2E+14	2.3E+14	8.4E+13	1.5E+14	1.1E+14	2.9E+14	7.5E+13	2.1E+14	7.7E+14	2.5E+15	
12:45	5:45	7.0E+14	2.3E+14	8.2E+13	1.5E+14	1.1E+14	2.8E+14	7.3E+13	2.1E+14	7.5E+14	2.4E+15	
13:00	6:00	6.9E+14	2.2E+14	8.0E+13	1.5E+14	1.0E+14	2.8E+14	7.2E+13	2.0E+14	7.3E+14	2.4E+15	



BASED ON
891150 RB 501
Feb 1992



KEY PLAN

REACTOR BUILDING ELEV. 501'

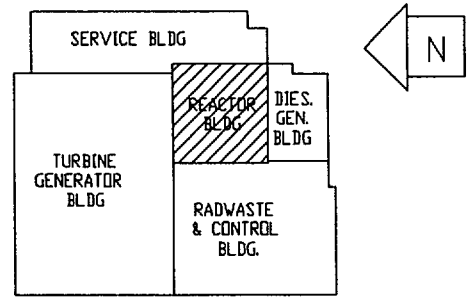
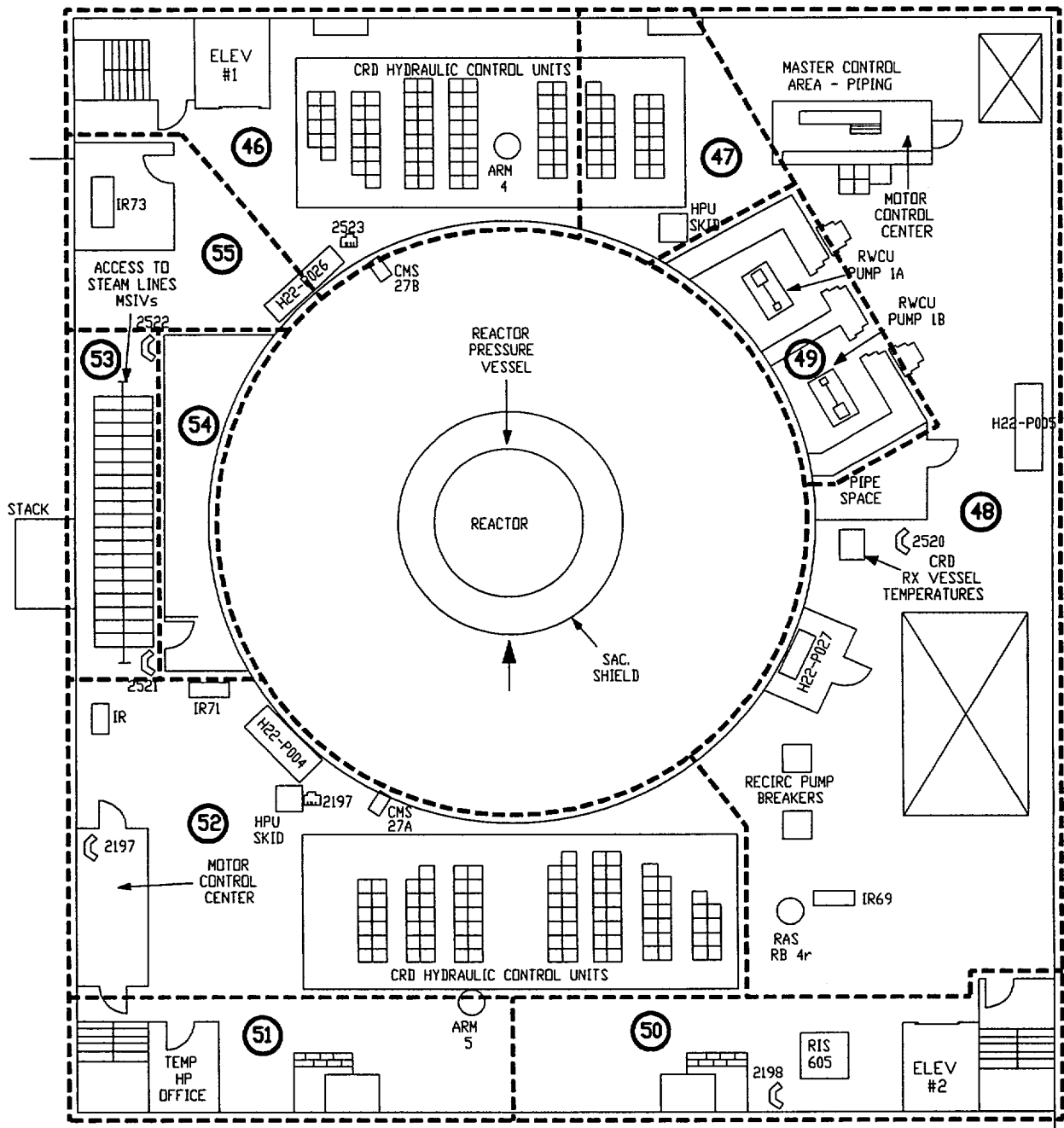
Columbia Generating Station
Contamination (dpm/100cm²)

Real Time	Drill	34	35	36	37	38	39	40	41	42	43	44
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	7.8E+12	3.1E+13	7.2E+10	8.4E+11	1.8E+12	3.0E+12	3.2E+12	1.3E+12	8.0E+12	9.5E+12	
11:15	4:15	2.3E+13	6.7E+13	7.1E+11	5.3E+12	1.2E+13	1.9E+13	1.5E+13	5.2E+12	2.5E+13	2.9E+13	
11:30	4:30	2.8E+13	8.0E+13	1.0E+12	7.3E+12	1.7E+13	2.6E+13	2.1E+13	6.7E+12	3.1E+13	3.6E+13	
11:45	4:45	3.2E+13	9.0E+13	1.2E+12	8.4E+12	2.0E+13	3.0E+13	2.4E+13	7.7E+12	3.6E+13	4.1E+13	
12:00	5:00	3.3E+13	9.1E+13	1.3E+12	8.9E+12	2.1E+13	3.1E+13	2.5E+13	7.9E+12	3.7E+13	4.2E+13	
12:15	5:15	3.3E+13	8.9E+13	1.3E+12	8.9E+12	2.1E+13	3.1E+13	2.5E+13	7.9E+12	3.7E+13	4.2E+13	
12:30	5:30	3.2E+13	8.7E+13	1.3E+12	8.7E+12	2.1E+13	3.1E+13	2.4E+13	7.7E+12	3.6E+13	4.1E+13	
12:45	5:45	3.1E+13	8.5E+13	1.2E+12	8.5E+12	2.0E+13	3.0E+13	2.3E+13	7.5E+12	3.5E+13	4.0E+13	
13:00	6:00	3.0E+13	8.3E+13	1.2E+12	8.3E+12	2.0E+13	2.9E+13	2.3E+13	7.4E+12	3.4E+13	3.9E+13	

Reactor Building Elev. 501'

H J K L M N D

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KEY PLAN

BASED ON
891150 RB 522
Feb 1992

REACTOR BUILDING ELEV. 522'

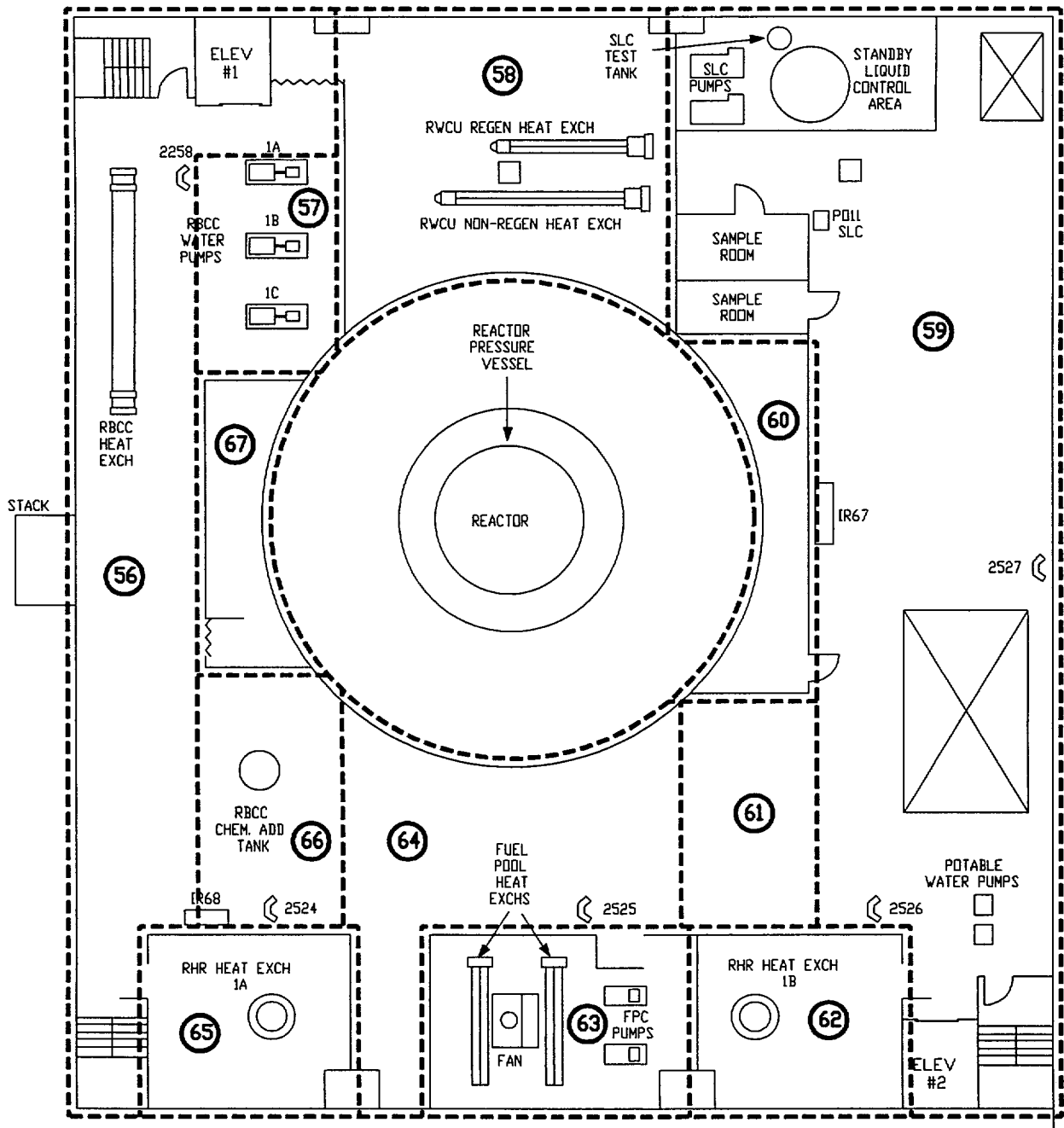
Columbia Generating Station
Contamination (dpm/100cm²)

Real Time	Drill Time	46	47	48	49	50	51	52	53	54	55
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	2.7E+11	8.3E+10	3.4E+11	1.3E+10	1.7E+11	2.0E+11	3.1E+11	2.1E+11	3.0E+09	1.3E+12
11:15	4:15	1.2E+12	1.1E+12	4.2E+12	3.7E+11	2.4E+12	1.4E+12	2.5E+12	1.0E+12	2.6E+10	3.5E+12
11:30	4:30	1.7E+12	1.7E+12	6.4E+12	6.3E+11	3.7E+12	2.2E+12	3.7E+12	1.4E+12	4.0E+10	4.3E+12
11:45	4:45	1.9E+12	2.0E+12	7.4E+12	7.4E+11	4.4E+12	2.6E+12	4.4E+12	1.6E+12	4.7E+10	4.9E+12
12:00	5:00	2.0E+12	2.2E+12	8.1E+12	8.2E+11	4.8E+12	2.8E+12	4.7E+12	1.7E+12	5.1E+10	5.0E+12
12:15	5:15	2.0E+12	2.2E+12	8.1E+12	8.3E+11	4.8E+12	2.8E+12	4.7E+12	1.7E+12	5.2E+10	5.0E+12
12:30	5:30	2.0E+12	2.2E+12	7.9E+12	8.2E+11	4.7E+12	2.7E+12	4.6E+12	1.7E+12	5.1E+10	4.8E+12
12:45	5:45	1.9E+12	2.1E+12	7.8E+12	8.0E+11	4.6E+12	2.7E+12	4.5E+12	1.7E+12	4.9E+10	4.7E+12
13:00	6:00	1.9E+12	2.1E+12	7.6E+12	7.8E+11	4.5E+12	2.6E+12	4.4E+12	1.6E+12	4.8E+10	4.6E+12

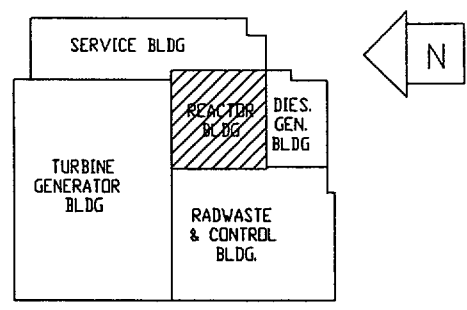
Reactor Building Elev. 522'

H J K L M N O

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BASED ON
891150 RB 548
FEB 1992



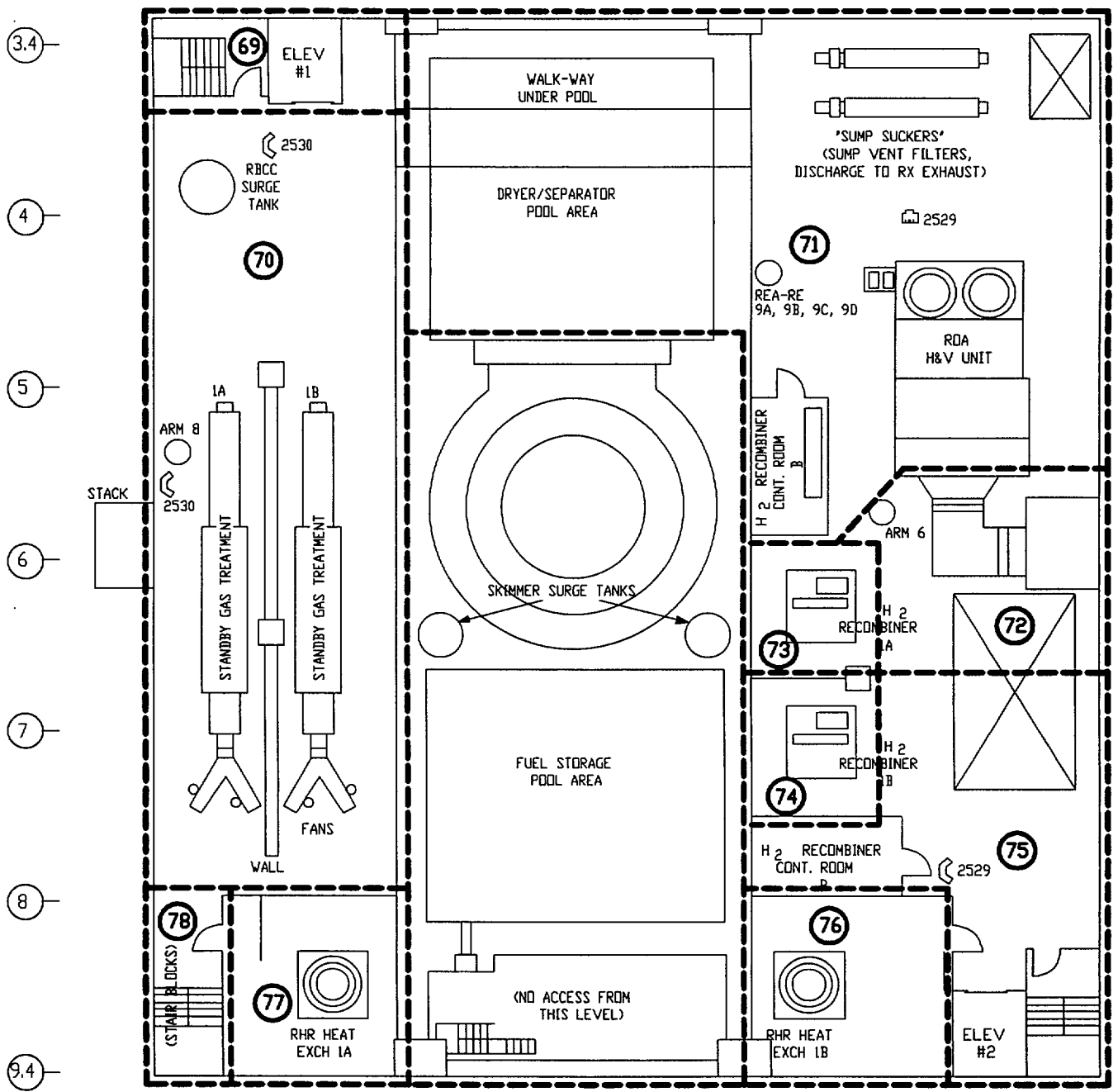
KEY PLAN

REACTOR BUILDING ELEV. 548'

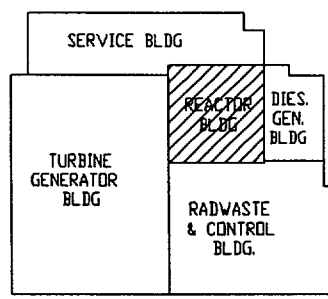
Real Time Drill	Time	56	57	58	59	60	61	62	63	64	65	66	67
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	6.7E+09	8.5E+08	6.6E+08	4.1E+10	3.2E+08	4.3E+09	2.9E+09	9.7E+08	1.6E+09	6.2E+08	1.1E+09	6.2E+08
11:15	4:15	1.1E+11	2.2E+10	2.0E+10	1.1E+12	3.2E+10	2.6E+11	2.0E+11	3.8E+10	5.8E+10	1.8E+10	3.8E+10	1.8E+10
11:30	4:30	1.9E+11	4.3E+10	4.0E+10	1.9E+12	6.5E+10	4.9E+11	3.8E+11	7.6E+10	1.2E+11	3.6E+10	7.9E+10	3.5E+10
11:45	4:45	2.3E+11	5.3E+10	5.0E+10	2.3E+12	7.9E+10	5.8E+11	4.6E+11	9.3E+10	1.4E+11	4.4E+10	9.7E+10	4.3E+10
12:00	5:00	2.6E+11	5.9E+10	5.6E+10	2.5E+12	8.9E+10	6.5E+11	5.1E+11	1.0E+11	1.6E+11	4.9E+10	1.1E+11	4.8E+10
12:15	5:15	2.6E+11	6.0E+10	5.7E+10	2.6E+12	9.0E+10	6.6E+11	5.2E+11	1.1E+11	1.7E+11	5.0E+10	1.1E+11	4.9E+10
12:30	5:30	2.6E+11	6.0E+10	5.7E+10	2.5E+12	8.9E+10	6.5E+11	5.1E+11	1.1E+11	1.6E+11	5.0E+10	1.1E+11	4.8E+10
12:45	5:45	2.5E+11	5.8E+10	5.5E+10	2.5E+12	8.7E+10	6.4E+11	5.0E+11	1.0E+11	1.6E+11	4.8E+10	1.1E+11	4.7E+10
13:00	6:00	2.5E+11	5.7E+10	5.4E+10	2.4E+12	8.5E+10	6.2E+11	4.9E+11	1.0E+11	1.6E+11	4.7E+10	1.1E+11	4.6E+10

Reactor Building Elev. 548'

H J K L M N O



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BASED ON
891150 RB 572
Feb 1992

KEY PLAN
REACTOR BUILDING ELEV. 572'

Columbia Generating Station
Contamination (dpm/100cm²)

Real Time	Drill Time	69	70	71	72	73	74	75	76	77	78
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	2.3E+07	2.9E+08	4.3E+09	4.5E+09	2.9E+07	5.9E+07	4.2E+09	4.3E+06	5.282	3.9E+07
11:15	4:15	5.1E+09	1.0E+11	3.6E+11	4.1E+11	8.9E+09	1.3E+10	3.0E+11	1.6E+09	3.4E+07	5.5E+10
11:30	4:30	1.5E+10	2.3E+11	7.1E+11	8.1E+11	2.0E+10	2.7E+10	5.8E+11	3.9E+09	1.4E+08	1.6E+11
11:45	4:45	2.0E+10	2.9E+11	8.6E+11	9.9E+11	2.5E+10	3.3E+10	7.0E+11	4.9E+09	2.0E+08	2.1E+11
12:00	5:00	2.3E+10	3.2E+11	9.6E+11	1.1E+12	2.8E+10	3.8E+10	7.8E+11	5.6E+09	2.3E+08	2.4E+11
12:15	5:15	2.4E+10	3.3E+11	9.8E+11	1.1E+12	2.8E+10	3.8E+10	8.0E+11	5.8E+09	2.5E+08	2.5E+11
12:30	5:30	2.4E+10	3.3E+11	9.7E+11	1.1E+12	2.8E+10	3.8E+10	7.9E+11	5.7E+09	2.5E+08	2.5E+11
12:45	5:45	2.3E+10	3.2E+11	9.5E+11	1.1E+12	2.8E+10	3.7E+10	7.7E+11	5.6E+09	2.4E+08	2.5E+11
13:00	6:00	2.3E+10	3.2E+11	9.3E+11	1.1E+12	2.7E+10	3.6E+10	7.5E+11	5.5E+09	2.4E+08	2.4E+11

Reactor Building Elev. 572'

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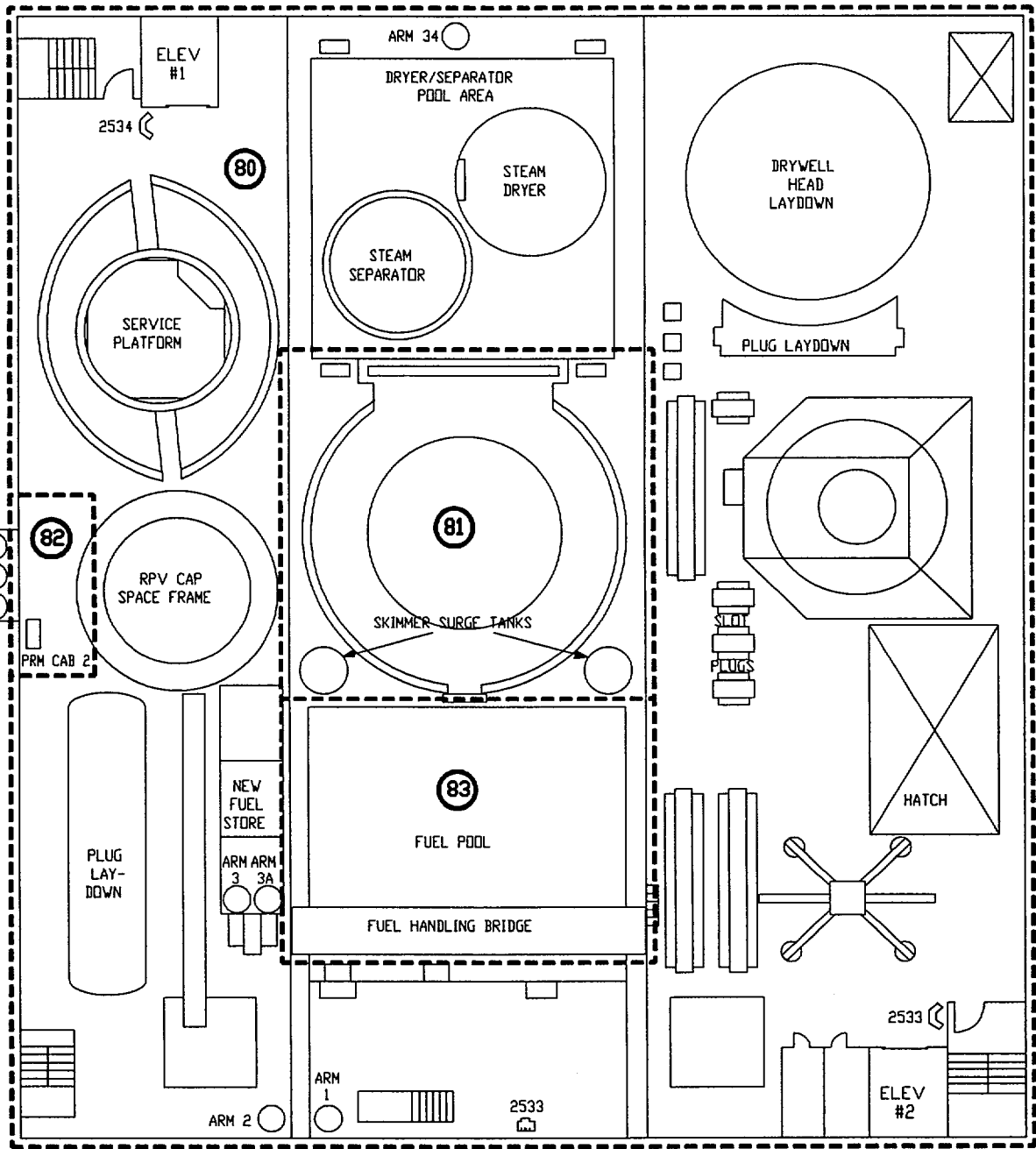
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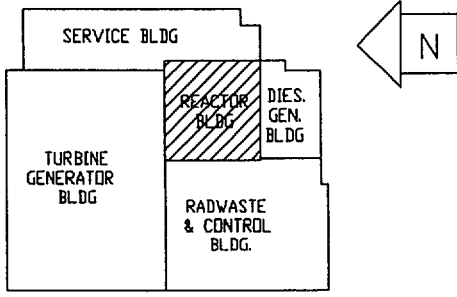
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BASED ON
891150 RX 606
Feb 1992



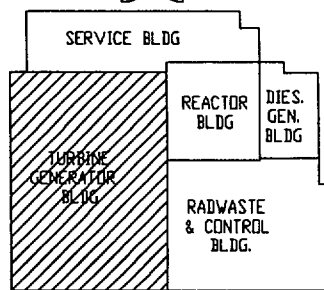
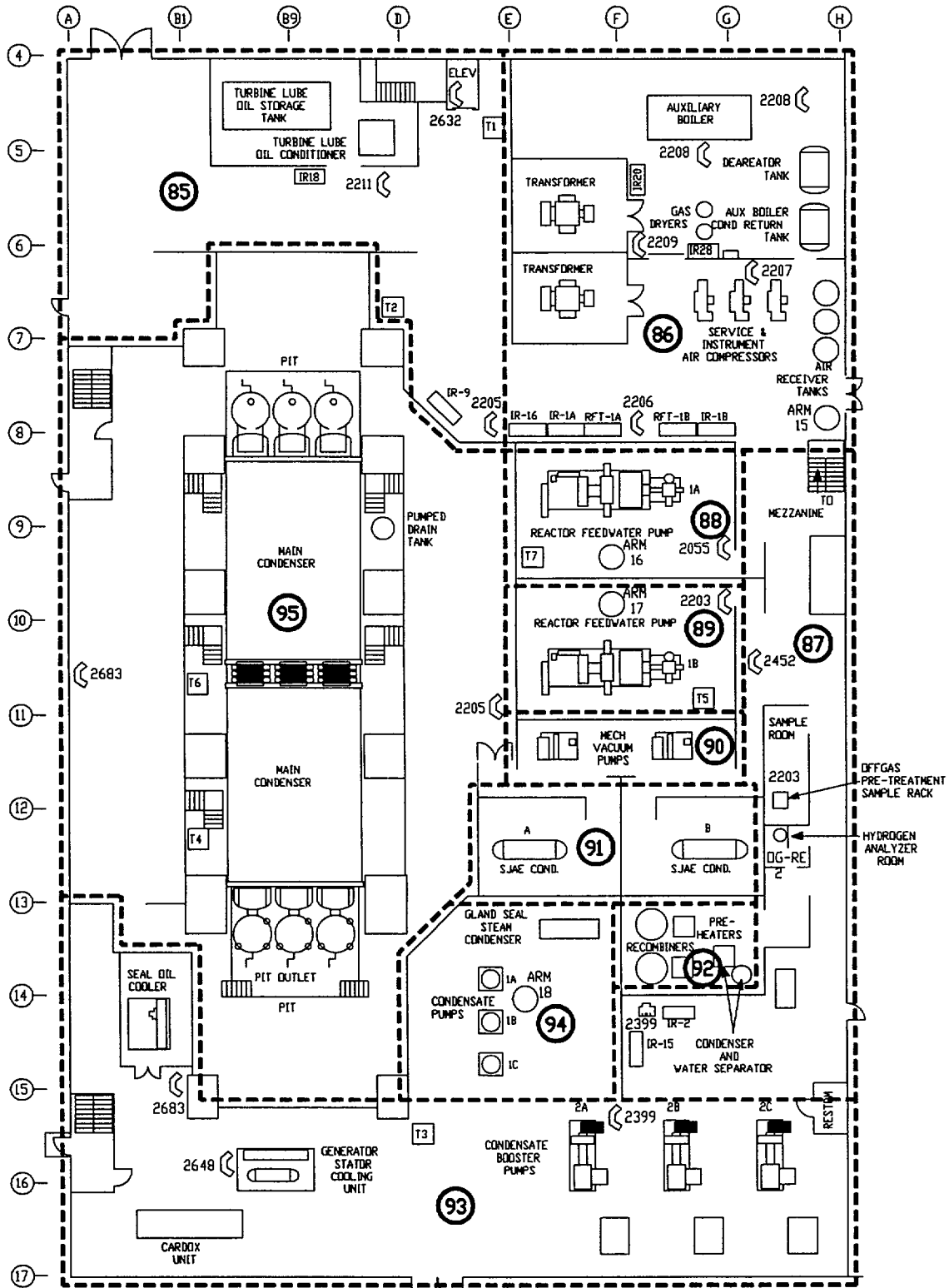
KEY PLAN

REACTOR BUILDING ELEV. 606'

Columbia Generating Station
Contamination (dpm/100cm²)

2002 Exercise

Real Time	Drill Time	Reactor Building Elev. 606'			
		80	81	82	83
7:00	0:00	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read
11:00	4:00	1.2E+08	1.1E+07	1.1E+07	1.1E+07
11:15	4:15	5.1E+10	2.9E+10	2.3E+10	2.9E+10
11:30	4:30	1.3E+11	8.9E+10	6.8E+10	8.9E+10
11:45	4:45	1.7E+11	1.2E+11	9.0E+10	1.2E+11
12:00	5:00	2.0E+11	1.4E+11	1.0E+11	1.4E+11
12:15	5:15	2.0E+11	1.4E+11	1.1E+11	1.4E+11
12:30	5:30	2.0E+11	1.4E+11	1.1E+11	1.4E+11
12:45	5:45	2.0E+11	1.4E+11	1.1E+11	1.4E+11
13:00	6:00	2.0E+11	1.4E+11	1.0E+11	1.4E+11



KEY PLAN

BASED ON
891150 RB 572
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 441'

Section 8

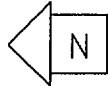
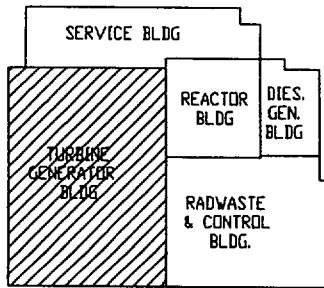
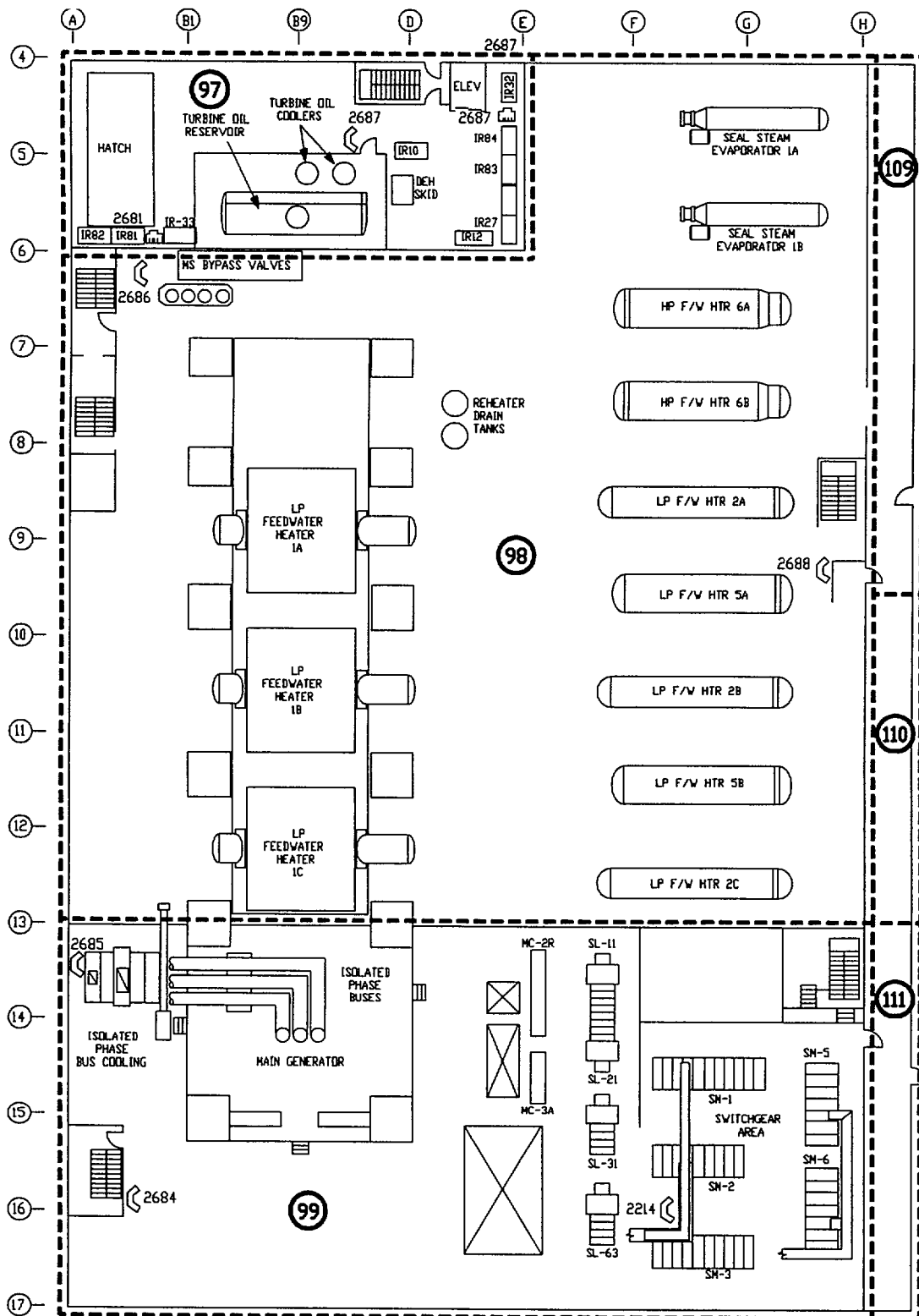
Figure 8-9

JULY 1, 2002

Columbia Generating Station
Contamination (dpm/100cm²)

2002 Exercise

Real Time	Drill Time	Turbine Generator Bldg. Elev. 441'										
		85	86	87	88	89	90	91	92	93	94	95
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read



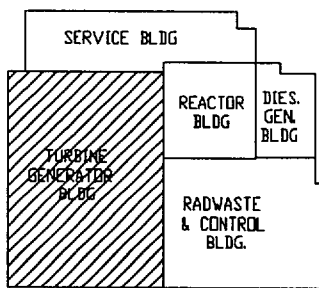
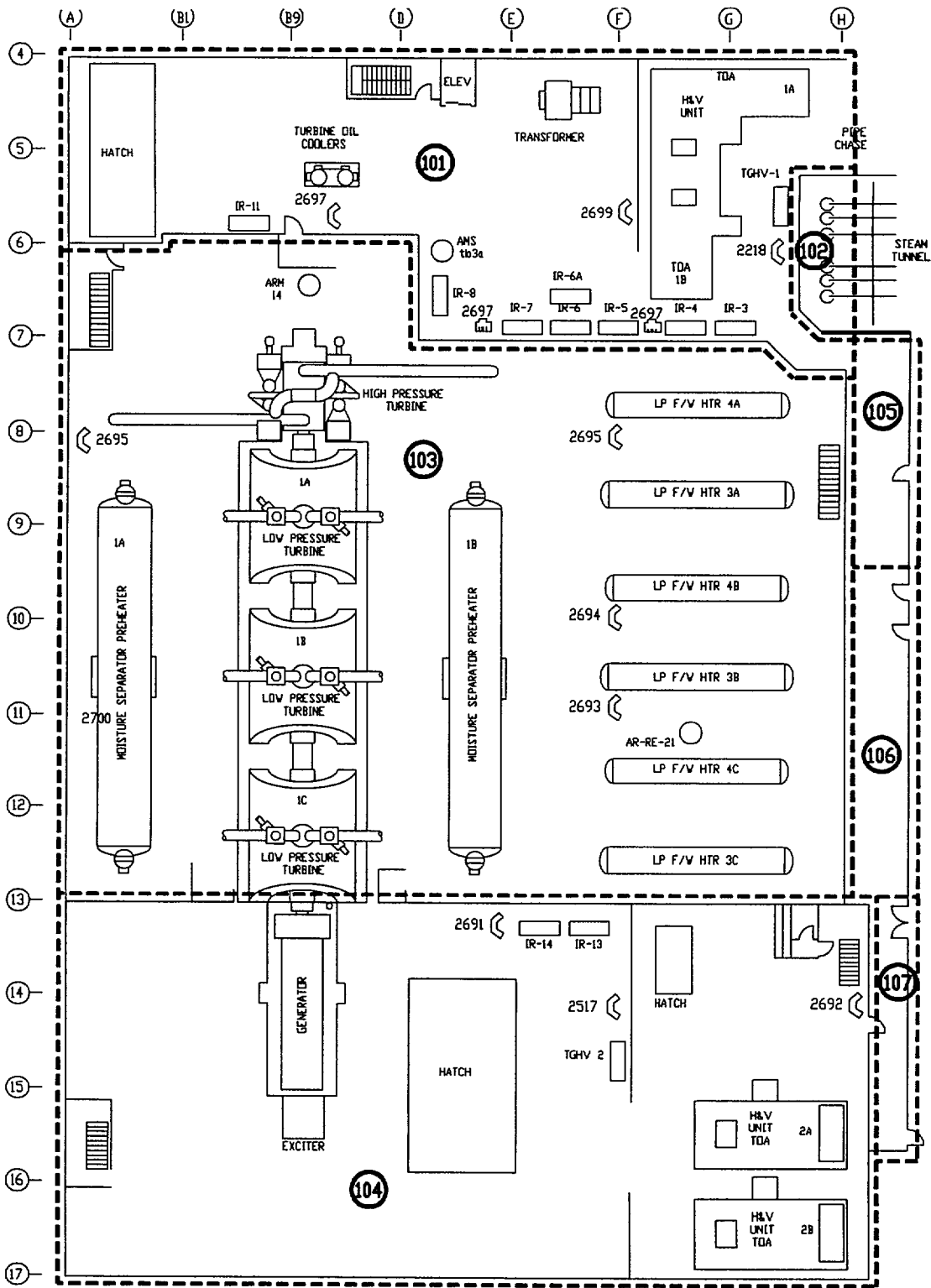
BASED ON
891150 TGB 471
Feb 1992

KEY PLAN
TURBINE GENERATOR BUILDING ELEV. 471'

Columbia Generating Station
Contamination (dpm/100cm2)

2002 Exercise

Real Time	Drill Time	Turbine Generator Bldg. Elev. 471'					
		97	98	99	109	110	111
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read



KEY PLAN

BASED ON
891150 TGB 501
Feb 1992

TURBINE GENERATOR BUILDING ELEV. 501'

Section 8

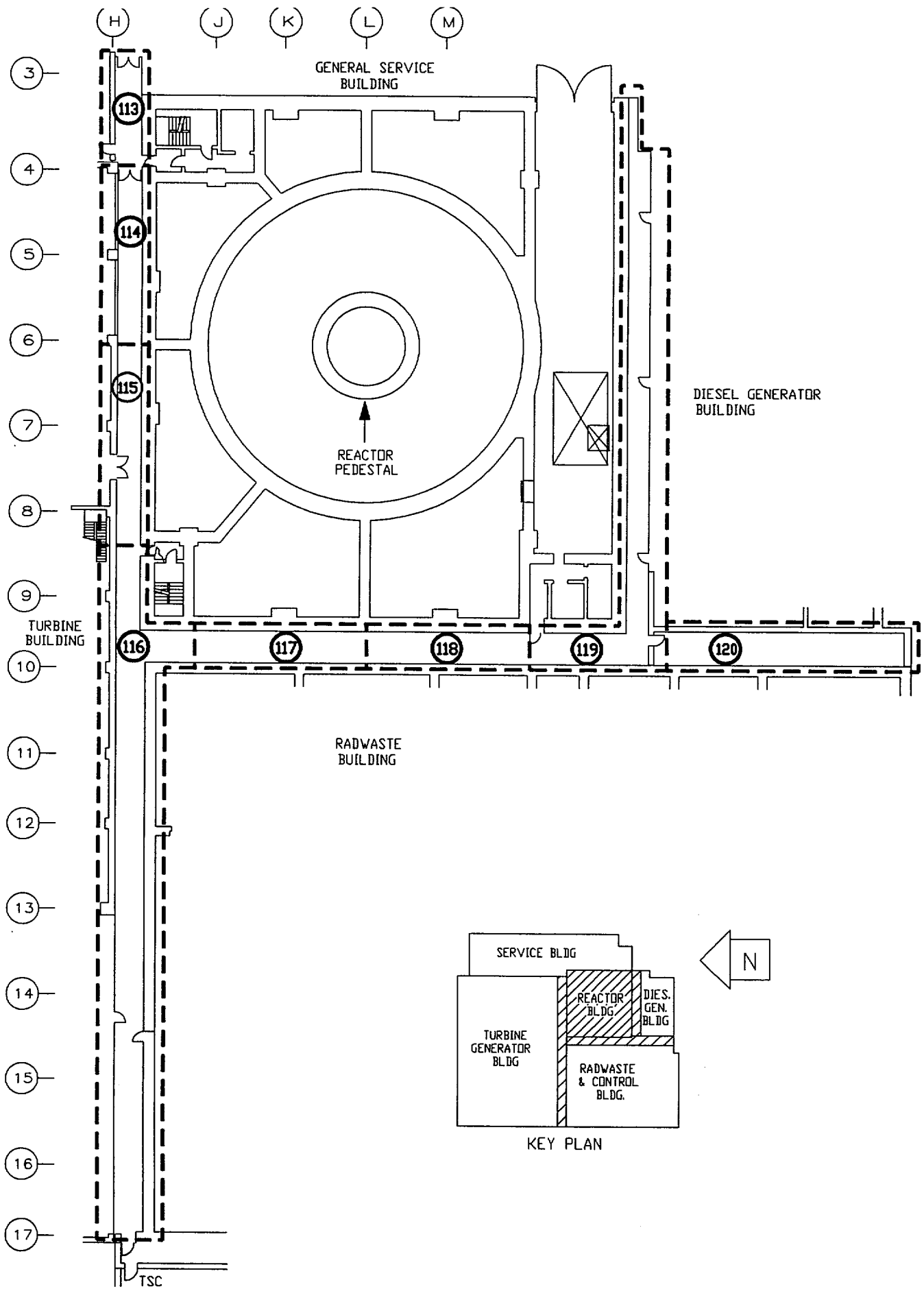
Figure 8-11

JULY 1, 2002

Columbia Generating Station
Contamination (dpm/100cm2)

Real Time	Drill Time	101	102	103	104	105	106	107
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Turbine Generator Bldg, 501'



GROUND FLOOR CORRIDORS ELEV. 441'

Section 8

Figure 8-12

JULY 1, 2002

Columbia Generating Station
Contamination (dpm/100cm²)

Real Time	Drill Time	113	114	115	116	117	118	119	120
7:00	0:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
7:30	0:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:00	1:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
8:30	1:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:00	2:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
9:30	2:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:00	3:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:30	3:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10:45	3:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:00	4:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:15	4:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:30	4:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
11:45	4:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:00	5:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:15	5:15	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:30	5:30	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
12:45	5:45	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
13:00	6:00	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Ground Floor Corridors 441'

Reactor Coolant System								
Real Time	7:00	7:30	8:00	8:30	9:00	9:30	10:00	
Drill Time	0:00	0:30	1:00	1:30	2:00	2:30	3:00	
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	1.41E-01	<LLD	
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	6.06E+00	<LLD	
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	1.19E+01	<LLD	
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	1.72E+01	<LLD	
Xe-131m	<LLD	<LLD	<LLD	<LLD	<LLD	2.52E-01	<LLD	
Xe-133	1.80E-05	2.00E-05	2.04E-05	2.04E-05	2.04E-05	4.29E+01	2.04E-05	
Xe-133m	<LLD	<LLD	<LLD	<LLD	<LLD	1.51E+00	<LLD	
Xe-135	9.80E-06	1.09E-05	1.11E-05	1.11E-05	1.11E-05	8.58E+00	1.11E-05	
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	4.29E+01	<LLD	
Total Noble Gas	2.78E-05	3.09E-05	3.15E-05	3.15E-05	3.15E-05	1.31E+02	3.15E-05	
I-131	8.00E-06	8.91E-06	9.08E-06	9.08E-06	9.08E-06	2.36E+02	3.42E+03	
I-132	1.03E-04	1.15E-04	1.17E-04	1.17E-04	1.17E-04	3.33E+02	4.83E+03	
I-133	3.78E-05	4.21E-05	4.29E-05	4.29E-05	4.29E-05	4.72E+02	6.84E+03	
I-134	3.10E-04	3.45E-04	3.52E-04	3.52E-04	3.52E-04	5.28E+02	7.65E+03	
I-135	9.62E-05	1.07E-04	1.09E-04	1.09E-04	1.09E-04	4.17E+02	6.04E+03	
Total Iodine	5.55E-04	6.18E-04	6.30E-04	6.30E-04	6.30E-04	1.99E+03	2.88E+04	
Sr-89	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.63E+02	
Sr-90	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.04E+01	
Ru-103	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.22E+01	
Ru-106	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.87E+01	
Te-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.68E+03	
Cs-134	4.00E-06	4.45E-06	4.54E-06	4.54E-06	4.54E-06	2.08E+01	2.32E+02	
Cs-136	<LLD	<LLD	<LLD	<LLD	<LLD	8.33E+00	9.27E+01	
Cs-137	3.70E-06	4.12E-06	4.20E-06	4.20E-06	4.20E-06	1.31E+01	1.45E+02	
Ba-140	1.70E-05	1.89E-05	1.93E-05	1.93E-05	1.93E-05	1.93E-05	5.98E+02	
La-140	3.80E-06	4.23E-06	4.31E-06	4.31E-06	4.31E-06	4.31E-06	1.20E+02	
Total Particulates	2.85E-05	3.17E-05	3.23E-05	3.23E-05	3.23E-05	4.22E+01	3.24E+03	
Dose Equivalent (uCi/cc)								
Xe-133 DEC	8.69E-05	9.67E-05	9.86E-05	9.86E-05	9.86E-05	3.08E+03	9.86E-05	
I-131 DEC	3.39E-03	3.77E-03	3.85E-03	3.85E-03	3.85E-03	8.74E+03	1.27E+05	
Cs-137 DEC	3.46E-05	3.86E-05	3.93E-05	3.93E-05	3.93E-05	9.81E+01	2.40E+03	
Gross Activity (uCi/cc)	6.11E-04	6.81E-04	6.94E-04	6.94E-04	6.94E-04	2.16E+03	3.20E+04	
Sample Data (mR/hr)								
10ml Liquid Sample @ Contact	As Read	As Read	As Read	As Read	As Read	5.92E+04	8.46E+05	
10ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	5.63E+01	8.04E+02	
1ml Liquid Sample @ Contact	As Read	As Read	As Read	As Read	As Read	5.92E+03	8.46E+04	
1ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	5.63E+00	8.04E+01	
0.1ml Liquid Sample @ Contact	As Read	As Read	As Read	As Read	As Read	5.92E+02	8.46E+03	
0.1ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	8.04E+00	

Reactor Coolant System							
Real Time	10:30	10:45	11:00	11:15	11:30	11:45	12:00
Drill Time	3:30	3:45	4:00	4:15	4:30	4:45	5:00
Concentration (uCi/cc)							
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	8.23E-06	5.65E-06	2.82E-06	1.16E-06	4.98E-07	3.10E-07	2.19E-07
Xe-133	3.33E-03	2.28E-03	1.13E-03	4.62E-04	1.99E-04	1.24E-04	8.77E-05
Xe-133m	2.35E-04	1.61E-04	7.96E-05	3.24E-05	1.38E-05	8.56E-06	6.00E-06
Xe-135	3.47E-02	2.32E-02	1.13E-02	4.52E-03	1.90E-03	1.15E-03	7.97E-04
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	3.83E-02	2.57E-02	1.25E-02	5.02E-03	2.11E-03	1.29E-03	8.90E-04
I-131	1.82E+03	1.24E+03	6.18E+02	2.53E+02	1.09E+02	6.80E+01	4.80E+01
I-132	2.56E+03	1.62E+03	7.49E+02	2.85E+02	1.14E+02	6.59E+01	4.33E+01
I-133	3.64E+03	2.46E+03	1.22E+03	4.95E+02	2.12E+02	1.31E+02	9.18E+01
I-134	4.02E+03	2.24E+03	9.20E+02	3.09E+02	1.09E+02	5.60E+01	3.25E+01
I-135	3.21E+03	2.13E+03	1.04E+03	4.14E+02	1.74E+02	1.05E+02	7.27E+01
Total Iodine	1.52E+04	9.68E+03	4.54E+03	1.76E+03	7.18E+02	4.26E+02	2.88E+02
Sr-89	1.40E+02	9.54E+01	4.77E+01	1.96E+01	8.43E+00	5.25E+00	3.72E+00
Sr-90	5.52E+00	3.76E+00	1.88E+00	7.70E-01	3.32E-01	2.07E-01	1.46E-01
Ru-103	4.38E+01	2.98E+01	1.49E+01	6.10E+00	2.63E+00	1.64E+00	1.16E+00
Ru-106	9.95E+00	6.77E+00	3.38E+00	1.39E+00	5.98E-01	3.73E-01	2.64E-01
Te-132	8.95E+02	6.08E+02	3.03E+02	1.24E+02	5.33E+01	3.32E+01	2.34E+01
Cs-134	1.23E+02	8.40E+01	4.20E+01	1.72E+01	7.42E+00	4.63E+00	3.27E+00
Cs-136	4.94E+01	3.36E+01	1.68E+01	6.87E+00	2.96E+00	1.85E+00	1.30E+00
Cs-137	7.73E+01	5.26E+01	2.63E+01	1.08E+01	4.65E+00	2.90E+00	2.05E+00
Ba-140	3.18E+02	2.16E+02	1.08E+02	4.43E+01	1.91E+01	1.19E+01	8.41E+00
La-140	6.37E+01	4.41E+01	2.24E+01	9.35E+00	4.09E+00	2.59E+00	1.86E+00
Total Particulates	1.73E+03	1.17E+03	5.87E+02	2.40E+02	1.04E+02	6.45E+01	4.56E+01
Dose Equivalent (uCi/cc)							
Xe-133 DEC	2.47E-01	1.66E-01	8.07E-02	3.23E-02	1.36E-02	8.25E-03	5.69E-03
I-131 DEC	6.69E+04	4.09E+04	1.85E+04	6.89E+03	2.72E+03	1.56E+03	1.02E+03
Cs-137 DEC	1.28E+03	8.74E+02	4.38E+02	1.80E+02	7.78E+01	4.87E+01	3.45E+01
Gross Activity (uCi/cc)							
	1.70E+04	1.09E+04	5.13E+03	2.00E+03	8.21E+02	4.91E+02	3.34E+02
Sample Data (mR/hr)							
10ml Liquid Sample @ Contact	4.47E+05	2.71E+05	1.22E+05	4.53E+04	1.78E+04	1.01E+04	6.61E+03
10ml Liquid Sample @ 3 ft	4.25E+02	2.63E+02	1.20E+02	4.53E+01	1.81E+01	1.05E+01	6.94E+00
1ml Liquid Sample @ Contact	4.47E+04	2.71E+04	1.22E+04	4.53E+03	1.78E+03	1.01E+03	6.61E+02
1ml Liquid Sample @ 3 ft	4.25E+01	2.63E+01	1.20E+01	4.53E+00	1.81E+00	1.05E+00	As Read
0.1ml Liquid Sample @ Contact	4.47E+03	2.71E+03	1.22E+03	4.53E+02	1.78E+02	1.01E+02	6.61E+01
0.1ml Liquid Sample @ 3 ft	4.25E+00	2.63E+00	1.20E+00	As Read	As Read	As Read	As Read

Reactor Coolant System					
	Real Time	12:15	12:30	12:45	13:00
	Drill Time	5:15	5:30	5:45	6:00
Concentration (uCi/cc)					
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	1.60E-07	1.16E-07	<LLD	<LLD	<LLD
Xe-133	6.42E-05	4.72E-05	3.49E-05	2.60E-05	2.60E-05
Xe-133m	4.34E-06	3.13E-06	2.26E-06	1.64E-06	1.64E-06
Xe-135	5.66E-04	4.02E-04	2.86E-04	2.04E-04	2.04E-04
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	6.35E-04	4.53E-04	3.24E-04	2.32E-04	2.32E-04
I-131	3.49E+01	2.54E+01	1.85E+01	1.34E+01	1.34E+01
I-132	2.92E+01	1.97E+01	1.33E+01	9.01E+00	9.01E+00
I-133	6.63E+01	4.79E+01	3.45E+01	2.49E+01	2.49E+01
I-134	1.94E+01	1.16E+01	6.91E+00	4.13E+00	4.13E+00
I-135	5.15E+01	3.66E+01	2.59E+01	1.84E+01	1.84E+01
Total Iodine	2.01E+02	1.41E+02	9.92E+01	6.99E+01	6.99E+01
Sr-89	2.70E+00	1.97E+00	1.43E+00	1.04E+00	1.04E+00
Sr-90	1.07E-01	7.76E-02	5.65E-02	4.11E-02	4.11E-02
Ru-103	8.44E-01	6.14E-01	4.47E-01	3.25E-01	3.25E-01
Ru-106	1.92E-01	1.40E-01	1.02E-01	7.41E-02	7.41E-02
Te-132	1.70E+01	1.24E+01	8.98E+00	6.52E+00	6.52E+00
Cs-134	2.38E+00	1.73E+00	1.26E+00	9.19E-01	9.19E-01
Cs-136	9.49E-01	6.90E-01	5.02E-01	3.66E-01	3.66E-01
Cs-137	1.49E+00	1.09E+00	7.91E-01	5.76E-01	5.76E-01
Ba-140	6.12E+00	4.45E+00	3.24E+00	2.36E+00	2.36E+00
La-140	1.38E+00	1.02E+00	7.50E-01	5.54E-01	5.54E-01
Total Particulates	3.32E+01	2.41E+01	1.76E+01	1.28E+01	1.28E+01
Dose Equivalent (uCi/cc)					
Xe-133 DEC	4.05E-03	2.88E-03	2.05E-03	1.46E-03	1.46E-03
I-131 DEC	6.90E+02	4.69E+02	3.21E+02	2.20E+02	2.20E+02
Cs-137 DEC	2.52E+01	1.84E+01	1.34E+01	9.79E+00	9.79E+00
Gross Activity (uCi/cc)	2.35E+02	1.65E+02	1.17E+02	8.27E+01	8.27E+01
Sample Data (mR/hr)					
10ml Liquid Sample @ Contact	4.46E+03	3.03E+03	2.06E+03	1.41E+03	1.41E+03
10ml Liquid Sample @ 3 ft	4.75E+00	3.27E+00	2.25E+00	1.56E+00	1.56E+00
1ml Liquid Sample @ Contact	4.46E+02	3.03E+02	2.06E+02	1.41E+02	1.41E+02
1ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read
0.1ml Liquid Sample @ Contact	4.46E+01	3.03E+01	2.06E+01	1.41E+01	1.41E+01
0.1ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read

Reactor Coolant System	
Real Time	
Drill Time	
Concentration (uCi/cc)	
Kr-85	
Kr-85m	
Kr-87	
Kr-88	
Xe-131m	
Xe-133	
Xe-133m	
Xe-135	
Xe-138	
Total Noble Gas	
I-131	
I-132	
I-133	
I-134	
I-135	
Total Iodine	
Sr-89	
Sr-90	
Ru-103	
Ru-106	
Te-132	
Cs-134	
Cs-136	
Cs-137	
Ba-140	
La-140	
Total Particulates	
Dose Equivalent (uCi/cc)	
Xe-133 DEC	
I-131 DEC	
Cs-137 DEC	
Gross Activity (uCi/cc)	
Sample Data (mR/hr)	
10ml Liquid Sample @ Contact	
10ml Liquid Sample @ 3 ft	
1ml Liquid Sample @ Contact	
1ml Liquid Sample @ 3 ft	
0.1ml Liquid Sample @ Contact	
0.1ml Liquid Sample @ 3 ft	

Drywell Air								
Real Time	7:00	7:30	8:00	8:30	9:00	9:30	10:00	
Drill Time	0:00	0:30	1:00	1:30	2:00	2:30	3:00	
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Iodine	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-103	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-106	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-136	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Particulates	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Dose Equivalent (uCi/cc)								
Xe-133 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Gross Activity (uCi/cc)	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Drywell Air								
	Real Time	10:30	10:45	11:00	11:15	11:30	11:45	12:00
	Drill Time	3:30	3:45	4:00	4:15	4:30	4:45	5:00
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	1.90E-07	1.25E-07	1.00E-07	<LLD	<LLD	<LLD
Xe-133	1.01E-05	3.38E-05	7.56E-05	4.92E-05	3.94E-05	3.73E-05	1.94E-05	
Xe-133m	7.16E-07	2.40E-06	5.36E-06	3.49E-06	2.79E-06	2.65E-06	1.37E-06	
Xe-135	1.04E-04	3.47E-04	7.62E-04	4.88E-04	3.84E-04	3.57E-04	1.82E-04	
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	1.15E-04	3.83E-04	8.43E-04	5.41E-04	4.26E-04	3.97E-04	2.03E-04	
I-131	9.41E-03	2.74E-02	5.80E-02	3.14E-02	1.83E-02	9.68E-03	3.29E-05	
I-132	1.29E-02	3.57E-02	7.03E-02	3.53E-02	1.91E-02	9.39E-03	2.96E-05	
I-133	1.88E-02	5.44E-02	1.14E-01	6.14E-02	3.55E-02	1.86E-02	6.28E-05	
I-134	1.95E-02	4.95E-02	8.63E-02	3.83E-02	1.83E-02	7.97E-03	2.22E-05	
I-135	1.64E-02	4.71E-02	9.72E-02	5.12E-02	2.91E-02	1.50E-02	4.97E-05	
Total Iodine	7.70E-02	2.14E-01	4.26E-01	2.18E-01	1.20E-01	6.07E-02	1.97E-04	
Sr-89	7.25E-04	2.11E-03	4.48E-03	2.42E-03	1.41E-03	7.48E-04	2.54E-06	
Sr-90	2.85E-05	8.33E-05	1.76E-04	9.54E-05	5.56E-05	2.95E-05	1.00E-07	
Ru-103	2.26E-04	6.60E-04	1.40E-03	7.56E-04	4.41E-04	2.33E-04	7.93E-07	
Ru-106	5.14E-05	1.50E-04	3.17E-04	1.72E-04	1.00E-04	5.31E-05	1.80E-07	
Te-132	4.62E-03	1.35E-02	2.84E-02	1.54E-02	8.94E-03	4.73E-03	1.60E-05	
Cs-134	6.38E-04	1.86E-03	3.94E-03	2.13E-03	1.24E-03	6.59E-04	2.24E-06	
Cs-136	2.55E-04	7.44E-04	1.57E-03	8.52E-04	4.96E-04	2.63E-04	8.93E-07	
Cs-137	4.00E-04	1.17E-03	2.47E-03	1.34E-03	7.79E-04	4.13E-04	1.40E-06	
Ba-140	1.64E-03	4.80E-03	1.01E-02	5.49E-03	3.20E-03	1.69E-03	5.76E-06	
La-140	3.31E-04	9.78E-04	2.10E-03	1.16E-03	6.86E-04	3.69E-04	1.27E-06	
Total Particulates	8.92E-03	2.60E-02	5.50E-02	2.98E-02	1.74E-02	9.19E-03	3.12E-05	
Dose Equivalent (uCi/cc)								
Xe-133 DEC	7.45E-04	2.47E-03	5.44E-03	3.48E-03	2.74E-03	2.55E-03	1.30E-03	
I-131 DEC	3.34E-01	9.04E-01	1.73E+00	8.53E-01	4.55E-01	2.22E-01	6.98E-04	
Cs-137 DEC	6.62E-03	1.94E-02	4.11E-02	2.23E-02	1.30E-02	6.93E-03	2.36E-05	
Gross Activity (uCi/cc)								
	8.60E-02	2.41E-01	4.82E-01	2.48E-01	1.38E-01	7.03E-02	4.32E-04	
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	2.03E+00	5.54E+00	1.07E+01	5.35E+00	2.88E+00	1.42E+00	As Read	
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	
Silver Zeolite @ Contact	2.54E+00	6.92E+00	1.34E+01	6.67E+00	3.60E+00	1.78E+00	As Read	
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	
Filter Paper @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	

Drywell Air								
Real Time	12:15	12:30	12:45	13:00	22:30	23:00	23:30	
Drill Time	5:15	5:30	5:45	6:00	6:30	7:00	7:30	
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD				
Kr-85m	<LLD	<LLD	<LLD	<LLD				
Kr-87	<LLD	<LLD	<LLD	<LLD				
Kr-88	<LLD	<LLD	<LLD	<LLD				
Xe-131m	<LLD	<LLD	<LLD	<LLD				
Xe-133	1.05E-05	6.36E-06	4.40E-06	3.04E-06				
Xe-133m	7.44E-07	4.49E-07	3.09E-07	2.14E-07				
Xe-135	9.72E-05	5.77E-05	3.92E-05	2.66E-05				
Xe-138	<LLD	<LLD	<LLD	<LLD				
Total Noble Gas	1.09E-04	6.45E-05	4.39E-05	2.99E-05				
I-131	1.20E-05	8.69E-06	6.32E-06	4.60E-06				
I-132	1.00E-05	6.75E-06	4.56E-06	3.08E-06				
I-133	2.27E-05	1.64E-05	1.18E-05	8.54E-06				
I-134	6.63E-06	3.96E-06	2.37E-06	1.41E-06				
I-135	1.76E-05	1.25E-05	8.87E-06	6.29E-06				
Total Iodine	6.89E-05	4.83E-05	3.39E-05	2.39E-05				
Sr-89	9.25E-07	6.74E-07	4.90E-07	3.57E-07				
Sr-90	<LLD	<LLD	<LLD	<LLD				
Ru-103	2.89E-07	2.10E-07	1.53E-07	1.11E-07				
Ru-106	<LLD	<LLD	<LLD	<LLD				
Te-132	5.82E-06	4.23E-06	3.07E-06	2.23E-06				
Cs-134	8.15E-07	5.93E-07	4.32E-07	3.14E-07				
Cs-136	3.25E-07	2.36E-07	1.72E-07	1.25E-07				
Cs-137	5.11E-07	3.72E-07	2.71E-07	1.97E-07				
Ba-140	2.09E-06	1.52E-06	1.11E-06	8.07E-07				
La-140	4.71E-07	3.48E-07	2.57E-07	1.90E-07				
Total Particulates	1.14E-05	8.26E-06	6.01E-06	4.37E-06				
Dose Equivalent (uCi/cc)								
Xe-133 DEC	6.95E-04	4.12E-04	2.80E-04	1.90E-04				
I-131 DEC	2.36E-04	1.61E-04	1.10E-04	7.53E-05				
Cs-137 DEC	8.62E-06	6.29E-06	4.59E-06	3.35E-06				
Gross Activity (uCi/cc)	1.89E-04	1.21E-04	8.38E-05	5.82E-05				
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	As Read	As Read	As Read	As Read				
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read				
Silver Zeolite @ Contact	As Read	As Read	As Read	As Read				
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read				
Filter Paper @ Contact	As Read	As Read	As Read	As Read				
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read				

Drywell Air	
Real Time	0:00
Drill Time	8:00
Concentration (uCi/cc)	
Kr-85	
Kr-85m	
Kr-87	
Kr-88	
Xe-131m	
Xe-133	
Xe-133m	
Xe-135	
Xe-138	
Total Noble Gas	
I-131	
I-132	
I-133	
I-134	
I-135	
Total Iodine	
Sr-89	
Sr-90	
Ru-103	
Ru-106	
Te-132	
Cs-134	
Cs-136	
Cs-137	
Ba-140	
La-140	
Total Particulates	
Dose Equivalent (uCi/cc)	
Xe-133 DEC	
I-131 DEC	
Cs-137 DEC	
Gross Activity (uCi/cc)	
Sample Data (mR/hr)	
15ml Gas Sample @ Contact	
15ml Gas Sample @ 3 ft	
Silver Zeolite @ Contact	
Silver Zeolite @ 3 ft	
Filter Paper @ Contact	
Filter Paper @ 3 ft	

Wetwell Air								
Real Time	7:00	7:30	8:00	8:30	9:00	9:30	10:00	
Drill Time	0:00	0:30	1:00	1:30	2:00	2:30	3:00	
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Iodine	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-103	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-106	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-136	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Particulates	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Dose Equivalent (uCi/cc)								
Xe-133 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Gross Activity (uCi/cc)	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Wetwell Air								
Real Time	10:30	10:45	11:00	11:15	11:30	11:45	12:00	
Drill Time	3:30	3:45	4:00	4:15	4:30	4:45	5:00	
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	6.19E-03	1.09E-02	3.68E-03	1.61E-03	1.61E-03	6.92E-04	9.50E-04	
Xe-133	2.49E+00	4.36E+00	1.46E+00	6.34E-01	6.31E-01	2.68E-01	3.67E-01	
Xe-133m	1.77E-01	3.09E-01	1.04E-01	4.50E-02	4.48E-02	1.91E-02	2.60E-02	
Xe-135	2.57E+01	4.42E+01	1.46E+01	6.25E+00	6.12E+00	2.56E+00	3.43E+00	
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	2.83E+01	4.89E+01	1.62E+01	6.93E+00	6.80E+00	2.85E+00	3.83E+00	
I-131	1.54E+02	2.31E+02	7.51E+01	3.47E+01	3.43E+01	1.50E+01	1.95E+01	
I-132	2.05E+02	2.86E+02	8.73E+01	3.81E+01	3.52E+01	1.43E+01	1.72E+01	
I-133	3.05E+02	4.55E+02	1.47E+02	6.76E+01	6.65E+01	2.88E+01	3.71E+01	
I-134	2.94E+02	3.66E+02	1.00E+02	3.99E+01	3.29E+01	1.18E+01	1.26E+01	
I-135	2.66E+02	3.89E+02	1.24E+02	5.61E+01	5.43E+01	2.31E+01	2.93E+01	
Total Iodine	1.22E+03	1.73E+03	5.34E+02	2.36E+02	2.23E+02	9.31E+01	1.16E+02	
Sr-89	1.18E+01	1.78E+01	5.79E+00	2.68E+00	2.65E+00	1.16E+00	1.51E+00	
Sr-90	4.66E-01	7.00E-01	2.28E-01	1.05E-01	1.04E-01	4.57E-02	5.93E-02	
Ru-103	3.69E+00	5.55E+00	1.81E+00	8.35E-01	8.28E-01	3.62E-01	4.70E-01	
Ru-106	8.39E-01	1.26E+00	4.11E-01	1.90E-01	1.88E-01	8.23E-02	1.07E-01	
Te-132	7.54E+01	1.13E+02	3.68E+01	1.70E+01	1.68E+01	7.32E+00	9.49E+00	
Cs-134	1.04E+01	1.56E+01	5.10E+00	2.36E+00	2.34E+00	1.02E+00	1.33E+00	
Cs-136	4.16E+00	6.25E+00	2.04E+00	9.40E-01	9.32E-01	4.07E-01	5.29E-01	
Cs-137	6.53E+00	9.80E+00	3.19E+00	1.48E+00	1.46E+00	6.40E-01	8.31E-01	
Ba-140	2.68E+01	4.03E+01	1.31E+01	6.06E+00	6.01E+00	2.63E+00	3.41E+00	
La-140	5.44E+00	8.31E+00	2.75E+00	1.29E+00	1.29E+00	5.74E-01	7.57E-01	
Total Particulates	1.46E+02	2.19E+02	7.12E+01	3.29E+01	3.26E+01	1.42E+01	1.85E+01	
Dose Equivalent (uCi/cc)								
Xe-133 DEC	1.83E+02	3.16E+02	1.04E+02	4.46E+01	4.37E+01	1.83E+01	2.45E+01	
I-131 DEC	5.22E+03	7.11E+03	2.13E+03	9.17E+02	8.38E+02	3.38E+02	4.06E+02	
Cs-137 DEC	1.08E+02	1.63E+02	5.33E+01	2.47E+01	2.45E+01	1.07E+01	1.40E+01	
Gross Activity (uCi/cc)	1.40E+03	1.99E+03	6.21E+02	2.76E+02	2.63E+02	1.10E+02	1.38E+02	
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	3.20E+04	4.41E+04	1.33E+04	5.79E+03	5.35E+03	2.18E+03	2.65E+03	
15ml Gas Sample @ 3 ft	1.76E+01	2.43E+01	7.34E+00	3.19E+00	2.94E+00	1.20E+00	1.46E+00	
Silver Zeolite @ Contact	4.00E+04	5.51E+04	1.66E+04	7.23E+03	6.68E+03	2.72E+03	3.31E+03	
Silver Zeolite @ 3 ft	4.22E+01	5.81E+01	1.76E+01	7.63E+00	7.05E+00	2.87E+00	3.50E+00	
Filter Paper @ Contact	2.23E+03	3.07E+03	9.27E+02	4.03E+02	3.72E+02	1.52E+02	1.84E+02	
Filter Paper @ 3 ft	2.13E+00	2.93E+00	As Read	As Read	As Read	As Read	As Read	

Wetwell Air					
	Real Time	12:15	12:30	12:45	13:00
	Drill Time	5:15	5:30	5:45	6:00
Concentration (uCi/cc)					
Kr-85	<LLD	<LLD	<LLD	<LLD	
Kr-85m	<LLD	<LLD	<LLD	<LLD	
Kr-87	<LLD	<LLD	<LLD	<LLD	
Kr-88	<LLD	<LLD	<LLD	<LLD	
Xe-131m	1.08E-03	1.15E-03	1.09E-03	9.78E-04	
Xe-133	4.14E-01	4.38E-01	4.15E-01	3.71E-01	
Xe-133m	2.94E-02	3.11E-02	2.94E-02	2.62E-02	
Xe-135	3.81E+00	3.96E+00	3.68E+00	3.23E+00	
Xe-138	<LLD	<LLD	<LLD	<LLD	
Total Noble Gas	4.25E+00	4.43E+00	4.13E+00	3.63E+00	
I-131	2.09E+01	2.08E+01	1.86E+01	1.58E+01	
I-132	1.72E+01	1.59E+01	1.32E+01	1.04E+01	
I-133	3.96E+01	3.92E+01	3.48E+01	2.93E+01	
I-134	1.11E+01	9.10E+00	6.68E+00	4.66E+00	
I-135	3.06E+01	2.98E+01	2.60E+01	2.15E+01	
Total Iodine	1.19E+02	1.15E+02	9.92E+01	8.18E+01	
Sr-89	1.62E+00	1.61E+00	1.44E+00	1.23E+00	
Sr-90	6.37E-02	6.36E-02	5.69E-02	4.84E-02	
Ru-103	5.04E-01	5.03E-01	4.50E-01	3.83E-01	
Ru-106	1.15E-01	1.15E-01	1.03E-01	8.72E-02	
Te-132	1.02E+01	1.01E+01	9.04E+00	7.68E+00	
Cs-134	1.42E+00	1.42E+00	1.27E+00	1.08E+00	
Cs-136	5.67E-01	5.66E-01	5.06E-01	4.31E-01	
Cs-137	8.92E-01	8.91E-01	7.97E-01	6.78E-01	
Ba-140	3.66E+00	3.65E+00	3.26E+00	2.78E+00	
La-140	8.25E-01	8.36E-01	7.59E-01	6.55E-01	
Total Particulates	1.98E+01	1.98E+01	1.77E+01	1.50E+01	
Dose Equivalent (uCi/cc)					
Xe-133 DEC	2.72E+01	2.83E+01	2.63E+01	2.31E+01	
I-131 DEC	4.06E+02	3.79E+02	3.19E+02	2.56E+02	
Cs-137 DEC	1.51E+01	1.51E+01	1.35E+01	1.15E+01	
Gross Activity (uCi/cc)	1.43E+02	1.39E+02	1.21E+02	1.00E+02	
Sample Data (mR/hr)					
15ml Gas Sample @ Contact	2.68E+03	2.53E+03	2.15E+03	1.74E+03	
15ml Gas Sample @ 3 ft	1.48E+00	1.39E+00	1.18E+00	As Read	
Silver Zeolite @ Contact	3.35E+03	3.16E+03	2.69E+03	2.18E+03	
Silver Zeolite @ 3 ft	3.53E+00	3.34E+00	2.84E+00	2.30E+00	
Filter Paper @ Contact	1.86E+02	1.76E+02	1.49E+02	1.21E+02	
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	

Wetwell Air	
Real Time	
Drill Time	
Concentration (uCi/cc)	
Kr-85	
Kr-85m	
Kr-87	
Kr-88	
Xe-131m	
Xe-133	
Xe-133m	
Xe-135	
Xe-138	
Total Noble Gas	
I-131	
I-132	
I-133	
I-134	
I-135	
Total Iodine	
Sr-89	
Sr-90	
Ru-103	
Ru-106	
Te-132	
Cs-134	
Cs-136	
Cs-137	
Ba-140	
La-140	
Total Particulates	
Dose Equivalent (uCi/cc)	
Xe-133 DEC	
I-131 DEC	
Cs-137 DEC	
Gross Activity (uCi/cc)	
Sample Data (mR/hr)	
15ml Gas Sample @ Contact	
15ml Gas Sample @ 3 ft	
Silver Zeolite @ Contact	
Silver Zeolite @ 3 ft	
Filter Paper @ Contact	
Filter Paper @ 3 ft	

Suppression Pool Water							
Real Time	7:00	7:30	8:00	8:30	9:00	9:30	10:00
Drill Time	0:00	0:30	1:00	1:30	2:00	2:30	3:00
Concentration (uCi/cc)							
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Iodine	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-103	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-106	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-136	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Particulates	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Dose Equivalent (uCi/cc)							
Xe-133 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Gross Activity (uCi/cc)	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sample Data (mR/hr)							
10ml Liquid Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read
10ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read
1ml Liquid Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read
1ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read
0.1ml Liquid Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read
0.1ml Liquid Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Suppression Pool Water							
Real Time	10:30	10:45	11:00	11:15	11:30	11:45	12:00
Drill Time	3:30	3:45	4:00	4:15	4:30	4:45	5:00
Concentration (uCi/cc)							
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	6.34E-04	4.15E-04	4.13E-04	3.20E-04	2.20E-04	1.20E-04	6.17E-05
Xe-133	2.54E-01	1.65E-01	1.63E-01	1.26E-01	8.58E-02	4.65E-02	2.37E-02
Xe-133m	1.81E-02	1.17E-02	1.16E-02	8.93E-03	6.09E-03	3.31E-03	1.69E-03
Xe-135	2.63E+00	1.68E+00	1.64E+00	1.24E+00	8.32E-01	4.44E-01	2.22E-01
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	2.90E+00	1.86E+00	1.81E+00	1.38E+00	9.24E-01	4.94E-01	2.48E-01
I-131	1.43E+03	9.38E+02	9.32E+02	7.23E+02	4.96E+02	2.71E+02	1.39E+02
I-132	1.92E+03	1.17E+03	1.10E+03	7.96E+02	5.10E+02	2.59E+02	1.24E+02
I-133	2.85E+03	1.85E+03	1.83E+03	1.41E+03	9.62E+02	5.22E+02	2.66E+02
I-134	2.78E+03	1.50E+03	1.28E+03	8.36E+02	4.77E+02	2.14E+02	9.03E+01
I-135	2.48E+03	1.58E+03	1.54E+03	1.17E+03	7.86E+02	4.19E+02	2.10E+02
Total Iodine	1.15E+04	7.04E+03	6.69E+03	4.94E+03	3.23E+03	1.69E+03	8.29E+02
Sr-89	1.10E+02	7.23E+01	7.19E+01	5.58E+01	3.83E+01	2.10E+01	1.08E+01
Sr-90	4.34E+00	2.85E+00	2.83E+00	2.20E+00	1.51E+00	8.27E-01	4.25E-01
Ru-103	3.44E+01	2.26E+01	2.24E+01	1.74E+01	1.20E+01	6.55E+00	3.37E+00
Ru-106	7.83E+00	5.13E+00	5.10E+00	3.96E+00	2.72E+00	1.49E+00	7.66E-01
Te-132	7.03E+02	4.60E+02	4.56E+02	3.54E+02	2.43E+02	1.33E+02	6.80E+01
Cs-134	9.71E+01	6.36E+01	6.33E+01	4.91E+01	3.38E+01	1.85E+01	9.50E+00
Cs-136	3.88E+01	2.54E+01	2.53E+01	1.96E+01	1.35E+01	7.37E+00	3.79E+00
Cs-137	6.08E+01	3.99E+01	3.96E+01	3.08E+01	2.12E+01	1.16E+01	5.95E+00
Ba-140	2.50E+02	1.64E+02	1.63E+02	1.26E+02	8.69E+01	4.75E+01	2.44E+01
La-140	5.07E+01	3.38E+01	3.40E+01	2.68E+01	1.87E+01	1.04E+01	5.42E+00
Total Particulates	1.36E+03	8.89E+02	8.84E+02	6.86E+02	4.71E+02	2.58E+02	1.32E+02
Dose Equivalent (uCi/cc)							
Xe-133 DEC	1.87E+01	1.20E+01	1.17E+01	8.85E+00	5.94E+00	3.17E+00	1.59E+00
I-131 DEC	4.90E+04	2.90E+04	2.68E+04	1.92E+04	1.21E+04	6.12E+03	2.91E+03
Cs-137 DEC	1.01E+03	6.63E+02	6.61E+02	5.14E+02	3.54E+02	1.94E+02	1.00E+02
Gross Activity (uCi/cc)	1.28E+04	7.93E+03	7.57E+03	5.62E+03	3.70E+03	1.94E+03	9.62E+02
Sample Data (mR/hr)							
10ml Liquid Sample @ Contact	3.26E+05	1.92E+05	1.77E+05	1.26E+05	7.92E+04	3.98E+04	1.89E+04
10ml Liquid Sample @ 3 ft	3.14E+02	1.88E+02	1.75E+02	1.26E+02	8.09E+01	4.13E+01	1.99E+01
1ml Liquid Sample @ Contact	3.26E+04	1.92E+04	1.77E+04	1.26E+04	7.92E+03	3.98E+03	1.89E+03
1ml Liquid Sample @ 3 ft	3.14E+01	1.88E+01	1.75E+01	1.26E+01	8.09E+00	4.13E+00	1.99E+00
0.1ml Liquid Sample @ Contact	3.26E+03	1.92E+03	1.77E+03	1.26E+03	7.92E+02	3.98E+02	1.89E+02
0.1ml Liquid Sample @ 3 ft	3.14E+00	1.88E+00	1.75E+00	1.26E+00	As Read	As Read	As Read

Suppression Pool Water					
	Real Time	12:15	12:30	12:45	13:00
	Drill Time	5:15	5:30	5:45	6:00
Concentration (uCi/cc)					
Kr-85		<LLD	<LLD	<LLD	<LLD
Kr-85m		<LLD	<LLD	<LLD	<LLD
Kr-87		<LLD	<LLD	<LLD	<LLD
Kr-88		<LLD	<LLD	<LLD	<LLD
Xe-131m		3.37E-05	2.15E-05	1.48E-05	1.07E-05
Xe-133		1.29E-02	8.14E-03	5.57E-03	3.99E-03
Xe-133m		9.13E-04	5.79E-04	3.96E-04	2.84E-04
Xe-135		1.18E-01	7.35E-02	4.94E-02	3.48E-02
Xe-138		<LLD	<LLD	<LLD	<LLD
Total Noble Gas		1.32E-01	8.23E-02	5.54E-02	3.91E-02
I-131		7.61E+01	4.85E+01	3.34E+01	2.42E+01
I-132		6.26E+01	3.71E+01	2.37E+01	1.59E+01
I-133		1.44E+02	9.13E+01	6.24E+01	4.48E+01
I-134		4.05E+01	2.12E+01	1.20E+01	7.12E+00
I-135		1.12E+02	6.94E+01	4.66E+01	3.29E+01
Total Iodine		4.35E+02	2.68E+02	1.78E+02	1.25E+02
Sr-89		5.89E+00	3.76E+00	2.59E+00	1.88E+00
Sr-90		2.32E-01	1.48E-01	1.02E-01	7.40E-02
Ru-103		1.84E+00	1.17E+00	8.09E-01	5.85E-01
Ru-106		4.18E-01	2.67E-01	1.84E-01	1.33E-01
Te-132		3.70E+01	2.36E+01	1.62E+01	1.17E+01
Cs-134		5.19E+00	3.31E+00	2.28E+00	1.65E+00
Cs-136		2.07E+00	1.32E+00	9.09E-01	6.57E-01
Cs-137		3.25E+00	2.08E+00	1.43E+00	1.04E+00
Ba-140		1.33E+01	8.51E+00	5.86E+00	4.24E+00
La-140		3.01E+00	1.95E+00	1.36E+00	1.00E+00
Total Particulates		7.22E+01	4.61E+01	3.18E+01	2.30E+01
Dose Equivalent (uCi/cc)					
Xe-133 DEC		8.44E-01	5.26E-01	3.53E-01	2.49E-01
I-131 DEC		1.48E+03	8.84E+02	5.73E+02	3.91E+02
Cs-137 DEC		5.49E+01	3.51E+01	2.43E+01	1.76E+01
Gross Activity (uCi/cc)		5.07E+02	3.14E+02	2.10E+02	1.48E+02
Sample Data (mR/hr)					
10ml Liquid Sample @ Contact		9.56E+03	5.70E+03	3.68E+03	2.51E+03
10ml Liquid Sample @ 3 ft		1.02E+01	6.17E+00	4.04E+00	2.78E+00
1ml Liquid Sample @ Contact		9.56E+02	5.70E+02	3.68E+02	2.51E+02
1ml Liquid Sample @ 3 ft		1.02E+00	As Read	As Read	As Read
0.1ml Liquid Sample @ Contact		9.56E+01	5.70E+01	3.68E+01	2.51E+01
0.1ml Liquid Sample @ 3 ft		As Read	As Read	As Read	As Read

Suppression Pool Water	
Real Time	
Drill Time	
Concentration (uCi/cc)	
Kr-85	
Kr-85m	
Kr-87	
Kr-88	
Xe-131m	
Xe-133	
Xe-133m	
Xe-135	
Xe-138	
Total Noble Gas	
I-131	
I-132	
I-133	
I-134	
I-135	
Total Iodine	
Sr-89	
Sr-90	
Ru-103	
Ru-106	
Te-132	
Cs-134	
Cs-136	
Cs-137	
Ba-140	
La-140	
Total Particulates	
Dose Equivalent (uCi/cc)	
Xe-133 DEC	
I-131 DEC	
Cs-137 DEC	
Gross Activity (uCi/cc)	
Sample Data (mR/hr)	
10ml Liquid Sample @ Contact	
10ml Liquid Sample @ 3 ft	
1ml Liquid Sample @ Contact	
1ml Liquid Sample @ 3 ft	
0.1ml Liquid Sample @ Contact	
0.1ml Liquid Sample @ 3 ft	

Secondary Containment								
Real Time	7:00	7:30	8:00	8:30	9:00	9:30	10:00	
Drill Time	0:00	0:30	1:00	1:30	2:00	2:30	3:00	
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Iodine	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-103	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-106	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-136	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Particulates	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Dose Equivalent (uCi/cc)								
Xe-133 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Gross Activity (uCi/cc)	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Secondary Containment							
Real Time	10:30	10:45	11:00	11:15	11:30	11:45	12:00
Drill Time	3:30	3:45	4:00	4:15	4:30	4:45	5:00
Concentration (uCi/cc)							
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	3.76E-03	5.49E-03	4.29E-03	3.65E-03	2.17E-03
Xe-133	<LLD	<LLD	1.50E+00	2.18E+00	1.69E+00	1.44E+00	8.49E-01
Xe-133m	<LLD	<LLD	1.06E-01	1.54E-01	1.20E-01	1.02E-01	6.00E-02
Xe-135	<LLD	<LLD	1.50E+01	2.14E+01	1.64E+01	1.37E+01	7.94E+00
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	1.66E+01	2.38E+01	1.82E+01	1.52E+01	8.85E+00
I-131	<LLD	<LLD	2.75E+01	1.28E+01	6.66E+00	5.79E+00	1.65E+00
I-132	<LLD	<LLD	3.18E+01	1.39E+01	6.82E+00	5.52E+00	1.46E+00
I-133	<LLD	<LLD	5.39E+01	2.49E+01	1.29E+01	1.11E+01	3.15E+00
I-134	<LLD	<LLD	3.61E+01	1.44E+01	6.33E+00	4.56E+00	1.07E+00
I-135	<LLD	<LLD	4.53E+01	2.07E+01	1.05E+01	8.93E+00	2.48E+00
Total Iodine	<LLD	<LLD	1.95E+02	8.67E+01	4.32E+01	3.59E+01	9.82E+00
Sr-89	<LLD	<LLD	2.12E+00	9.88E-01	5.15E-01	4.48E-01	1.28E-01
Sr-90	<LLD	<LLD	8.36E-02	3.89E-02	2.03E-02	1.76E-02	5.03E-03
Ru-103	<LLD	<LLD	6.62E-01	3.08E-01	1.61E-01	1.40E-01	3.99E-02
Ru-106	<LLD	<LLD	1.51E-01	7.01E-02	3.65E-02	3.18E-02	9.07E-03
Te-132	<LLD	<LLD	1.35E+01	6.26E+00	3.26E+00	2.83E+00	8.05E-01
Cs-134	<LLD	<LLD	1.87E+00	8.69E-01	4.53E-01	3.94E-01	1.13E-01
Cs-136	<LLD	<LLD	7.46E-01	3.47E-01	1.81E-01	1.57E-01	4.49E-02
Cs-137	<LLD	<LLD	1.17E+00	5.45E-01	2.84E-01	2.47E-01	7.05E-02
Ba-140	<LLD	<LLD	4.81E+00	2.24E+00	1.17E+00	1.01E+00	2.89E-01
La-140	<LLD	<LLD	1.01E+00	4.75E-01	2.51E-01	2.22E-01	6.42E-02
Total Particulates	<LLD	<LLD	2.61E+01	1.21E+01	6.33E+00	5.49E+00	1.57E+00
Dose Equivalent (uCi/cc)							
Xe-133 DEC	<LLD	<LLD	1.07E+02	1.53E+02	1.17E+02	9.75E+01	5.67E+01
I-131 DEC	<LLD	<LLD	7.74E+02	3.35E+02	1.62E+02	1.30E+02	3.45E+01
Cs-137 DEC	<LLD	<LLD	1.95E+01	9.11E+00	4.76E+00	4.15E+00	1.19E+00
Gross Activity (uCi/cc)	<LLD	<LLD	2.37E+02	1.23E+02	6.78E+01	5.66E+01	2.02E+01
Sample Data (mR/hr)							
15ml Gas Sample @ Contact	As Read	As Read	4.90E+03	2.21E+03	1.11E+03	9.03E+02	2.63E+02
15ml Gas Sample @ 3 ft	As Read	As Read	2.70E+00	1.22E+00	As Read	As Read	As Read
Silver Zeolite @ Contact	As Read	As Read	6.11E+03	2.76E+03	1.39E+03	1.13E+03	3.28E+02
Silver Zeolite @ 3 ft	As Read	As Read	6.45E+00	2.91E+00	1.46E+00	1.19E+00	As Read
Filter Paper @ Contact	As Read	As Read	3.41E+02	1.54E+02	7.70E+01	6.27E+01	1.82E+01
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Secondary Containment					
Real Time	12:15	12:30	12:45	13:00	
Drill Time	5:15	5:30	5:45	6:00	
Concentration (uCi/cc)					
Kr-85	<LLD	<LLD	<LLD	<LLD	
Kr-85m	<LLD	<LLD	<LLD	<LLD	
Kr-87	<LLD	<LLD	<LLD	<LLD	
Kr-88	<LLD	<LLD	<LLD	<LLD	
Xe-131m	1.28E-03	6.64E-04	3.53E-04	1.92E-04	
Xe-133	4.99E-01	2.59E-01	1.38E-01	7.49E-02	
Xe-133m	3.52E-02	1.83E-02	9.69E-03	5.25E-03	
Xe-135	4.58E+00	2.34E+00	1.22E+00	6.52E-01	
Xe-138	<LLD	<LLD	<LLD	<LLD	
Total Noble Gas	5.11E+00	2.62E+00	1.37E+00	7.32E-01	
I-131	2.74E-01	6.95E-03	1.86E-04	5.13E-06	
I-132	2.25E-01	5.31E-03	1.32E-04	3.38E-06	
I-133	5.18E-01	1.31E-02	3.47E-04	9.51E-06	
I-134	1.46E-01	3.04E-03	6.66E-05	1.51E-06	
I-135	4.02E-01	9.95E-03	2.59E-04	6.98E-06	
Total Iodine	1.56E+00	3.83E-02	9.90E-04	2.65E-05	
Sr-89	2.12E-02	5.39E-04	1.44E-05	3.98E-07	
Sr-90	8.35E-04	2.12E-05	5.68E-07	<LLD	
Ru-103	6.61E-03	1.68E-04	4.49E-06	1.24E-07	
Ru-106	1.50E-03	3.83E-05	1.02E-06	<LLD	
Te-132	1.33E-01	3.38E-03	9.02E-05	2.49E-06	
Cs-134	1.87E-02	4.75E-04	1.27E-05	3.51E-07	
Cs-136	7.44E-03	1.89E-04	5.05E-06	1.40E-07	
Cs-137	1.17E-02	2.97E-04	7.95E-06	2.20E-07	
Ba-140	4.79E-02	1.22E-03	3.26E-05	9.00E-07	
La-140	1.08E-02	2.79E-04	7.57E-06	2.12E-07	
Total Particulates	2.60E-01	6.61E-03	1.76E-04	4.88E-06	
Dose Equivalent (uCi/cc)					
Xe-133 DEC	3.27E+01	1.67E+01	8.74E+00	4.66E+00	
I-131 DEC	5.32E+00	1.27E-01	3.18E-03	8.30E-05	
Cs-137 DEC	1.97E-01	5.04E-03	1.35E-04	3.74E-06	
Gross Activity (uCi/cc)	6.94E+00	2.66E+00	1.37E+00	7.32E-01	
Sample Data (mR/hr)					
15ml Gas Sample @ Contact	5.75E+01	1.24E+01	6.04E+00	3.21E+00	
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	
Silver Zeolite @ Contact	7.17E+01	1.54E+01	7.53E+00	4.00E+00	
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	
Filter Paper @ Contact	3.96E+00	As Read	As Read	As Read	
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	

Secondary Containment	
	Real Time
	Drill Time
Concentration (uCi/cc)	
Kr-85	
Kr-85m	
Kr-87	
Kr-88	
Xe-131m	
Xe-133	
Xe-133m	
Xe-135	
Xe-138	
Total Noble Gas	
I-131	
I-132	
I-133	
I-134	
I-135	
Total Iodine	
Sr-89	
Sr-90	
Ru-103	
Ru-106	
Te-132	
Cs-134	
Cs-136	
Cs-137	
Ba-140	
La-140	
Total Particulates	
Dose Equivalent (uCi/cc)	
Xe-133 DEC	
I-131 DEC	
Cs-137 DEC	
Gross Activity (uCi/cc)	
Sample Data (mR/hr)	
15ml Gas Sample @ Contact	
15ml Gas Sample @ 3 ft	
Silver Zeolite @ Contact	
Silver Zeolite @ 3 ft	
Filter Paper @ Contact	
Filter Paper @ 3 ft	

Stack								
	Real Time	7:00	7:30	8:00	8:30	9:00	9:30	10:00
	Drill Time	0:00	0:30	1:00	1:30	2:00	2:30	3:00
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Iodine	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-103	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ru-106	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-132	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-136	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Particulates	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Dose Equivalent (uCi/cc)								
Xe-133 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137 DEC	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Gross Activity (uCi/cc)	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	As Read

Stack								
	Real Time	10:30	10:45	11:00	11:15	11:30	11:45	12:00
	Drill Time	3:30	3:45	4:00	4:15	4:30	4:45	5:00
Concentration (uCi/cc)								
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-131m	<LLD	<LLD	<LLD	2.88E-05	1.11E-04	1.62E-04	1.73E-04	
Xe-133	<LLD	<LLD	1.26E-05	1.15E-02	4.42E-02	6.43E-02	6.84E-02	
Xe-133m	<LLD	<LLD	8.94E-07	8.12E-04	3.12E-03	4.54E-03	4.82E-03	
Xe-135	<LLD	<LLD	1.26E-04	1.13E-01	4.26E-01	6.10E-01	6.38E-01	
Xe-138	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total Noble Gas	<LLD	<LLD	1.39E-04	1.25E-01	4.73E-01	6.79E-01	7.11E-01	
I-131	<LLD	<LLD	4.11E-04	2.10E-02	1.22E-02	6.39E-03	4.63E-03	
I-132	<LLD	<LLD	4.74E-04	2.26E-02	1.24E-02	6.06E-03	4.10E-03	
I-133	<LLD	<LLD	8.05E-04	4.09E-02	2.36E-02	1.23E-02	8.84E-03	
I-134	<LLD	<LLD	5.37E-04	2.28E-02	1.13E-02	4.97E-03	2.99E-03	
I-135	<LLD	<LLD	6.77E-04	3.38E-02	1.92E-02	9.84E-03	6.97E-03	
Total Iodine	<LLD	<LLD	2.90E-03	1.41E-01	7.87E-02	3.95E-02	2.75E-02	
Sr-89	<LLD	<LLD	3.17E-05	1.62E-03	9.44E-04	4.94E-04	3.58E-04	
Sr-90	<LLD	<LLD	1.25E-06	6.39E-05	3.72E-05	1.95E-05	1.41E-05	
Ru-103	<LLD	<LLD	9.89E-06	5.07E-04	2.95E-04	1.54E-04	1.12E-04	
Ru-106	<LLD	<LLD	2.25E-06	1.15E-04	6.70E-05	3.50E-05	2.54E-05	
Te-132	<LLD	<LLD	2.01E-04	1.03E-02	5.97E-03	3.12E-03	2.26E-03	
Cs-134	<LLD	<LLD	2.79E-05	1.43E-03	8.31E-04	4.35E-04	3.16E-04	
Cs-136	<LLD	<LLD	1.11E-05	5.71E-04	3.32E-04	1.73E-04	1.26E-04	
Cs-137	<LLD	<LLD	1.75E-05	8.96E-04	5.21E-04	2.73E-04	1.98E-04	
Ba-140	<LLD	<LLD	7.19E-05	3.68E-03	2.14E-03	1.12E-03	8.11E-04	
La-140	<LLD	<LLD	1.51E-05	7.84E-04	4.62E-04	2.45E-04	1.80E-04	
Total Particulates	<LLD	<LLD	3.90E-04	2.00E-02	1.16E-02	6.06E-03	4.40E-03	
Dose Equivalent (uCi/cc)								
Xe-133 DEC	<LLD	<LLD	8.98E-04	8.03E-01	3.04E+00	4.35E+00	4.55E+00	
I-131 DEC	<LLD	<LLD	1.15E-02	5.41E-01	2.93E-01	1.43E-01	9.66E-02	
Cs-137 DEC	<LLD	<LLD	2.92E-04	1.50E-02	8.73E-03	4.58E-03	3.33E-03	
Gross Activity (uCi/cc)	<LLD	<LLD	3.43E-03	2.86E-01	5.64E-01	7.24E-01	7.43E-01	
Sample Data (mR/hr)								
15ml Gas Sample @ Contact	As Read	As Read	As Read	3.97E+00	3.96E+00	3.92E+00	3.77E+00	
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	
Silver Zeolite @ Contact	As Read	As Read	As Read	4.95E+00	4.94E+00	4.89E+00	4.69E+00	
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	
Filter Paper @ Contact	As Read	As Read	As Read	As Read	As Read	As Read	As Read	
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read	As Read	As Read	As Read	

Stack							
	Real Time	12:15	12:30	12:45	13:00		
	Drill Time	5:15	5:30	5:45	6:00		
Concentration (uCi/cc)							
Kr-85	<LLD	<LLD	<LLD	<LLD	<LLD		
Kr-85m	<LLD	<LLD	<LLD	<LLD	<LLD		
Kr-87	<LLD	<LLD	<LLD	<LLD	<LLD		
Kr-88	<LLD	<LLD	<LLD	<LLD	<LLD		
Xe-131m	1.57E-04	1.25E-04	9.16E-05	6.32E-05			
Xe-133	6.17E-02	4.92E-02	3.59E-02	2.47E-02			
Xe-133m	4.34E-03	3.46E-03	2.52E-03	1.73E-03			
Xe-135	5.66E-01	4.44E-01	3.18E-01	2.15E-01			
Xe-138	<LLD	<LLD	<LLD	<LLD			
Total Noble Gas	6.32E-01	4.96E-01	3.57E-01	2.42E-01			
I-131	1.68E-03	3.46E-04	2.03E-05	8.20E-07			
I-132	1.38E-03	2.64E-04	1.44E-05	5.41E-07			
I-133	3.19E-03	6.50E-04	3.78E-05	1.52E-06			
I-134	8.94E-04	1.51E-04	7.26E-06	2.41E-07			
I-135	2.47E-03	4.95E-04	2.82E-05	1.12E-06			
Total Iodine	9.61E-03	1.91E-03	1.08E-04	4.24E-06			
Sr-89	1.30E-04	2.68E-05	1.57E-06	<LLD			
Sr-90	5.13E-06	1.06E-06	<LLD	<LLD			
Ru-103	4.06E-05	8.36E-06	4.90E-07	<LLD			
Ru-106	9.24E-06	1.90E-06	1.12E-07	<LLD			
Te-132	8.19E-04	1.68E-04	9.83E-06	3.98E-07			
Cs-134	1.15E-04	2.36E-05	1.38E-06	<LLD			
Cs-136	4.57E-05	9.40E-06	5.51E-07	<LLD			
Cs-137	7.19E-05	1.48E-05	8.67E-07	<LLD			
Ba-140	2.95E-04	6.06E-05	3.55E-06	1.44E-07			
La-140	6.65E-05	1.39E-05	8.25E-07	<LLD			
Total Particulates	1.60E-03	3.28E-04	1.92E-05	7.79E-07			
Dose Equivalent (uCi/cc)							
Xe-133 DEC	4.04E+00	3.17E+00	2.27E+00	1.54E+00			
I-131 DEC	3.27E-02	6.30E-03	3.47E-04	1.33E-05			
Cs-137 DEC	1.21E-03	2.50E-04	1.47E-05	5.98E-07			
Gross Activity (uCi/cc)	6.43E-01	4.99E-01	3.57E-01	2.42E-01			
Sample Data (mR/hr)							
15ml Gas Sample @ Contact	3.00E+00	2.23E+00	1.57E+00	1.06E+00			
15ml Gas Sample @ 3 ft	As Read	As Read	As Read	As Read			
Silver Zeolite @ Contact	3.74E+00	2.77E+00	1.95E+00	1.32E+00			
Silver Zeolite @ 3 ft	As Read	As Read	As Read	As Read			
Filter Paper @ Contact	As Read	As Read	As Read	As Read			
Filter Paper @ 3 ft	As Read	As Read	As Read	As Read			

Stack	
	Real Time
	Drill Time
Concentration (uCi/cc)	
Kr-85	
Kr-85m	
Kr-87	
Kr-88	
Xe-131m	
Xe-133	
Xe-133m	
Xe-135	
Xe-138	
Total Noble Gas	
I-131	
I-132	
I-133	
I-134	
I-135	
Total Iodine	
Sr-89	
Sr-90	
Ru-103	
Ru-106	
Te-132	
Cs-134	
Cs-136	
Cs-137	
Ba-140	
La-140	
Total Particulates	
Dose Equivalent (uCi/cc)	
Xe-133 DEC	
I-131 DEC	
Cs-137 DEC	
Gross Activity (uCi/cc)	
Sample Data (mR/hr)	
15ml Gas Sample @ Contact	
15ml Gas Sample @ 3 ft	
Silver Zeolite @ Contact	
Silver Zeolite @ 3 ft	
Filter Paper @ Contact	
Filter Paper @ 3 ft	