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CPSES-200102112
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RP-18

September 10, 2001

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
TRANSMITTAL OF THE CPSES 2001 EMERGENCY
PREPAREDNESS EXERCISE SCENARIO - REVISED

REF: TXU Electric letter logged TXX-01114 from C. L. Terry to USNRC dated July 30, 2001

Gentlemen:

In the referenced letter, TXU Electric submitted a copy of the Emergency Preparedness Exercise Scenario Manual for the Graded Exercise that was scheduled at CPSES on August 22, 2001. Subsequent to the referenced submittal, TXU Electric made minor changes in the scenario that was actually performed for the Graded Exercise. The changes were discussed with the NRC Regional inspectors during the onsite exercise inspection activities conducted the week of August 20-24, 2001 at CPSES.

As requested September 4, 2001 during a telephone conversation with the lead NRC inspector for the Graded Exercise, TXU Electric herein submits one copy of the revised Emergency Preparedness Scenario Manual for the August 22, 2001 exercise performed at CPSES.

A045

NOTE: **This transmittal contains Emergency Preparedness exercise information that may be immediately released to the Public Document Room as the CPSES Graded Exercise was conducted August 22, 2001.**

This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2

Sincerely,

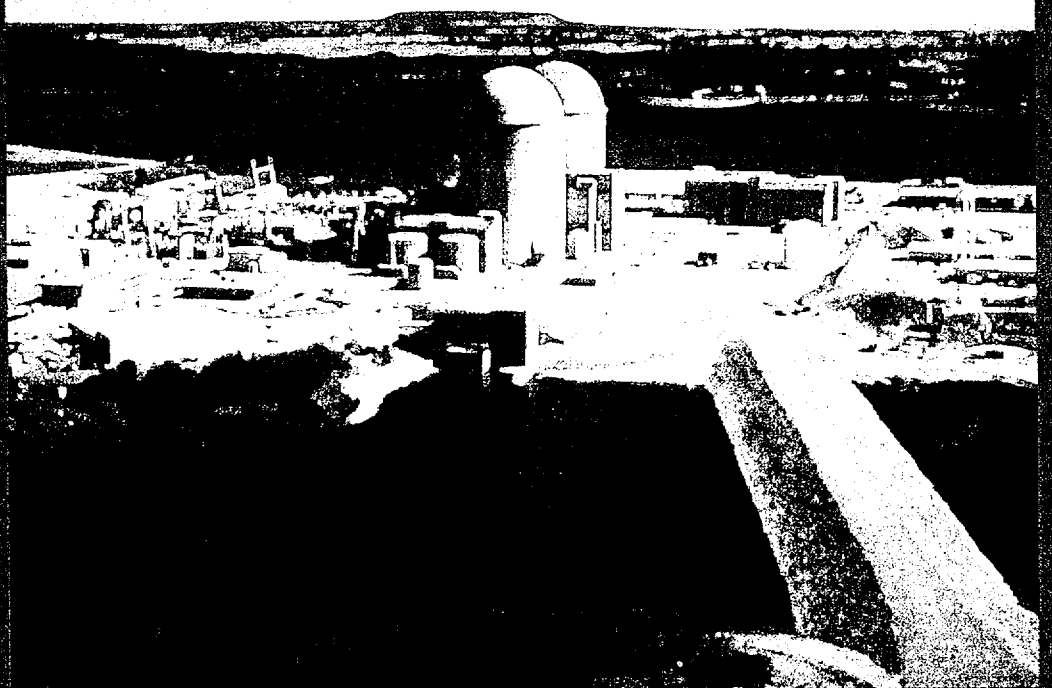
C. L. Terry

By: Roger D. Walker
Roger D. Walker
Regulatory Affairs Manager

CLW/clw
Enclosure

c - E. W. Merschoff, Region IV (clo)
J. A . Clark, Region IV (clo)
D. H. Jaffe, NRR (clo)
Resident Inspectors, CPSES (clo)
W. A. Maier, Region IV

2001 graded exercise



Comanche Peak Steam Electric Station

confidential until after the exercise

TXU ELECTRIC
COMANCHE PEAK STEAM ELECTRIC STATION
2001 GRADED EXERCISE

TABLE OF CONTENTS

10. IN-PLANT SURVEY DATA

Contains in-plant radiological survey information.

11. ONSITE SURVEY DATA

Contains onsite plume exposure information.

12. ERDC (MAINTENANCE) CONTROLLER INSTRUCTIONS

Special instructions to Emergency Repair and Damage Control team controllers.

13. FIRE BRIGADE CONTROLLER INSTRUCTIONS

Special instructions to Fire Drill controllers.

14. FIRST AID/RESCUE CONTROLLER INSTRUCTIONS

Special instructions and data for the First Aid controllers.

15. PARTICIPANTS

List of expected participants by facility and position.

16. CONTROLLER/EVALUATOR/ROLEPLAYER ORGANIZATION

List of personnel who will participate as a controller, evaluator, or roleplayer.

17. LOG SHEETS

Blank log sheets for controller/evaluator comments.

The following sections are contained within a separate DATA SUPPLEMENT Manual

1. OFFSITE SURVEY DATA (TXU ELECTRIC)

Contains offsite exposure and contamination information for the utility field teams.

2. CHEMISTRY DATA and CONTROLLER INSTRUCTIONS

Contains onsite chemistry information and controller instructions.

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

INTRODUCTION

The 2001 Graded Exercise will verify the capability of CPSES and offsite agencies to respond to a simulated accident. The exercise will provide training, test the Emergency Response Organization, and identify potential problems in the overall response effort. It will be graded by the Nuclear Regulatory Commission (NRC) and Federal Emergency Management Agency (FEMA). The following is a schedule of exercise-related activities.

Tuesday, August 7

2:30 p.m., Lead and County Controllers Briefing, EP Conference Room, NOSF

Thursday, August 9

1:00 p.m., Control Room Controllers and Simulator Operators Briefing, EP Conference Room, NOSF

Monday, August 13

10:00 a.m., TSC Controllers Briefing, EP Conference Room, NOSF

1:00 p.m., Security and LSC Controllers Briefing, EP Conference Room, NOSF

Tuesday, August 14

10:00 a.m., Phone Bank Roleplayers Briefing, EP Conference Room, NOSF

1:00 p.m., News Center (NC) Controllers and Reporter Roleplayers Briefing, EP Conference Room, NOSF

1:00 p.m., Offsite Survey Team Controller Briefing, EOF, NOSF

Wednesday, August 15

1:00 p.m., EOF Controllers Briefing, EP Conference Room, NOSF

Thursday, August 16

09:00 a.m., OSC Rad Team Controllers Briefing, Outage Control Center

1:00 p.m., OSC Management Controllers Briefing, Outage Control Center

Monday, August 20

9:30 a.m.,	NRC Entrance Meeting; EP Conference Room, NOSF

Tuesday, August 21

9:00 a.m.,	Scenario briefing and facility tour for NRC Inspection Team; EP Conference Room, NOSF
1:00 p.m.,	Offsite Roleplayers and Controllers Briefing, Hood County Annex Auditorium, Granbury
2:00 p.m.	Player/Controller/Observer briefing with FEMA – BRC Staging Area, Granbury.

Wednesday, August 22

7:00 a.m.,	Brief on-coming Operations crew in the simulator.
7:30 a.m.,	Exercise Begins
~ 3:00 p.m.,	Exercise Terminated, Facility Debriefs Begin
4:30 p.m.,	Lead Controller/Evaluator Meeting, EP Staff Area, NOSF

Thursday, August 23

8:00 a.m.,	Offsite Critique, Hood County Annex Auditorium, Granbury
10:00 a.m.,	Federal/State/Local Critique, Hood County Annex Auditorium, Granbury
11:30 a.m.,	Public Meeting (NRC and FEMA), Hood County Annex Auditorium, Granbury
3:00 p.m.,	Presentation of exercise findings to Management Review Board; POD Room, MSC

Friday, August 24

1:00 p.m.,	NRC Exit Meeting, CPE Executive Conference Room

A copy of this manual will be provided to each Controller/Evaluator, and selected observers prior to the exercise.

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

OBJECTIVES

TXU - CPSES
2001 GRADED EXERCISE

ONSITE OBJECTIVES

The locations where objectives are anticipated to be demonstrated are indicated by abbreviations as shown below. Actual player response, to conditions existing at the time of the exercise, may result in an objective being demonstrated in another facility.

Some objectives (designated NFD) are not intended to be fully demonstrated by this scenario. The portions of these objectives demonstrated by the players will be graded by the facility evaluators, but credit for objective demonstration is not intended.

FACILITY

CONTROL ROOM	(CR)
TECHNICAL SUPPORT CENTER	(TSC)
EMERGENCY OPERATIONS FACILITY	(EOF)
OPERATIONS SUPPORT CENTER	(OSC)
NEWS CENTER	(NC)
Not fully demonstrated	(NFD)

	OBJECTIVE	FACILITY
1.	Demonstrate the ability of the emergency organization to assess plant conditions and make appropriate emergency classification.	CR, TSC
2.	Demonstrate the ability to notify and update federal, state, and local authorities.	CR, TSC, EOF
3.	Demonstrate the ability to alert, notify, and update onsite personnel.	CR, TSC, EOF
4.	Demonstrate the ability to initially staff and activate the Emergency Response Facilities.	ALL
5.	Demonstrate the adequacy of procedures, equipment, displays, security provisions, and habitability precautions for the Emergency Response Facilities.	ALL
6.	Demonstrate the ability to direct, coordinate, and control emergency activities.	ALL
7.	Demonstrate the ability to transfer command and control of the emergency response.	CR, TSC, EOF
8.	Demonstrate the adequacy of communication procedures and equipment for emergency response activities.	ALL
9.	Demonstrate the ability to coordinate the formation and dissemination of accurate information and instructions to the public through news releases.	NC
10.	Demonstrate the ability to establish and operate rumor control.	NC
11.	Demonstrate the ability to monitor, assess and correlate onsite radiological conditions.	CR, TSC, OSC
12.	Demonstrate the ability of the Engineering Team to assess plant conditions.	TSC
13.	Demonstrate the ability to perform dose projections.	EOF

	OBJECTIVE	FACILITY
14.	Demonstrate the ability to make protective action recommendations.	EOF
15.	Demonstrate the ability to monitor and control emergency worker exposure.	ALL
16.	Demonstrate the ability to provide onsite contamination control.	OSC
17.	Demonstrate the ability of Offsite Radiological Monitoring Teams to collect and report field data.	EOF
18.	Demonstrate the ability to collect and evaluate environmental samples and surveys.	NFD
19.	Demonstrate the ability to provide initial and continuous accountability for all personnel within the Protected Area.	NFD
20.	Demonstrate the ability to coordinate the evacuation of onsite personnel.	NFD
21.	Demonstrate the ability to respond to and treat a contaminated injured individual.	NFD
22.	Demonstrate the ability to transport contaminated injured individuals from CPSES to the hospital.	NFD
23.	Demonstrate the adequacy of facilities, equipment, supplies, and personnel for decontamination of emergency workers, equipment, and vehicles.	NFD
24.	Demonstrate the ability to respond to an onsite fire.	NFD
25.	Demonstrate the ability to make the decision to recommend the use of KI to emergency workers, as well as to distribute and administer KI once the decision is made.	NFD
26.	Demonstrate the ability to implement measures for controlled reentry and recovery.	NFD

	OBJECTIVE	FACILITY
27.	Demonstrate the ability to collect, sample, and analyze a post-accident sample.	NFD
28.	Demonstrate the ability to perform a shift change in each of the Emergency Response Facilities.	NFD
29.	Demonstrate the ability to identify the need for and call upon Federal and other outside support agencies for assistance.	EOF
30.	Demonstrate the ability to staff and activate alternate Emergency Operations Facility.	NFD
31.	Demonstrate the ability to staff and activate alternate News Center.	NFD

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COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

GUIDELINES AND EXTENT OF PLAY NOTES

GUIDELINES AND EXTENT OF PLAY NOTES

GENERAL GUIDELINES

The following guidelines have been developed to instruct exercise controllers on the conduct necessary to fulfill the exercise objectives. Where no instructions are provided for a particular objective, actions that would be taken for a real emergency should be taken for the exercise. The intent of the exercise is to demonstrate actual emergency response capabilities as realistically as possible.

1. The exercise controller organization will control all phases of the exercise by passing messages to the participants, either per the timeline or in response to the actions of the participants.

2. The controller and the evaluator organizations are at the direction of the Exercise Lead Controller. Additionally, a Lead Facility Controller will be assigned to each Emergency Response Facility.

3. A controller will be assigned to each location or event where an emergency response is to be demonstrated.

4. The Control Room activities will be conducted in the NOSF Simulator.
   a. Plant Computer System (SPDS) and PC-11 data in the simulator, OSC, TSC, and EOF will be driven by the simulator.
   b. At the direction of the Lead Exercise Controller, if the Simulator fails and cannot be returned to service, the exercise may be continued for the other facilities by the CR staff and controllers acting as roleplayers and presenting simulated plant data by means of the established communication channels.
   c. "All-page" announcements, requiring plant-wide alarms to be sounded, will be coordinated with the actual Control Room as follows:
      - initiating facility will develop the message to be announced, then
      - contact the real Control Room who will actually make the announcement and sound the alarm.

5. The controllers should allow free-play. However, free-play will be stopped under the following conditions:
   a. if the action taken would prevent an exercise objective from being met or is outside the scope of the exercise.
   b. if the actions are judged to be unsafe or leading to violations of laws.
   c. if the actions would degrade systems or equipment, or degrade response to a real emergency.

6. All communications and messages will begin and end with the statement "This is a drill".

GENERAL GUIDELINES (cont.)

7. This exercise will be graded by the NRC and FEMA. Controller/evaluators SHALL NOT coach or correct players during the course of the exercise. Mistakes or areas of improvement should be noted, with feedback given to the players at the critique following the exercise.

8. The 15-minute clock for making local emergency notifications is satisfied when the communicator begins reading the contents of the Emergency Notification Message Form to DPS Waco and Somervell and Hood counties.

9. Participants shall comply with the instructions from the controller organization. If a conflict exists between scenario data and actual data, inform the Facility Lead Controller and wait for further instructions.

10. Controller/evaluators/roleplayers will be identified by wearing either an arm band, special badge, or vest.

11. This exercise is not intended to demonstrate entry into, or use of, the CPSES Severe Accident Management Guidelines (SAMGs).

SAFETY

1. Each controller and evaluator is responsible to ensure that the exercise is conducted in a safe manner.

2. If a controller or evaluator observes an unsafe exercise activity, stop the activity and notify Exercise Lead Controller.

3. If an actual emergency occurs, the exercise may be terminated at the discretion of the on-shift Shift Manager or the Exercise Lead Controller. All communications concerning an actual emergency will begin and end with "This is not, repeat, not a drill."

ACTIVITIES TO BE SIMULATED (EXTENT OF PLAY)

The following is a list of activities that will be simulated during the exercise. NO OTHER ACTIVITIES WILL BE SIMULATED UNLESS APPROVED BY THE EXERCISE LEAD CONTROLLER.

1. The actions of the Control Room crew will be conducted in the NOSF Simulator. Operations personnel will be pre-positioned in the Simulator when the exercise starts. Additional personnel who report to the Control Room during emergencies will report to the Simulator.

2. No activities involving actual plant systems, either manipulation or modification, are allowed by exercise personnel without explicit permission of the on-duty Shift Manager in the real Control Room.

3. Utility personnel that are not onsite at the time of the exercise will not be notified at home.

4. Pager activation will use the normal equipment and procedures, but a "drill only" code will be transmitted.

5. Site evacuation will be simulated. Once the decision to evacuate has been made, a pre-formatted message to simulate the evacuation will be handed to the players. Security should setup roadblock equipment, but traffic will NOT actually be impeded.

6. Accountability will be simulated as follows:
   a. Facility accountability will be performed in the TSC and OSC only.
   b. Security sweeps will be conducted by dispatching Officers, but "bullhorn" announcements will NOT be made.
   c. Security will be required to print a Security Accountability Report. At this point, a Security controller will interject a simulated report and it will be transmitted IAW Security procedures.

7. Emergency repairs or modifications to plant equipment (e.g., temp. cooling of ECCS pumps, breaker replacement, etc) will be simulated. However, all tools, equipment, and procedures required to complete the repairs should be obtained. Every effort should be made by the applicable controller to ensure that needed materials are onhand and are adequate to perform the assigned task.

8. Protective clothing, or other potentially contaminated materials, will not be used outside the Radiologically Controlled Area (RCA) for the purposes of the exercise. Any use of protective clothing, by either onsite or offsite personnel, which is outside of the RCA will be simulated.

ACTIVITIES TO BE SIMULATED (EXTENT OF PLAY) continued

9. If an air purifying or SCBA respirator is dictated for any team (e.g., Fire Brigade, RP, etc); the respirators will be issued, verified operational, seal checked, and then the facepiece removed. If SCBAs are simulated being used, the controllers should simulate the consumption of air, requiring bottle changeout as appropriate.

10. ERDS will be activated from the TSC, however, the activation may be unsuccessful since the NRC Response Center is not participating in the exercise. No further action is required by the exercise players.

11. Fire Brigade should lay out hoses and other suppression equipment, however, actual water flow and/or suppression system operation will be simulated.

12. Roleplayers and/or recordings will be used for:
    * Grid Dispatcher
    * National Weather Service
    * ENS line
    * HPN line
    * Phone Bank
    * Reporters
    * Unit 2 Control Room
    * any injured persons
    * Squaw Creek Park staff

13. Once sufficient personnel have responded to staff the facility, a list of designated players may be given to each facility manager to ensure the designated players are chosen to remain.

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SUBSTITUTE TELEPHONE NUMBERS

SUBSTITUTE TELEPHONE NUMBERS

All communications MUST begin and end with **"This is a drill."**

During the exercise, use the telephone numbers listed below.

Control Room Simulator	
Shift Manager	**5515**
RO Desk	**3210**
Communicator	**3503**
"Emergency"	**4911**
ENS Roleplayer (Using Federal Telephone System (orange tag) phone ext 700-731-8189)	**1-254-897-8336**
HPN Roleplayer (Using Federal Telephone System (orange tag) phone ext 700-731-8192)	**1-254-897-5414**
National Weather Service Recording	**5268**

All communications MUST begin and end with **"This is a drill."**

NOTE: The local hospitals and ambulance services are **NOT** participating with CPSES in this drill. If you have a question, contact your controller before attempting the communication.

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COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

INITIAL CONDITIONS

SHIFT TURNOVER INFORMATION

1.0 INITIAL CONDITIONS:

Time in Core Life:	BOL	T_{avg}:	589 °F
Reactor Power:	100 %	RCS Pressure:	2250 psig
Turbine Load	1162 MWe	Xenon:	Equil.
Boron Concentration:	1415 ppm	Rod Control:	(Auto)
Rod Height:	Bank D @ 215 steps		

2.0 LCOAR/TECHNICAL SPECIFICATION ACTIONS IN EFFECT:

TS#	Description	Reason

None

3.0 CLEARANCES IN EFFECT:

4.0 SAFETY SYSTEM SETTING BYPASS/MALFUNCTIONS:

None

5.0 DEGRADED EQUIPMENT:

6.0 PLANNED EVOLUTIONS:

Shift orders are to maintain load and availability.

7.0 TURNOVER INFORMATION:

- Presently in IPO-003, step 5.5. Unit 2 is at 100 %.
- Radio channel 1 and Gaitronics line 5 will be used for exercise-related communications. All messages should begin and end with "THIS IS A DRILL
- If communicating with PEOs by phone, ensure Simulator operator is aware of content of discussion.
- Training shift PEOs should be used if Fire Brigade is required.
- Requests for Unit 2 information should be made to the Controller.
- Requests for Radwaste or system dispatcher should be made to the Sim. booth, requests for other support should be made to the actual plant groups.
- To make Gaitronics "all-page" announcements or to sound plant-wide alarms, call Clint Carter at x7213 in the real CR.

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

NARRATIVE SUMMARY

This scenario is for Comanche Peak Steam Electric Station Unit 1.

The scenario consists of a failure of Pressurizer Pressure control with a resulting partially open PORV, a fire which leads to a loss of a vital 6.9 kV bus, a turbine and reactor trip due to loss of condenser vacuum, a tube rupture on S/G #4, failed fuel, and an unisolable steam release to the atmosphere from SG #4 safety valve.

The exercise is scheduled to begin at 7:30 a.m., Wednesday, August 22, 2001.

METEOROLOGICAL CONDITIONS

Temperature is 84 degrees with wind out of the southwest at 7 mph. Temperature will increase to about 98 degrees by the end of the exercise. Wind speed will remain light and variable throughout the day.

NARRATIVE SUMMARY

At 0700 a turnover briefing for the simulator crew will occur.

At 0730 the exercise scenario will start on the simulator.

At 0735 the controlling channel of pressurizer pressure will fail high this will result in a pressurizer PORV opening. When pressure lowers to set point the backup channel will close any open PORV but 455 will remain ~ 5% open, operators will need to take procedural action to close the associated block valve.

By ~0750 a fire in CP1-EPMCEB-01 will start which effects associated cable trays.

At 0754 a bus fault caused by the fire above will result in loss of bus 1EA1.

At ~0805 conditions will warrant declaration of an **ALERT** due to fire effecting a safety system.
Emergency Response Facilities should begin staffing.
(EPP-201, Chart 9; 9.H, 9.E, ALERT)

At ~0817 the fire will be put out.

At ~0905 a Loose Parts annunciator will be received in the Control Room.

At ~0910 RCS activity will increase due to the loose part impingement giving indications of fuel damage.

At 0914 vacuum breaker valve 1-HV-2955 will open due to a faulted circuit. This leads to a rapid loss of condenser vacuum and results in a turbine trip and reactor trip. A tube in S/G #4 will rupture at ~550 gpm with RCS activity continuing to increase.

At ~0929 conditions will warrant declaration of an **SITE AREA EMERGENCY** due to a steam generator tube failure greater than capacity of available CCP's and indications of failed fuel. A Site Evacuation will be called.
(EPP-201, Chart 3; 3.A, 3.B, 3.C, SAE).

By ~0959 Protected Area accountability should be accomplished, all personnel will be accounted for.

At 1017 a safety valve on S/G #4 will open initiating a radiological release to the atmosphere.

At ~1032 conditions will warrant declaration of a **GENERAL EMERGENCY.**

(EPP-201, Chart 3; 3.A, 3.B, 3.C, 3.D, General Emergency)
(PAR Evac. 2A based on plant conditions.)

At ~1040 the MDAFW Pump 1-02 will trip due to over current caused by a pump/motor coupling failure.

At ~1214 a personnel medical emergency will occur in the Turbine Bldg. (See First Aide/Rescue Controller notes for details.)

At ~ 1300 the safety valve will close terminating the release.

The exercise may be terminated by the Lead Controller when the onsite and offsite objectives have been satisfied.

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COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

ONSITE EXERCISE GUIDE

2001 BLUE Team aded Exercise
Timeline and Response Guide

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
0700				Simulator	Initial conditions established for the operating crew.		**All events refer to Unit 1. Ensure crew has had a chance to walkdown the control boards.**
0730	1	CR Lead Controller	Shift Manager	Simulator			
0735				Simulator	Control channel of pressurizer Pressure will fail resulting in PORV opening which will not fully close.	The Ops Crew should quantify the leak per ABN-705.	
0750				Simulator	A fire will start in MCC CP1-EPMCEB-01.	Dispatch recon PEO to confirm fire alarm and assemble Fire Brigade.	Details are on ERDC controller and Fire Brigade Controller notes.
0754				Simulator	The above fire will cause damage to 2 nearby cable trays which short resulting in a loss of bus 1EA1.	Respond to loss of bus 1EA1 per ABN-602	
~0805				Simulator	Conditions support Alert declaration .	Implement the Emergency Plan commensurate with an ALERT.	Ref EPP-201, Chart 9; 9.H, 9.E = ALERT

*** - Inform the Exercise Lead Controller if this message is passed.**

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
~0805	2*	CR Lead Controller	Emerg. Coord.	Simulator	**CONTINGENCY MESSAGE:** Plant Conditions warrant declaration of an ALERT.		Inform the Exercise Lead Controller if this message is passed.
~0817		Fire Brigade Controller	Fire Brigade Leader	Fire Scene	The fire is out.	Relay this information to the Control Room	
~0900	3*	Simulator Lead Controller	TSC Mgr/Emerg. Coord.	Simulator	**CONTINGENCY MESSAGE:** The Emergency Coordinator should relocate to the TSC at this time to keep the scenario on the timeline		The approximate time assumes that the TSC is staffed and ready to activate.
0905				Simulator	A Loose Parts Annunciator is received in the Control Room.	Verify location of alarm.	
0910				Simulator	RCS activity will increase due to loose part impingement.	Monitor RCS activity.	

*** - Inform the Exercise Lead Controller if this message is passed.**

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
0914				Simulator	Vacuum breaker valve 1-HV-2955 fails open due to a faulted circuit. This leads to a rapid loss of condenser vacuum that causes a turbine trip and reactor trip. A tube in the #4 S/G will rupture at ~550 gpm with RCS activity increasing to the failed fuel threshold.	Respond to plant conditions using appropriate Ops procedures.	
~0935	4	TSC/EOF Lead Controller	TSC Mgr./Emerg. Coord.	TSC/EOF	Indications available to support Site Area Emergency declaration.	Implement the Emergency Plan commensurate with a Site Area Emergency. A site evacuation should be ordered. **Evacuation should NOT be performed.** Control Room to sound alarm and read message.	Ref. EPP-201, Chart 3; 3.A, 3.B, 3.C = SAE Pass the site evacuation message after the TSC/EOF Manager has prepared one from his PAD.

*** - Inform the Exercise Lead Controller if this message is passed.**

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
~0945	5*	TSC/EOF Lead Controller	TSC Mgr/Emerg. Coord.	TSC/EOF	**CONTINGENCY MESSAGE** Plant Conditions warrant declaration of a Site Area Emergency.	Implement the Emergency Plan commensurate with a Site Area Emergency. A site evacuation should be ordered. **Evacuation should NOT be performed.** Control Room to sound alarm and read message.	Inform the Exercise Lead Controller if this message is passed.
~0959				EOF	Accountability within the Protected Area should be complete. All personnel are accounted for.	Security Coordinator should be informed of the results.	See Security Controller instructions for accountability.
1017				TSC/EOF	A safety valve on #4 S/G will open initiating a radiological release to the atmosphere. The TSC Mgr. should declare a GENERAL EMERGENCY.	Implement the Emergency Plan commensurate with a GENERAL EMERGENCY.	Ref EPP-201, chart : 3.A, 3.B, 3.C, 3.D = GENERAL EMERGENCY.
~1032	6*	TSC/EOF Lead Controller	TSC Mgr/ Emergency Coord.	TSC/EOF	**CONTINGENCY MESSAGE:** The conditions warrant declaration of a GENERAL EMERGENCY.	Implement the Emergency Plan commensurate with a GENERAL EMERGENCY.	Inform the Exercise Lead Controller if this message is passed.

*** - Inform the Exercise Lead Controller if this message is passed.**

TIME	MESSAGE NUMBER	FROM	TO	LOCATION	SUMMARY	RESPONSE	NOTES
~1214	7	Roleplayer	Control Room Personnel	Simulator	A member of ERDC Team or PEO reports that a coworker just collapsed in the Turbine Bldg. And is in need of medical assistance.	Dispatch First Responders to scene of casualty.	
1300				Simulator	The safety valve on the #4 S/G goes closed.	Recognize that radiological release has terminated	
~1315	8	Exercise Lead Controller	All	All	The exercise is terminated at the direction of the lead controller.	All personnel should secure exercise related activities, restore their facilities, and prepare for facility de-brief.	Pass only with permission of the exercise lead controller. All onsite & offsite objectives have been evaluated.

*** - Inform the Exercise Lead Controller if this message is passed.**

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

MESSAGES

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 1

TO: Shift Manager FROM: Lead Controller

LOCATION: Simulator

TIME: 0715

MESSAGE: "The exercise will begin with the following initial conditions."

END OF MESSAGE

(NOTE: Give Shift Manager copy of Shift Turnover Information sheet as well as a copy of the substitute phone number list.)

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 2

CONTINGENCY MESSAGE

TO: Shift Manager FROM: CR Lead Controller

LOCATION: Simulator

TIME: ~0805

MESSAGE: "Plant conditions warrant declaration of an **ALERT**"

END OF MESSAGE

(NOTE: Inform the Exercise Lead Controller if this message is passed.)

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 3

CONTINGENCY MESSAGE

TO: Emergency Coordinator FROM: CR Lead Controller

LOCATION: Simulator

TIME: ~0900 (Assuming the TSC has been staffed and is ready to activate)

MESSAGE: "The Emergency Coordinator should relocate to the Technical Support Center at this time to keep the scenario on the timeline."

END OF MESSAGE

(NOTE: Inform the Exercise Lead Controller if this message is passed.)

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 4

TO: Emergency Coordinator FROM: TSC Lead Controller

LOCATION: TSC

TIME: ~0935

MESSAGE: Direct the actual Control Room to make the following announcement and sound the evacuation alarm.

Attention in the plant. Clear the Gaitronics for an emergency All-Page announcement.

This is a drill.

A SITE AREA EMERGENCY has been declared due to a Steam Generator tube rupture with indications of failed fuel.

Channel 5 is for Emergency use Only.

The following alarm is for drill purposes only. Disregard the alarm. Do not evacuate.

In a real emergency, you would be directed to evacuate the site and to procede to one of the Relocation Centers, in Cleburne at the Citizens Center or in Stephenville at the City Park.

This is a drill.

Sound the site evacuation alarm for 15-30 seconds.

Repeat announcement.

END OF MESSAGE

Note: Pass this message immediately after the Emergency Coordinator develops the drill evacuation announcement.

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 5

CONTINGENCY MESSAGE

TO: Emergency Coordinator FROM: TSC Lead Controller

LOCATION: TSC

TIME: ~0945

MESSAGE: "Plant conditions warrant the declaration of a Site Area Emergency."

Controller note: If it is necessary to pass this message be prepared to also pass message #4.

(Inform the Exercise Lead Controller if this message is passed.)

END OF MESSAGE

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 6

CONTINGENCY MESSAGE

TO: Emergency Coordinator FROM: TSC Lead Controller

LOCATION: TSC

TIME: ~1032

MESSAGE: "Plant conditions warrant declaration of a GENERAL EMERGENCY."

END OF MESSAGE

(NOTE: Inform the Exercise Lead Controller if this message is passed.)

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 7

TO: Control Room Personnel FROM: Roleplayer

LOCATION: Turbine Bldg.

TIME: ~1214

MESSAGE: **Call Drill Emergency Number 4911 and pass the following information:**

"This is a DRILL.

This is _____.

One of my coworkers _____ said that he/she was feeling lightheaded and dizzy and has just passed out.

We are in the Turbine Bldg. Elevation 803'. Send help.

This is a drill.

END OF MESSAGE

THIS IS A DRILL

THIS IS A DRILL

DO NOT initiate actions affecting plant operations.

MESSAGE NUMBER: 8

TO: ALL FROM: Exercise Lead Controller

LOCATION: Plant

TIME: ~1315

MESSAGE: "The exercise is terminated. All personnel should secure from the exercise activities, restore their facilities, assemble all paper and forms used during the exercised, and prepare for debriefs."

END OF MESSAGE

THIS IS A DRILL

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

METEOROLOGICAL CONDITIONS

METEOROLOGY DATA

Real Time	Wind Speed	Wind Dir.	Delta-t	Air Temp.
07:30	8	200	-0.5	85
07:45	8	200	-0.5	85
08:00	8	200	-0.5	86
08:15	8	205	-0.7	86
08:30	9	205	-0.7	86
08:45	9	200	-0.7	86
09:00	9	200	-0.8	87
09:15	9	195	-1.0	87
09:30	10	195	-1.0	87
09:45	10	200	-1.0	88
10:00	10	200	-1.2	88
10:15	12	207	-1.2	88
10:30	12	207	-1.2	88
10:45	12	207	-1.2	88
11:00	12	205	-1.2	90
11:15	12	195	-1.4	90
11:30	12	195	-1.4	90
11:45	10	197	-1.4	90
12:00	10	200	-1.4	92
12:15	10	200	-1.4	92
12:30	13	200	-1.4	92
12:45	13	203	-1.5	94
13:00	13	203	-1.5	94
13:15	13	203	-1.5	94
13:30	13	205	-1.5	94
13:45	15	205	-1.5	95
14:00	15	205	-1.5	95
14:15	15	205	-1.5	95
14:30	15	205	-1.5	96
14:45	15	195	-1.5	96
15:00	15	195	-1.5	96
15:15	15	195	-1.5	98
15:30	15	195	-1.5	98

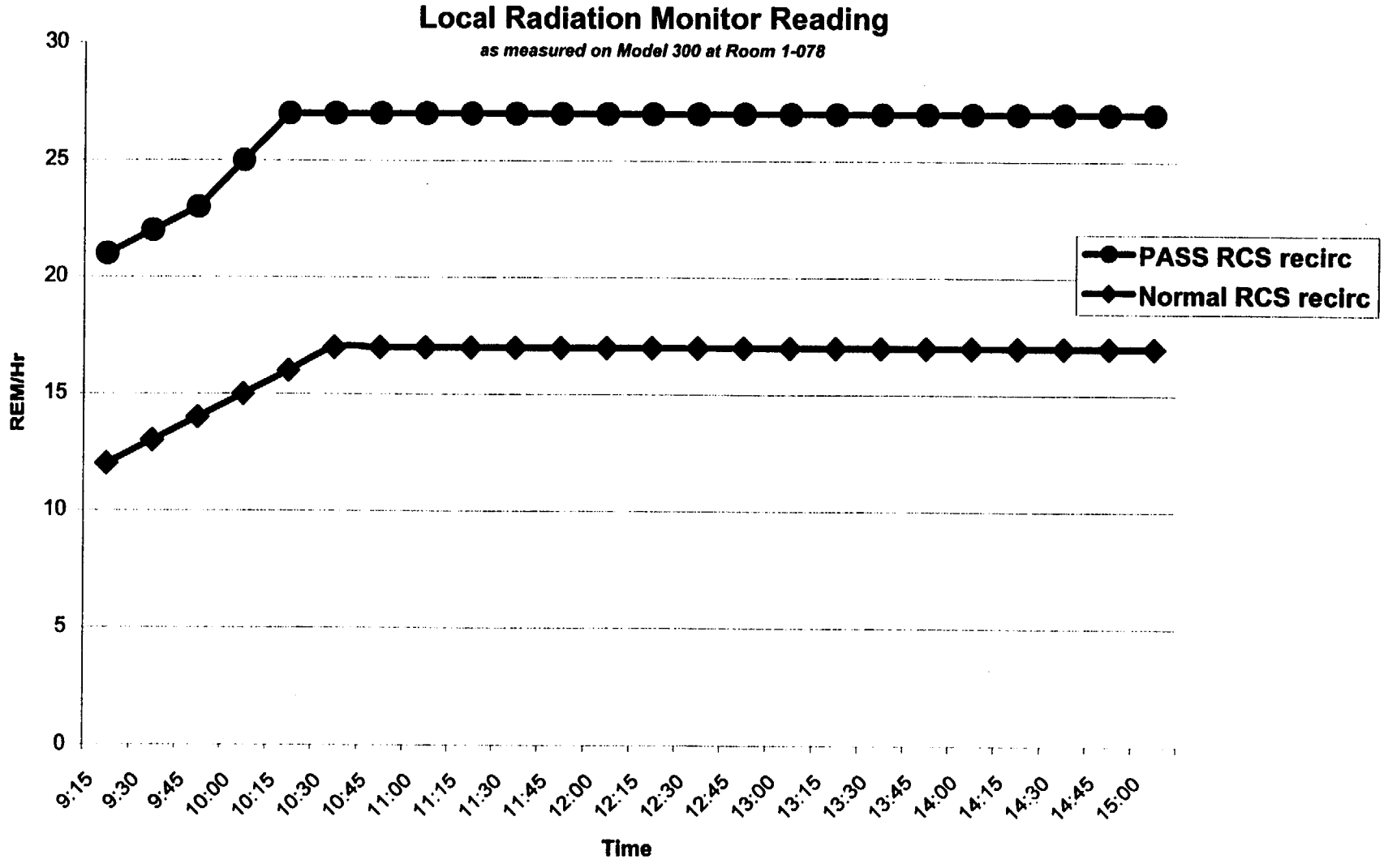
Wind Speed Units: Miles/hour
Wind Direction Units: Degrees
Delta-t Units: Deg. F/50 m
Air Temperature Units: Fahrenheit

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

IN PLANT SURVEY DATA

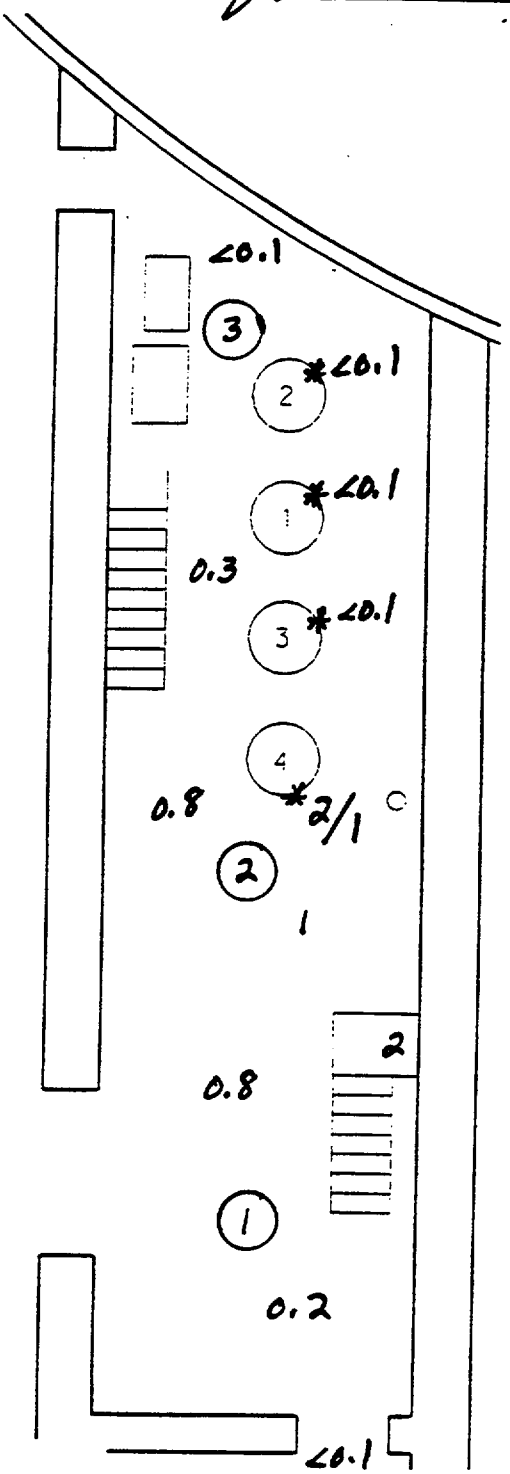

Local Radiation Monitor Reading
as measured on Model 300 at Room 1-078
REM/Hr
30
25
20
15
10
5
0
PASS RCS recirc
Normal RCS recirc
9:15
9:30
9:45
10:00
10:15
10:30
10:45
11:00
11:15
11:30
11:45
12:00
12:15
12:30
12:45
13:00
13:15
13:30
13:45
14:00
14:15
14:30
14:45
15:00
Time

U-1 SG 873' SOUTH PORV ACCUMULATOR ROOM 1-107

SURVEY#	RWP / GAP#	☐ ROUTINE ☐ SPECIAL	RX. POWER ___ % 2N/A
INSTRUMENT / ID# / CAL DUE DATE	N/A	N/A	
SURVEYED BY: N/A	DATE/TIME	REVIEWED BY: N/A	DATE

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS: For Drill Use Only - Time: 0914 hrs to end of exercise. Air sample results if taken: <0.25 DAC



sm	cpm/100cm²
1	<1K
2	↓
3	<1K

N/A

MAXIMUM LEVELS		
GENERAL AREA	1	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	<1K	dpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

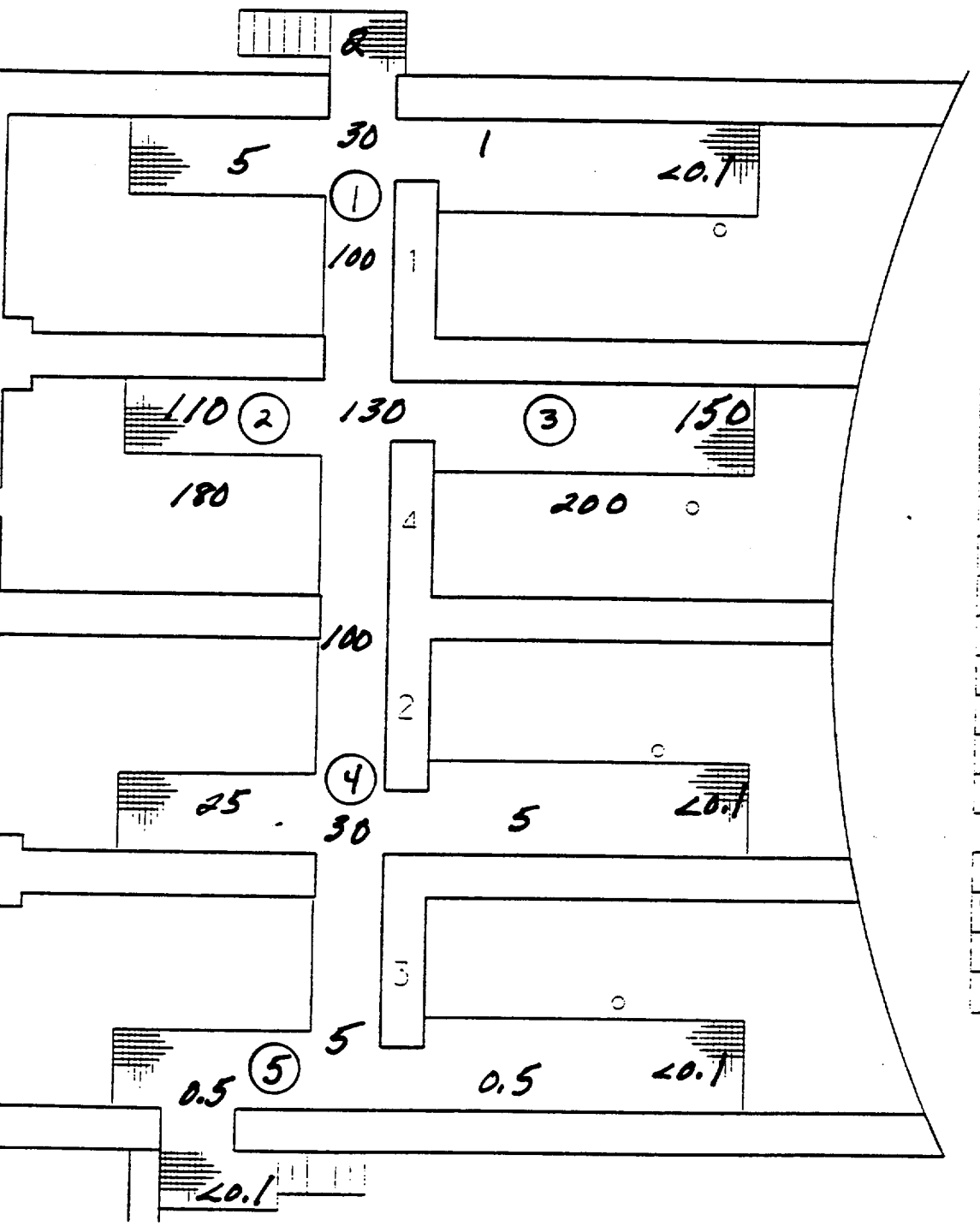
RP-6001
R-8

U-1SG 873' MAIN STEAM PEN AREA 1-108A-H

SURVEY#	RWP / GAP#	☐ ROUTINE ☐ SPECIAL	RX. POWER ___ % 2N/A1
INSTRUMENT / ID# / CAL DUE DATE	N/A		
SURVEYED BY:	DATE/TIME	REVIEWED BY: N/A	DATE

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS: Drill Use Only – Time: 0914 hrs to end of exercise. If air sample is taken results: <0.25 DAC



sm	cpm/100cm²
1	<1K
2	1K
3	3K
4	<1K
5	<1K

N/A

MAXIMUM LEVELS		
GENERAL AREA	200	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	3K	cpm/100cm²

RP1-602-1
R-3

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

U-150 810 ALL ROOMS

SURVEY#	RWP / GAP#	☐ ROUTINE ☐ SPECIAL	ISC-810AL RX. POWER ___ % 2N/A
INSTRUMENT / ID# N/A CAL DUE DATE			
SURVEYED BY: N/A	DATE/TIME	REVIEWED BY: N/A	DATE

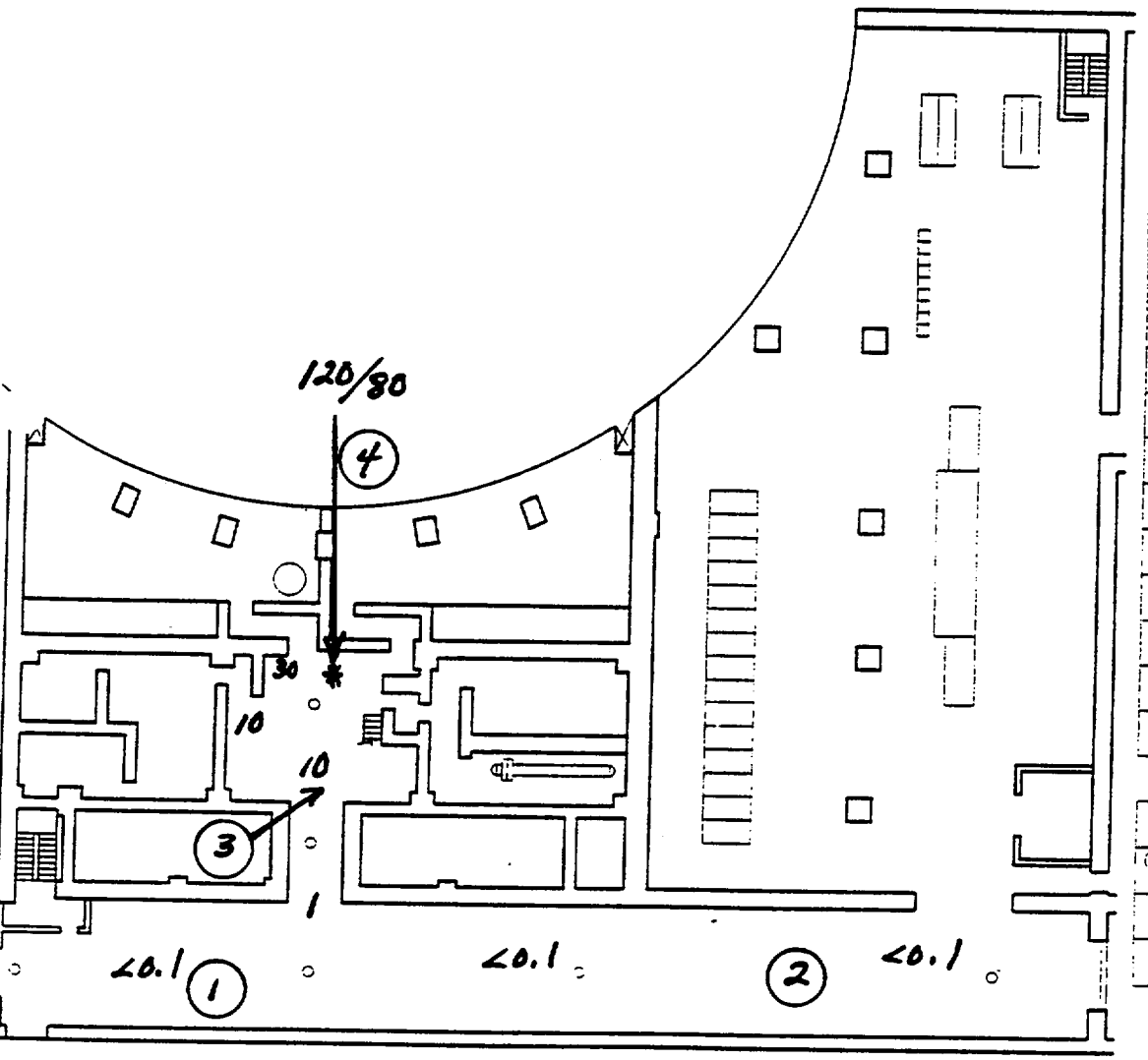
POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS:

For Drill Use Only – Time: 0914 hrs to end of exercise.
Air sample results if taken: <0.25 DAC

sm	cpm/100cm²
1	<1K
2	
3	
4	<1K

N/A



MAXIMUM LEVELS		
GENERAL AREA	80	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	<1K	dpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

RP-602
R-8

U-1SG 810' SAMPLE ROOM 1-078

1-078

SURVEY#: | RWP / CAP#: | ☐ ROUTINE ☐ SPECIAL | RX. POWER: ___ % 2N/A:

INSTRUMENT / ID# / CAL DUE DATE: N/A

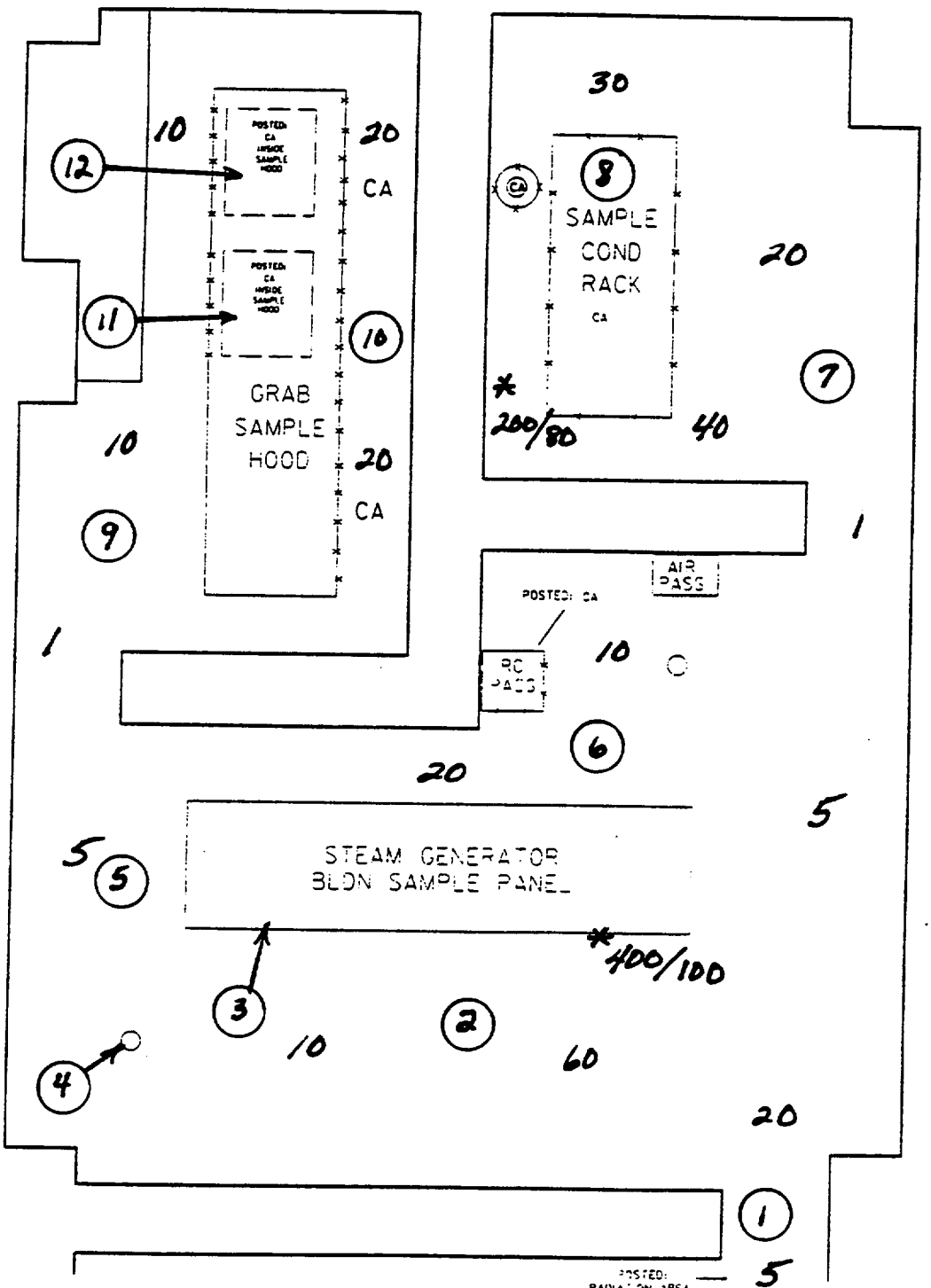
SURVEYED BY: | DATE/TIME: | REVIEWED BY: N/A | DATE:

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS:

ALL SMEARS FROM THE SAMPLE SINKS > 1000 DPM/100cm2 SHOULD BE COUNTED FOR ALPHA ACTIVITY

For Drill Use Only: Time - 0914 hrs to end of exercise. Air sample results if taken: <0.25DAC



sm	cpm/100cm²
1	<1K
2	<1K
3	120K
4	80K
5	<1K
6	↓
7	<1K
8	40K
9	<1K
10	<1K
11	180K
12	100K

N/A

MAXIMUM LEVELS		
GENERAL AREA	100	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	180K	cpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

0750 TDP TURBINE DRIVEN AFW PUMP 1-0174

SURVEY#	RWP / CAP#	☐ ROUTINE ☐ SPECIAL	EX. POWER ___ % 2 N/A
INSTRUMENT / ID# / CAL DUE DATE	N/A		N/A
SURVEYED BY:	DATE/TIME	REVIEWED BY:	DATE

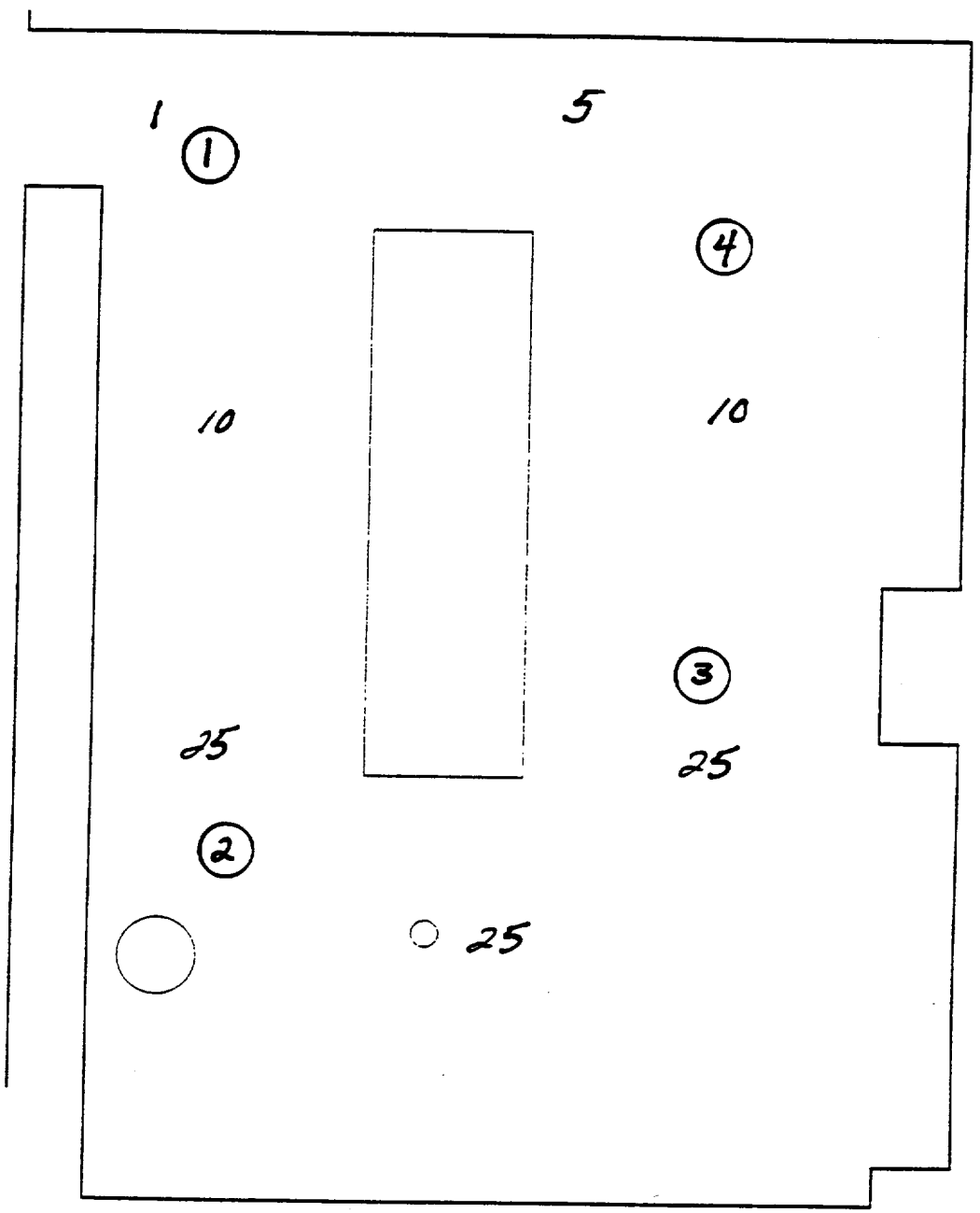
POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; JG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS:

For Drill Use Only. Time - 0914 hrs to end of exercise.
Air sample results if taken: <0.25 DAC

SM	cpm/100cm²
1	<1K
2	<1K
3	2K
4	<1K

N/A



MAXIMUM LEVELS		
GENERAL AREA	25	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	2K	cpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

R-8

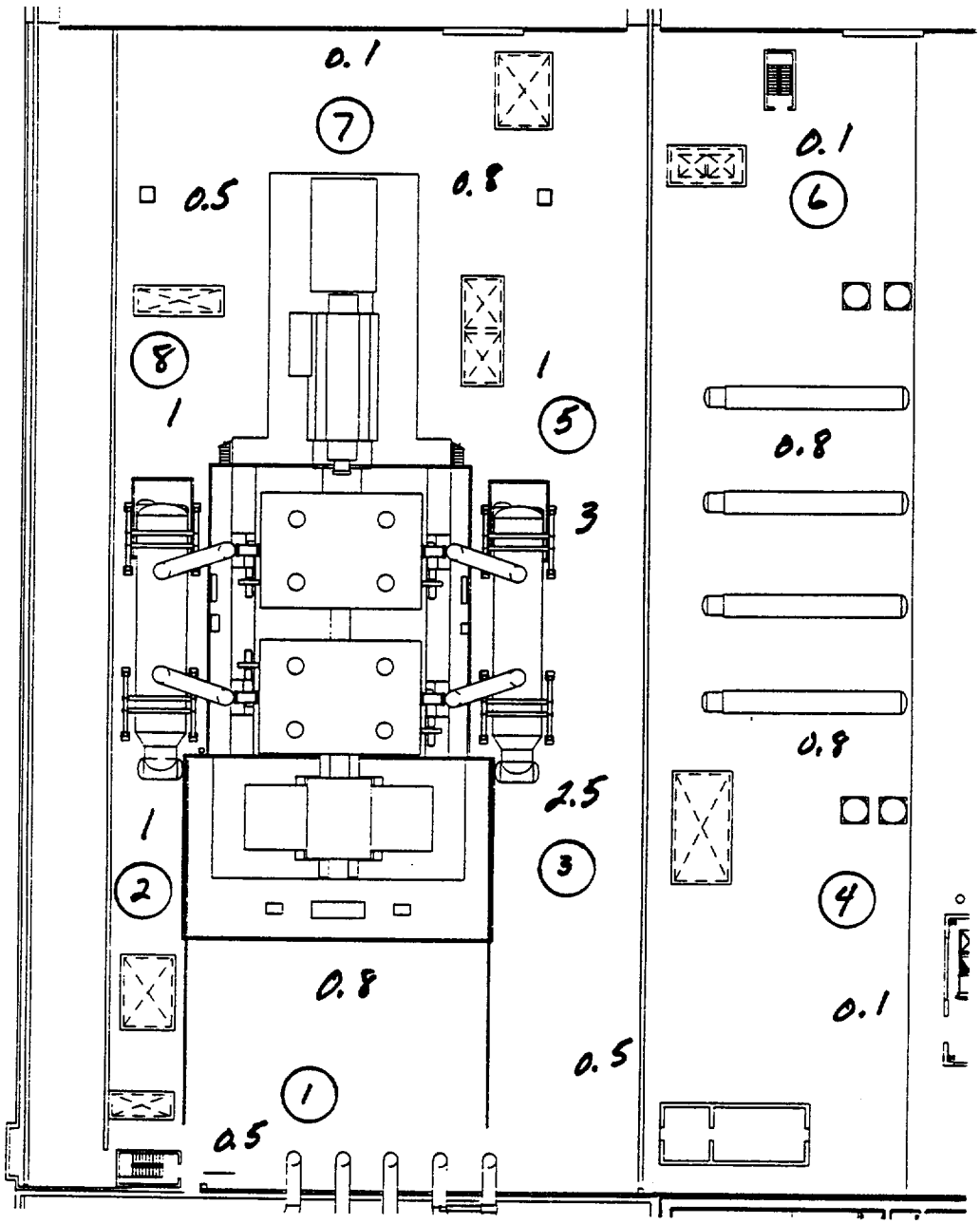
U-1 TB 830' TURBINE DECK

TDECK

SURVEY#	RWP / GAP#	☐ ROUTINE ☐ SPECIAL	RX. POWER 1 ___ % 2 ___ %
INSTRUMENT / ID# / CAL DUE DATE: N/A			
SURVEYED BY: N/A	DATE/TIME	REVIEWED BY: N/A	DATE

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS: For Drill Use Only. Time: 0914 hrs to end of exercise. Air sample results if taken: <0.25 DAC



sm	cpm/100cm²
1	<1K
2	
3	
4	
5	
6	
7	
8	<1K
	N/A

MAXIMUM LEVELS	
GENERAL AREA	3 mR/hr
HOT SPOT	N/A mR/hr
CONT.	<1K dpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

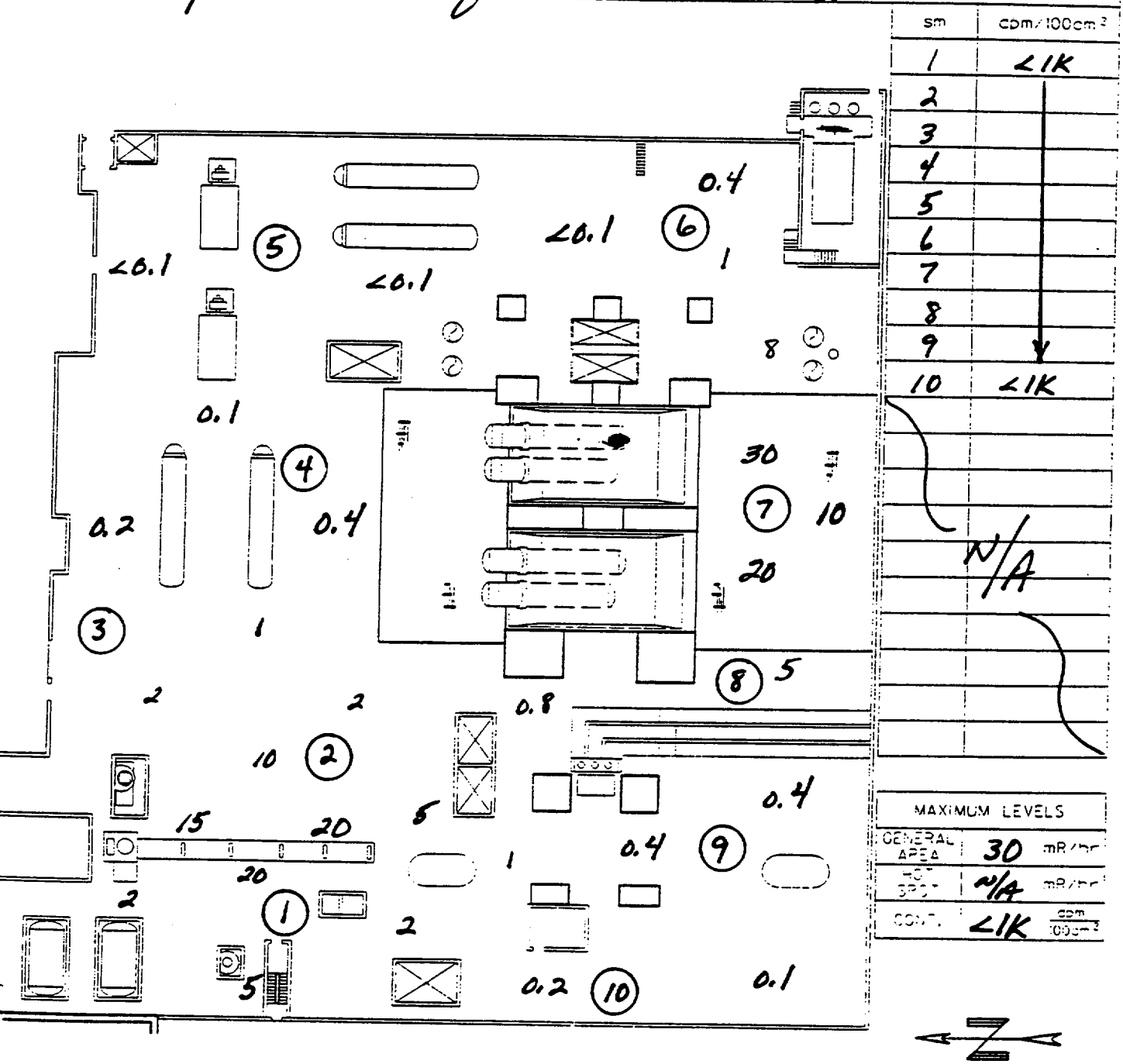
U-1 TB 803' ALL ROOMS

TBS03AL

SURVEY#	RWP / GAP#	☐ ROUTINE ☐ SPECIAL	RX. POWER ___% 2___%
INSTRUMENT / ID# / CALIBRATION DUE DATE	N/A		
SURVEYED BY: N/A	DATE/TIME	REVIEWED BY: N/A	DATE

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UC - UNDER CRATING; SOP - STEP OFF PAD; C - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS: For Drill Use Only. Time: 0914hrs to end of exercise. Air sample results if taken: <0.25 DAC



sm	cpm/100cm²
1	<1K
2	
3	
4	
5	
6	
7	
8	
9	
10	<1K

N/A

MAXIMUM LEVELS		
GENERAL AREA	30	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	<1K	cpm/100cm²

DOSE RECEIVED PERFORMING T-0 SURVEY: N/A mR

RP-602-1
R-8

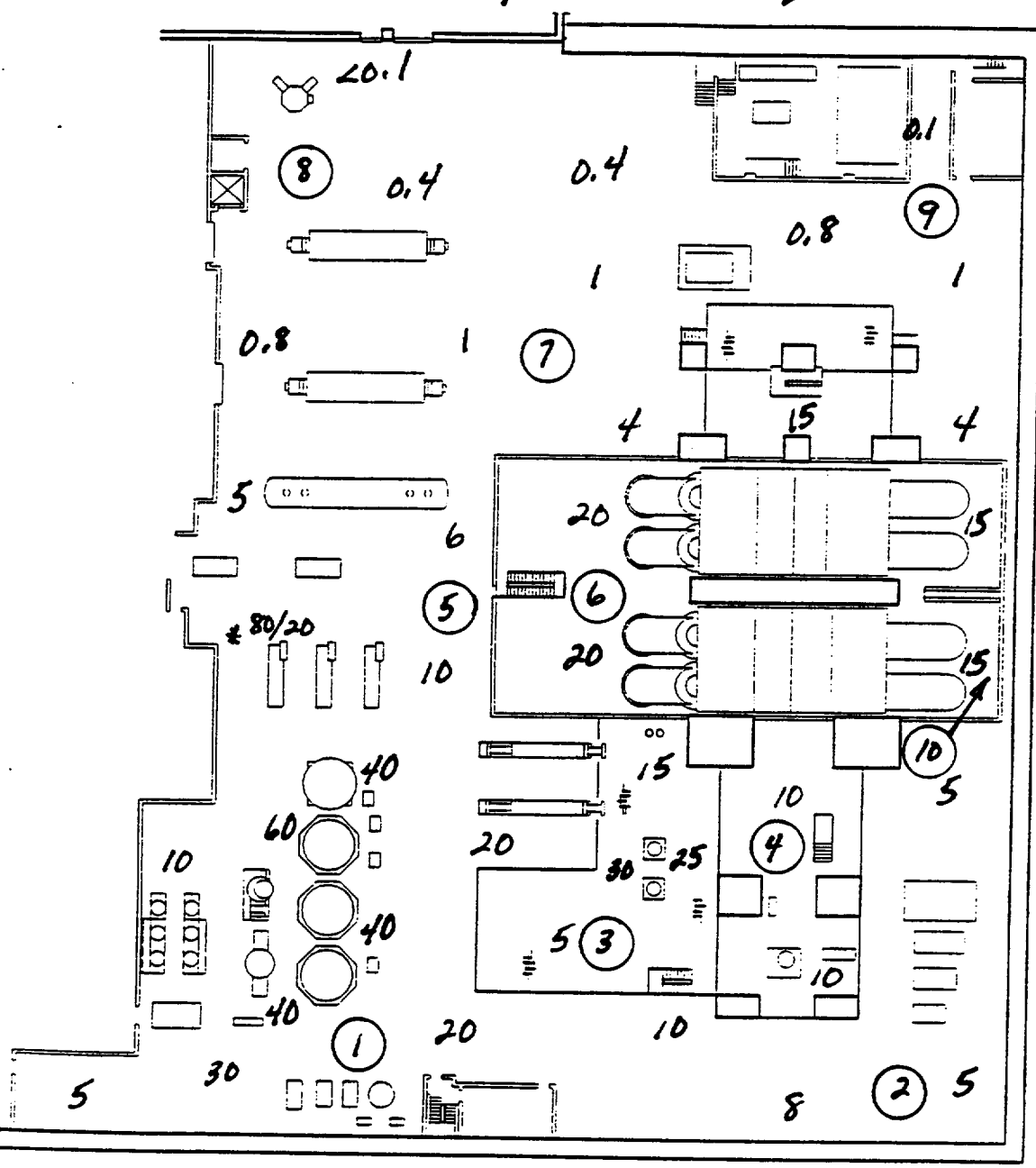
U-1 TB 778' ALL ROOMS

SURVEY#	RWP / GAP# N/A	☐ ROUTINE ☐ SPECIAL N/A	RX. POWER ___% 2 ___%
INSTRUMENT / ID# / CALIBRATION DUE DATE			
SURVEYED BY:	DATE/TIME N/A	REVIEWED BY:	DATE N/A

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UC - UNDER CRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS:

For Drill Use Only. Time: 0914 hrs to end of exercise. Air sample results if taken: <0.25 DAC



sm	cpm/100cm²
1	<1K
2	
3	
4	
5	<1K
6	2K
7	<1K
8	
9	<1K
10	1K

N/A

MAXIMUM LEVELS	
GENERAL AREA	60 mR/hr
HOT SPOT	N/A mR/hr
CONT.	2K cpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

RPI-6001
P-5

U-1 TB 758' ALL ROOMS

ITBTSRA1

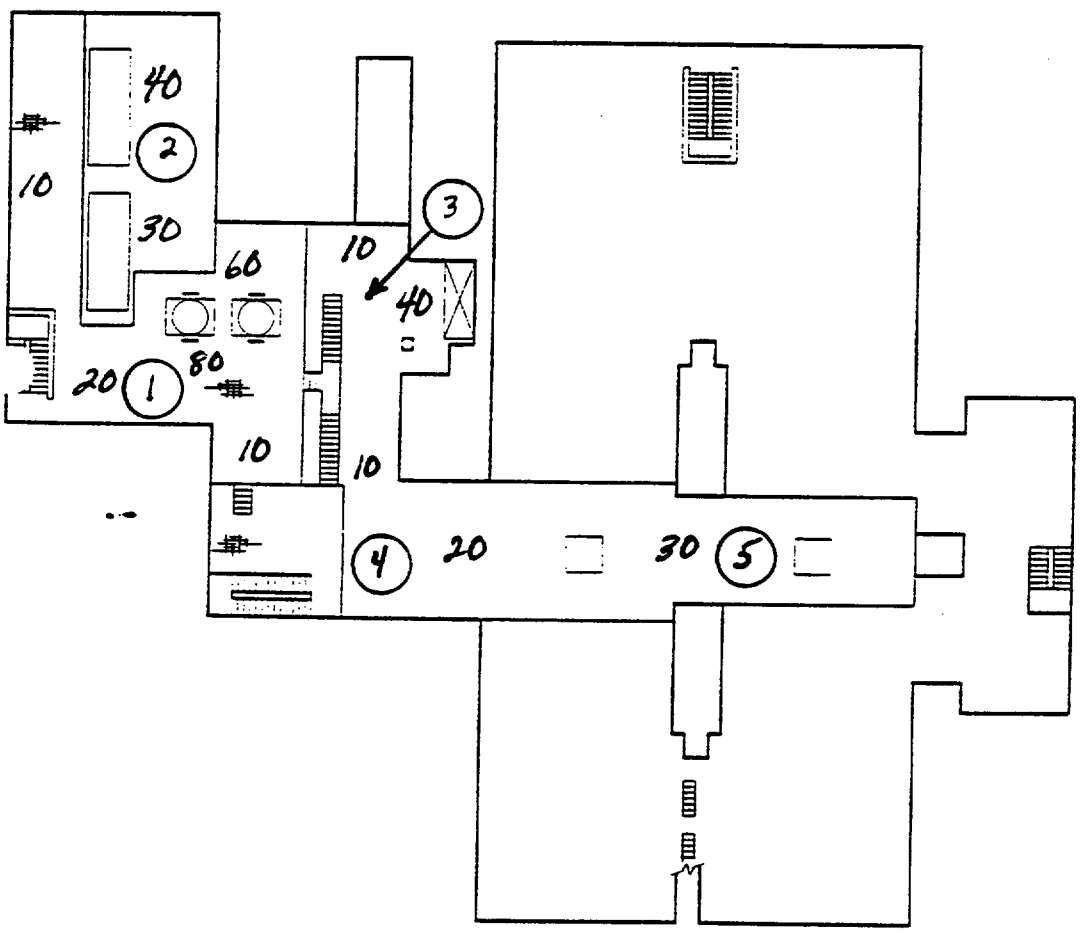
SURVEY# | RWP / GAP# | ☐ ROUTINE ☐ SPECIAL | RX. POWER ____ % ____ %

INSTRUMENT / ID# / CAL DUE DATE: N/A

SURVEYED BY: A | DATE/TIME | REVIEWED BY: N/A | DATE

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UC - UNDER CRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS: For Drill Use Only. Time: 0914 hrs to end of exercise. Air sample results if taken: <0.25 DAC



SM	cpm/100cm²
1	20K
2	4K
3	10K
4	30K
5	40K

N/A

MAXIMUM LEVELS		
GENERAL AREA	80	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	40K	dpm/100cm²

PP-602-1
R-9

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

EC 778' ALL ROOMS

EC778AL

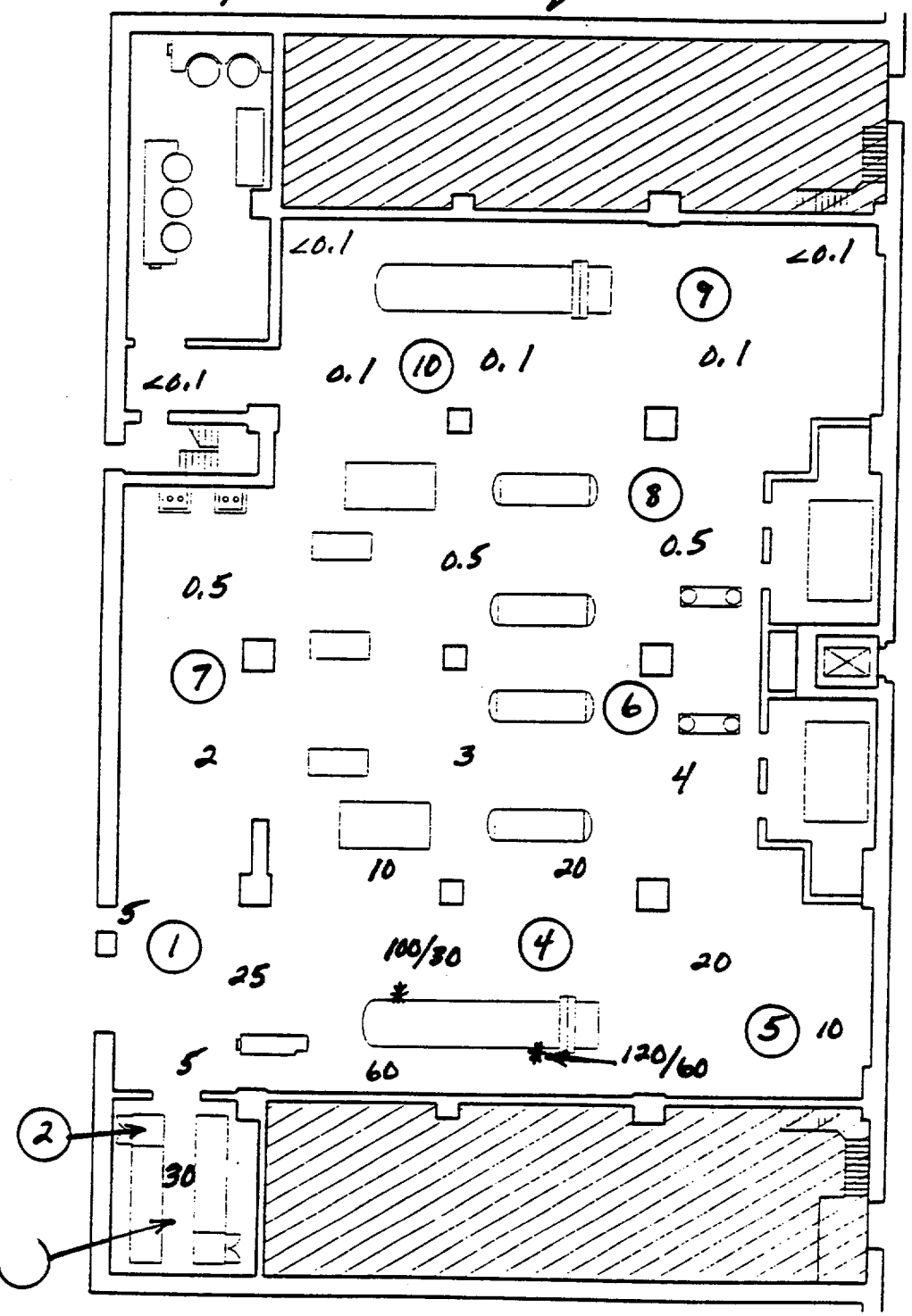
SURVEY# | RWP / GAP# | ☐ ROUTINE ☐ SPECIAL | RX. POWER ___% C___%

INSTRUMENT / ID# / CAL DUE DATE: N/A

SURVEYED BY: | DATE/TIME | REVIEWED BY: N/A | DATE

POSTING ABBREVIATIONS: RA - RADIATION AREA; HRA - HIGH RADIATION AREA; LHRA - LOCKED HIGH RADIATION AREA; UG - UNDER GRATING; SOP - STEP OFF PAD; IC - INTERNALLY CONTAMINATED; RMA - RADIOACTIVE MATERIALS AREA; OH - OVERHEAD; LAS - LARGE AREA WIPE SURVEY; CA - CONTAMINATION AREA; CRPPE - CONTACT RP PRIOR TO ENTRY; AA - AIRBORNE AREA

REMARKS: For Drill Use Only. Time: 0914 hrs to end of exercise. Air sample results if taken: <0.25 DAC



sm	cpm/100cm²
1	<1K
2	4K
3	<1K
4	
5	
6	
7	
8	
9	
10	<1K

N/A

MAXIMUM LEVELS		
GENERAL AREA	60	mR/hr
HOT SPOT	N/A	mR/hr
CONT.	4K	dpm/100cm²

DOSE RECEIVED PERFORMING THIS SURVEY: N/A mR

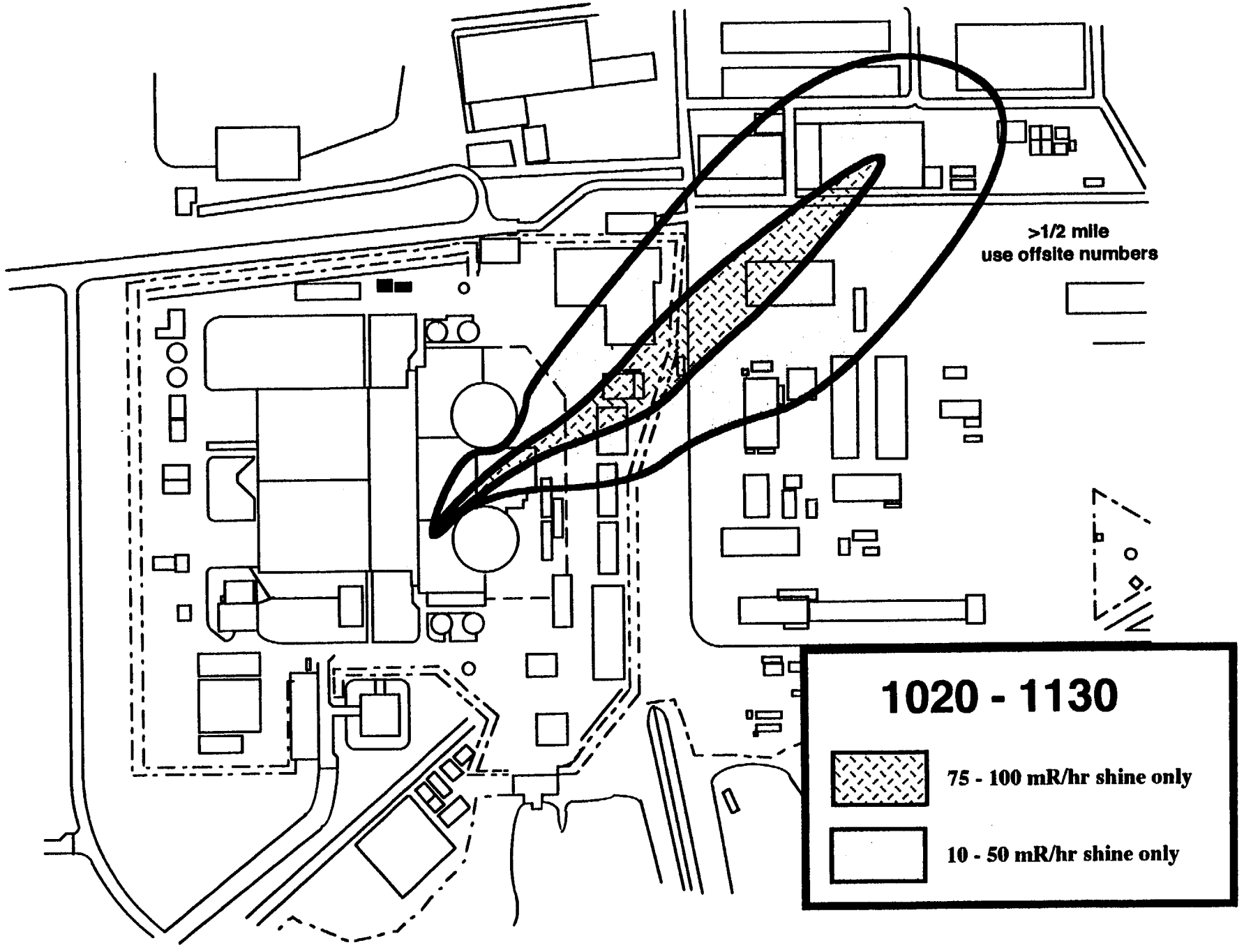
RP-6.02-1
R-9

TXU ELECTRIC

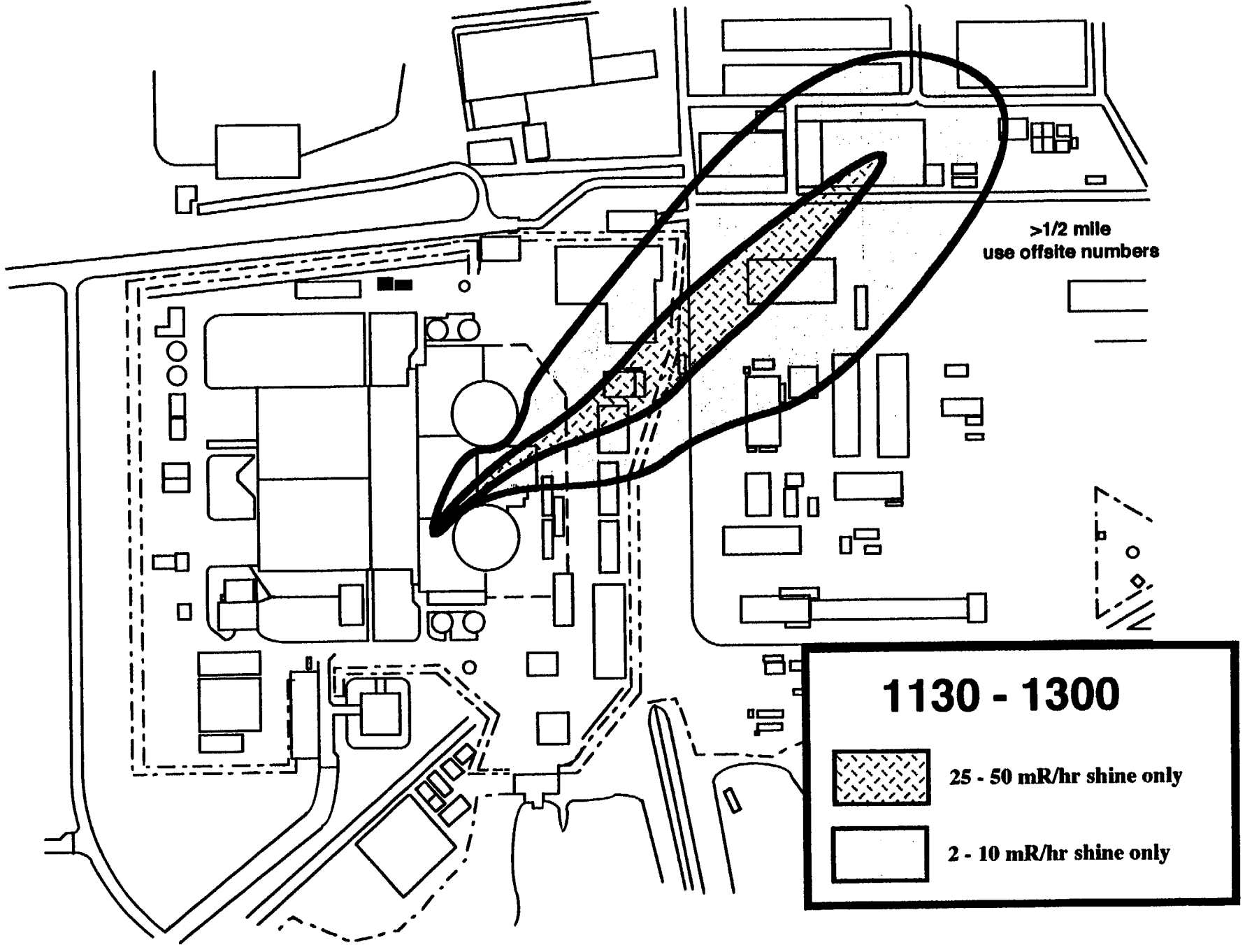
COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

ONSITE SURVEY DATA



ONSITE SURVEY MAP



ONSITE SURVEY MAP

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

ERDC (MAINTENANCE) CONTROLLER INSTRUCTIONS

Event: Failure of Unit 1 Pressurizer Pressure Transmitter; channel PT-455

Location: Control Room Simulator

Time: 0735

Initiating Event:

PT-455 fails HIGH (2500 psia) due to an open circuit.

Anticipated Player Response:

Players (RO/SRO) will take actions to isolate the failed channel from the circuit. The CR will notify the PROMPT Team of the channel failure and the PROMPT Team will commence troubleshooting.

Controller Actions:

CAUTION:	No actual plant equipment is to actually be manipulated for this scenario. Players should simulate/discuss all actions with the controller.

Coordinate with the actual CR Controller (C. Carter) to allow troubleshooting in the real Control Room versus trying to go to the simulator.

Make sure the players demonstrate that the proper parts and materials are available before allowing simulated work to be performed.

Scenario Needs:

Players may be allowed to simulate repairing this circuit if time would realistically allow.

References:

CPF-014530S-001

Event: **Cable tray fire and loss of bus 1EA1.**

Location: Unit 1, 810' el, Safeguards Switchgear Room

Time: ~0750

Initiating Event:

A fire in the MCC CP1-EPMCEB-01 affects cable trays T13OEGG17 and T11OEAA39-40 and results in a fault on bus 1EA1 and subsequent loss of train A safeguards electrical equipment.

Anticipated Player Response:

Control room personnel should dispatch a PEO to verify the fire and dispatch the fire brigade.

Upon arriving on the scene the PEO should report that there is a fire in the motor control center and cable trays T13OEGG17 and T11OEAA39-40 and that bus 1EA1 appears to be affected.

The fire brigade should attempt to extinguish the fire.

An ERDC team should be dispatched to the scene after the fire has been extinguished to assess damage.

Controller Actions:

The fire will not be extinguished until ~0817.

Following inspection it will be reported that lockout relays 86-1 and 86-2 flags are dropped.

The ERDC team will report that some melting of bus bars has occurred causing a phase-to-phase short and a phase-to-ground short. If investigated, the cause of the melted bus bars was overcurrent caused by the failure of the trip fuses which then did not isolate the transformer.

Scenario Needs:

This will result in a loss of train A safeguards equipment. Bus will not be restored to service during exercise.

Event: **Failure (fully open) of Main Condenser Vacuum Breaker MOV, 1HV-2955.**

Location: Unit 1

Time: 0914

Initiating Event:

1-HV-2955 will open due to a circuit failure inside the MCC.

Anticipated Player Response:

Any attempt to shut the valve at the MCB will not work.

An Operator should be dispatched to attempt to manually shut the valve.

Controller Actions:

When the Operator attempts to shut the valve, it will remain stuck open

Cause of valve actuation is a broken wire in the MCC shorting across the open contacts (1+3).

Scenario Needs:

A loss of condenser vacuum causing a turbine and reactor trip.

Event: **Failure (fully open) Steam Generator #4 Main Steam Safety Valve, 1MS-0129.**

Location: Unit 1

Time: 1017

Initiating Event:

1-MS-0129 will open due to a valve failure.

Anticipated Player Response:

An Operator may be dispatched to verify valve status. An ERDC team should be dispatched to attempt to manually close the valve.

Controller Actions:

When the ERDC team attempts to close the valve, it will remain stuck open.

Attempts to close the valve will not be successful until ~1300.

Scenario Needs:

This provides the source for a radiological release to the atmosphere.

Event: Unit 1 TRN B MDAFW Pump trip

Location: Simulator

Time: 10:40

Initiating Event:

TRN B MDAFW Pump trips due to mechanical binding in the pump.

Anticipated Player Response:

Players (RO/SRO) will take actions to feed available S/Gs from the TDAFW Pump. PEOs and ERDC Teams dispatched to the field to investigate.

Controller Actions:

Breaker indicates OPEN with the following flag:
- Over Current

If the pump/motor are uncoupled, the pump cannot be rotated by hand.

Scenario Needs:

Players will not be able to fully repair the pump mechanical binding until after the end of the exercise.

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

FIRE BRIGADE CONTROLLER INSTRUCTIONS

FIRE DRILL SCENARIO

UNIT I, SAFEGUARDS BUILDING, 810' ELEV
(TRN A Train Electrical Equipment Room)

FIRE PUMP BREAKER and CABLE TRAYS

Scenario Overview:

Both Units I and II are operating at indicated power with no Limiting Condition of Operations (LCO's) or Fire Protection Impairments reported for this drill.

This drill involves the explosion and resulting fire to a breaker panel in the Unit I, Safeguards Building, 810' elevation, (A Train Electrical Equipment Room). The plant is operating at indicated power with no current Limiting Condition of Operations (LCO's) and no fire protection impairments logged for this drill. The breaker for one of the motor driven fire pumps in 810' elevation Safeguards Building fails and explodes. The fire spreads rapidly to cable trays and takes down Train "A" safeguards bus. The Control Room (CR) receives local alarms, directs actions of the FB, and responds to the plant impact of this event.

Drill Locations:

The drill involves Fire Brigade (FB) activities in the Safeguards Building, 810' and 832' elevations, and in the Assembly Area.

Personnel Involvement:

Conductance of this drill may include participation by FB Members, Control Room (CR) personnel (simulator personnel only), Radiation Protection (RP) personnel, and Security personnel.

Drill Time Duration (approximate):

Conductance of Drill Scenario	-	26 minutes
Equipment Restoration	-	20 minutes

FIRE DRILL SCENARIO

LOCATION: Unit I, Safeguards Building
810' Elevation, A Train
Electrical Equipment Room

FIRE AREA/ZONE: SD9

FIRE PRE-PLAN: FPI-108A

SAFE SHUTDOWN/SAFETY RELATED: Yes

1.0 Objectives

The Controllers will:

1.1 Evaluate the time required to notify, assemble and respond the FB to the fire scene.

1.2 Evaluate the fire fighting strategy and tactics employed by the Fire Brigade Leader (FBL) for effective fire attack and ventilation techniques without unduly compromising other plant areas and equipment.

1.3 Evaluate the Fire Brigade (FB) members knowledge and use of protective turnout gear and self-contained breathing apparatus (SCBA).

1.4 Evaluate of fireground communications.

The Fire Brigade will:

1.5 Demonstrate fire-fighting strategies and tactics and the use of fire-fighting equipment needed to control the fire.

1.6 Demonstrate the use of ventilation per Fire Pre-plan.

2.0 Guidelines

Participants are to perform actual fire fighting and ventilation operations, except for the actual charging of fire hose lines, charging/discharging of fire extinguishers, activation of fixed suppression/detection systems, securing or restarting of fixed plant HVAC systems and the de-energization or re-energization of fixed plant power supplies for this fire drill.

Adherence to all actual plant Radiation Protection postings, boundaries, and applicable procedures shall be maintained by all players and Controller/Observers (CO's).

Adherence to all actual plant Security postings, boundaries and applicable procedures shall be maintained by all players and Controller/Observers.

Drill "Play" shall include actual communications, mustering of the Fire Brigade (FB), use of applicable Fire Pre-Plans, use of protective clothing and SCBA's, deployment of hose lines, portable fire extinguisher units and fire fighting equipment (including portable ventilation equipment) as deemed necessary by the FBL to control the given scenario.

The time lines provided for this drill scenario are an approximation based on ideal conditions. Accordingly, care must be taken to apply reasonable judgement in evaluating drill performance and acceptability against stated time constraints. Additionally, the scenario and expected fire fighting actions presented are only representative and therefore do not preclude the use of other acceptable suppression tactics and strategies.

3.0 Participants

Participants in this drill shall include the on-shift plant Fire Brigade (FB), Recon PEO, Control Room (CR) shift staff, Radiation Protection, and support Security personnel.

4.0 Controller/Observers Required

The drill shall consist of a minimum of two (2) Controller/Observers (CO's). The CO's shall be assigned as follows:

Controller/Observer	Area Assigned
1	Assembly Area and Fire Area
2	Unit I 810' Elevation Safeguards Building, Fire Area
3	Control Room (may be EP Exercise controller)

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

FIRST AID/RESCUE CONTROLLER INSTRUCTIONS

Event: Injured Person
Location: Unit 1 Turbine Bldg; elev. 803'

Time: ~1214

Initiating Event:

A worker in the 803' U1 Turbine Bldg passes out after complaining to his co-worker that he is feeling hot, dizzy, and has a headache.

The co-worker calls the CR (simulator) emergency number, x4911, and reports the medical emergency. ***(Message #8)***

Anticipated Response:

Control Room personnel should dispatch the medical response team to the scene.

Upon arrival of the medical response team, the worker has regained consciousness and complains of feeling dizzy, nauseous, and hot. He relates his condition as feeling sort of "flu-like".

The patient should be taken to a cooler location and loaded onto the ambulance. The extent of play should end when the ambulance is outside the protected area, and enroute to highway 56.

Controller Instructions:

When asked, provide the following patient information:

	On arrival of medical team	15 minutes after cooling started
Blood Pressure	116/76	135/90
Respiration	18	26
Pulse	84	104
Skin Color	Ashen, dry	Pale, clammy

If a follow-up status is requested from the hospital:

- the patient is on an IV for re-hydration and is being cooled. He is responding well to treatment and should be released from the hospital later today.

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

PARTICIPANTS

BLUE TEAM
Participant List

CONTROL ROOM

Shift Manager	Shift OPs - Crew 15
Unit Supervisor	Shift OPs - Crew 15
Shift Technical Advisor	Shift OPs - Crew 15
Plant Equipment Operators	Shift OPs - Crew 15
Operations Status Board Communicator	Bill Moore
Operations Advisor	Jack Dillard
Control Room Communicator	Prompt Team Crew 15

TECHNICAL SUPPORT CENTER

Manager	Steve Ellis
Operations Coordinator	Russel Smith
Engineering Team Coordinator	Duerk Reimer
EngineeringTeam (Analysis)	Craig Harrington
Engineering Team (Electrical)	John Gregg/Steve Ward
Engineering Team (I&C)	Mike McCutchen/Pravin Shah
Engineering Team (Mechanical)	Chris Dupre/John Meyer
EngineeringTeam (Nuclear)	Wayne Rosette
Engineering Team (Operational)	Bill Murphy
ERF Computer Operator	Moazam Syed
ENS Communicator	Tom Daskam
Onsite Radiological Assessment Coordinator (ONRAC)	Ray Fishencord
Emergency Planning Advisor	Bill Nix
Communications Coordinator	Coy Rice
Communicator	Bob Gill
Radiological Status Board Recorder	Doug Kay
Sequence of Events Board Recorder	Buck Gastinel/Heather Brown
Operational Status Board Recorder	Rob Slough

BLUE TEAM
Participant List

OPERATIONS SUPPORT CENTER

Manager	Scotty Harvey
Chemistry Supervisor	Robert Theimer
Chemistry Technicians	SHIFT
Radiation Protection Supervisor	Ruben Garcia
Team Communicator	Jim Wren
Radiological Status Board Recorder	Gary Millican
Sequence of Events Board Recorder	Terry Meaders
Radiation Protection Technicians	SHIFT
ERDC Supervisor	Prompt Team Crew 15
ERDC Electrician	Prompt Team Crew 15
ERDC Mechanic	Prompt Team Crew 15
I&C Technician	Prompt Team Crew 15
First Aid & Rescue Teams	SHIFT

NEWS CENTER

Company Spokesperson	Norman Hood
News Conference Manager	Sid Underwood
Information Coordinator	Gary Ellis
Information Liaison	Angie Riley
News Release Writer	Mark Manroe
Rumor Control Coordinator	Chuck Kessinger
Rumor Control Aides	Glenn Huber
	Debbie Piloian
	Jose Rodriguez
	Carla White
Media Monitoring Aides	Tionette Blakely
	Randy Hiler
	Linda Hyde
	Carol Johnson
Electronic Media Monitoring Aide	Jim R. Gallman
News Center Aide	Donna Maness
	Patti Marsh
AudioVisual Aide	Rick Nichols

BLUE TEAM
Participant List

EMERGENCY OPERATIONS FACILITY

Manager	Dave Moore
Clerk (Manager)	Jo Conte
Emergency Planning Advisor	Ted Robison
Radiation Protection Coordinator	Scott Bradley
Radiation Protection Technician	Roy Bost
Offsite Radiological Assessment Coordinator (OFFRAC)	Neil Harris
Dose Assessors	Connie Wilkerson
	Bob Sandford
Health Physics Network (HPN) Communicator	Stephanie Goodrum
Offsite Monitoring Teams Director	Grover Downing
Offsite Monitoring Teams Communicator	Mike Watts
Offsite Field Team Drivers	Dave Manning
	Glen Levisay
	Gordon Dalby
Radiological Status Board Recorder	Kim Kirwin
Communications Coordinator	Al Saunders
Communicator	Nick Rakos
TSC/EOF Liaison	Elizabeth Meaders
Operational Status Board Recorder	Peter Presby
Sequence of Events Board Recorder	Jack Hicks
Security Coordinator	Craig Cravey
Logistical Support Coordinator	Fred Powers
Procurement Coordinator	Chris Miller
Contract Coordinator	Henry Bow
Manpower Coordinator	James Brown
Clerk (Manpower)	Wanda Everitt
Clerks	Judy Carroll/Janet Hughes
Transportation Vehicle Drivers	Gus Grzywinski
	James A. Kelley
	Danny Moore
Information Technology Service Coordinator	Bob Hobart

EXTERNAL FACILITIES

Somervell County EOC	John Ellard
Hood County EOC	David Barham
State EOC Advisor	Richard Calder

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

CONTROLLER/EVALUATOR/ROLEPLAYER ORGANIZATION

Controllers, Evaluators, and Roleplayers

Bob Kidwell	Exercise Lead	**817-434-6464** pager
CONTROL ROOM		
Clint Carter	Plant Impact/Announcements	x5450
CONTROL ROOM SIMULATOR		**x7211**
Terry Marsh	Lead Controller	
Paul Cox	Shift Manager	
Doyce McGaughey	Unit Supv and U2 CR roleplayer	
John Finneran	Communications	
Ray Wheeler	Field Support / PEO Controller	Radio or Gaitronics
Kit Wilson	PEO Controller	"
Ed Lessman	PEO Controller	"
James Stafford	PEO Controller	"
Tony Kade	PEO Controller	"
Jimmy Barnard	Simulator Operator	x3338
Cliff Davis	Simulator Operator	x3338
TECHNICAL SUPPORT CENTER		**x4721**
Greg Bell	Lead Controller	817-452-1301 pager
Randy Morrison	Management	
Dale Walling	Engineering	
Todd Evans	Engineering	
Anita Barnette	Radiological	
Chuck Rickgauer	Communications	
Michael Feneley	ENS RolePlayer	x8336
EMERGENCY OPERATIONS FACILITY		**x4062**
Matt Bozeman	Lead Controller	817-273-8587 pager
Mitch Lucas	Management	
Danny Wilder	Radiological Lead	
John Blaikie	Radiological/Dose Assessment	
Jeff Braun	Security	
Matt Sunseri	Communications	
Bobby Bird	Logistics	
Kerry Riggs	ERO Staging Area	x8643
Don Doan	Offsite Survey Team	Vehicle Radio
Dewey Heintz	Offsite Survey Team	"
Carolyn Cosentino	Offsite Survey Team	"
Billy Hise	HPN Roleplayer	x5414

Controllers, Evaluators, and Roleplayers

OPERATIONS SUPPORT CENTER		**x6873**
Dave Weyandt	Lead/Management Controller	
Chuck Cotton	Management Area Controller	
Adam Hinkley / Jimmy Alldredge	RP Controller Coordinator (RCA Access)	x8081
Robert Segura	ERDC Controller Coordinator	x6873
Tim Robbins	ERDC Team Controller	Gaitronics
Finley Nunn	ERDC Team Controller	"
Tim Gilder	ERDC Team Controller	"
Bill Reppa	ERDC Team Controller	"
John White	ERDC Team Controller	"
Dennis Wallace	ERDC Team Controller	"
Bruce Emanuel	Survey Team Controller	"
Mike Macho	Survey Team Controller	"
Charles England	Survey Team Controller	"
Andy Caves	Survey Team Controller	"
Gary Wiechering	Survey Team Controller	"
Dave Perkins	Chem Team Controller	"
Shawn Flaherty	Chem Team Controller	"
Willie Scott	Fire Brigade	"
Dwayne Sandlin	Fire Brigade	"
John Halvorson	Medical Controller	"

NEWS CENTER		**x5054**
Kelly Faver	Lead Controller	817-434-1332 pager
Jerry Lee	Press Conference and Reporters	
Patsy Lamb & Kim Waldrep	Lobby and Auditorium	
Dave McAfee	Rumor Control	
Donna Hammond	Phone Bank Lead	x0583
Jack Martin	Phone Bank Roleplayer	
Kay Uloth	Phone Bank Roleplayer	
Bob Reible	Phone Bank Roleplayer	
Michele Meyer	Phone Bank Roleplayer	
Tonya Luerson	Phone Bank Roleplayer	
Sandra Taylor	Phone Bank Roleplayer	
Mike Blevins	Reporter Roleplayer	
Tom Tigner	Reporter Roleplayer	
Frank Shants	Reporter Roleplayer	
Mitch Warren	Reporter Roleplayer	
Obaid Bhatty	Reporter Roleplayer	
Susan Gravatt	Reporter Roleplayer	
Jan Caldwell	Reporter Roleplayer	
Tom Moody	Reporter Roleplayer	
Chandis Fischer	Reporter Roleplayer	

MISC. CONTROLERS/ROLEPLAYERS

Alan Hall	EOC Controller - Hood	
Gene Dyas	EOC Controller - Somervell	
N/A	Squaw Creek Park	817-573-7053

Karen Taylor	Offsite Roleplayer
Ron McGlothlin	" "
Tony Summers	" "
Patti Edwards	" "
Trish Stout	" "
Mike Ware	" "
Barney Poole	" "
Jerry Hobbs	" "

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

LOG SHEETS

EMERGENCY RESPONSE ORGANIZATION ACTIVITIES LOG SHEET

Date: _____ Page _____ of _____

Position: _____

Name: _____

TIME	List changes, events, decisions, priorities and/or conditions

EMERGENCY RESPONSE ORGANIZATION ACTIVITIES LOG SHEET

Date: _____ Page _____ of _____

Position: _____

Name: _____

TIME	List changes, events, decisions, priorities and/or conditions

EMERGENCY RESPONSE ORGANIZATION ACTIVITIES LOG SHEET

Date: _____ Page _____ of _____

Position: _____

Name: _____

TIME	List changes, events, decisions, priorities and/or conditions

COMANCHE PEAK
STEAM ELECTRIC STATION

EMERGENCY PREPAREDNESS

2001
GRADED EXERCISE

DATA BOOKLET

- Offsite Radiological Data
- Chemistry Data

22 AUGUST, 2001

CONFIDENTIAL ***until after the exercise***

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

OFFSITE SURVEY DATA (TXU ELECTRIC)

OFF-SITE RADIOLOGICAL DATA
THUMB RULES

1. All air samples were calculated based on a 10 ft^3 sample volume. If the actual sample volume is different, convert the listed CPM as follows:

$$\frac{CPM_{net} \text{ X vol. } (ft^3)}{10\ ft^3} = CPM_{net} \text{ for volume sampled}$$

2. The values listed for background (45 CPM) are only for areas that have not been exposed to fallout from the plume.

3. Convert dose rates (open window) to frisker readings (CPM) as follows:

Dose rate (mR/hr) X $\underline{3000}$ = frisker CPM

4. Convert given ground deposition activity to direct frisk readings (CPM) as follows:

Net ground deposition (uCi/m^2) X $\underline{20}$ = direct frisk (CPM)

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

..AL TIME: 10:15 RELATIVE TIME: H+02:45

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	12.00	NOBLE GAS (CI/SEC)	0.000E+00
DELTA-T (DEG. F/50M)	-1.20	IODINE (CI/SEC)	0.000E+00
STABILITY CLASS (PASQUILL)	D	PARTICULATE (CI/SEC)	0.000E+00
WIND DIRECTION (DEG./From)	207.0	TOTAL (CI/SEC)	0.000E+00
WIND TRAVEL (MI)	0.000E+00	AVERAGE GAMMA (MEV/DIS)	0.00
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.00

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 10:30 RELATIVE TIME: H+03:00

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA	
WIND SPEED (MPH)	12.00
DELTA-T (DEG. F/50M)	-1.20
STABILITY CLASS (PASQUILL)	D
WIND DIRECTION (DEG./From)	207.0
WIND TRAVEL (MI)	3.006E+00
PLUME TRAILING EDGE (MI)	0.000E+00

RELEASE DATA	
NOBLE GAS (CI/SEC)	1.741E+01
IODINE (CI/SEC)	1.626E+00
PARTICULATE (CI/SEC)	1.508E-01
TOTAL (CI/SEC)	1.918E+01
AVERAGE GAMMA (MEV/DIS)	0.46
AVERAGE BETA (MEV/DIS)	0.43

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN IND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	197.20	394.71	4.30E-05	3.99E-06	5.13E-04	6.16E-06	4.05E+04	2.50E+05	1.41E+05	4.23E+02	40
	0.04	119.61	239.40	2.61E-05	2.42E-06	3.11E-04	3.74E-06	2.46E+04	1.52E+05	8.55E+04	2.57E+02	40
	0.08	26.69	53.42	5.82E-06	5.40E-07	6.95E-05	8.34E-07	5.51E+03	3.39E+04	1.91E+04	5.72E+01	40
	0.12	2.19	4.38	4.78E-07	4.43E-08	5.70E-06	6.84E-08	4.89E+02	2.82E+03	1.60E+03	4.70E+00	40
1.0	0.00	63.57	127.25	1.39E-05	1.29E-06	1.65E-04	2.00E-06	1.31E+04	8.11E+04	4.57E+04	1.37E+02	40
	0.07	38.56	77.18	8.45E-06	7.85E-07	1.00E-04	1.21E-06	7.98E+03	4.92E+04	2.77E+04	8.31E+01	40
	0.15	8.60	17.22	1.89E-06	1.75E-07	2.24E-05	2.70E-07	1.81E+03	1.10E+04	6.22E+03	1.86E+01	40
	0.22	0.71	1.41	1.55E-07	1.44E-08	1.84E-06	2.22E-08	1.85E+02	9.40E+02	5.47E+02	1.52E+00	40
1.5	0.00	34.03	68.11	7.56E-06	7.02E-07	8.84E-05	1.08E-06	7.14E+03	4.40E+04	2.48E+04	7.44E+01	40
	0.11	20.64	41.31	4.59E-06	4.26E-07	5.36E-05	6.57E-07	4.35E+03	2.67E+04	1.51E+04	4.51E+01	40
	0.22	4.61	9.22	1.02E-06	9.50E-08	1.20E-05	1.47E-07	1.00E+03	5.99E+03	3.39E+03	1.01E+01	40
	0.32	0.38	0.76	8.40E-08	7.79E-09	9.83E-07	1.20E-08	1.19E+02	5.28E+02	3.15E+02	8.26E-01	40
2.0	0.00	22.20	44.44	4.98E-06	4.62E-07	5.77E-05	7.14E-07	4.72E+03	2.90E+04	1.64E+04	4.90E+01	40
	0.14	13.47	26.95	3.02E-06	2.80E-07	3.50E-05	4.33E-07	2.88E+03	1.76E+04	9.93E+03	2.97E+01	40
	0.28	3.00	6.01	6.74E-07	6.26E-08	7.80E-06	9.66E-08	6.73E+02	3.96E+03	2.25E+03	6.63E+00	40
	0.42	0.25	0.49	5.53E-08	5.14E-09	6.40E-07	7.93E-09	9.20E+01	3.62E+02	2.21E+02	5.44E-01	40
3.0	0.00	12.44	24.90	2.83E-06	2.62E-07	3.23E-05	4.05E-07	2.70E+03	1.65E+04	9.30E+03	2.78E+01	40
	0.20	7.55	15.10	1.71E-06	1.59E-07	1.96E-05	2.46E-07	1.65E+03	1.00E+04	5.66E+03	1.69E+01	40
	0.39	1.68	3.37	3.83E-07	3.55E-08	4.37E-06	5.48E-08	3.99E+02	2.26E+03	1.29E+03	3.76E+00	40
	0.59	0.14	0.28	3.14E-08	2.91E-09	3.58E-07	4.50E-09	6.95E+01	2.23E+02	1.43E+02	3.09E-01	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 10:45 RELATIVE TIME: H+03:15

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA	
WIND SPEED (MPH)	12.00
DELTA-T (DEG. F/50M)	-1.20
STABILITY CLASS (PASQUILL)	D
WIND DIRECTION (DEG./From)	207.0
WIND TRAVEL (MI)	6.012E+00
PLUME TRAILING EDGE (MI)	0.000E+00

RELEASE DATA	
NOBLE GAS (CI/SEC)	1.386E+01
IODINE (CI/SEC)	1.284E+00
PARTICULATE (CI/SEC)	1.063E-01
TOTAL (CI/SEC)	1.525E+01
AVERAGE GAMMA (MEV/DIS)	0.44
AVERAGE BETA (MEV/DIS)	0.42

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN IND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	149.13	301.04	3.40E-05	2.81E-06	4.09E-04	5.09E-06	3.20E+04	1.76E+05	2.41E+05	7.25E+02	40
	0.04	90.45	182.59	2.06E-05	1.71E-06	2.48E-04	3.09E-06	1.94E+04	1.07E+05	1.46E+05	4.40E+02	40
	0.08	20.18	40.74	4.60E-06	3.81E-07	5.53E-05	6.89E-07	4.36E+03	2.39E+04	3.27E+04	9.81E+01	40
	0.12	1.66	3.34	3.77E-07	3.13E-08	4.54E-06	5.66E-08	3.95E+02	2.00E+03	2.72E+03	8.05E+00	40
1.0	0.00	48.08	97.05	1.10E-05	9.12E-07	1.32E-04	1.65E-06	1.04E+04	5.72E+04	7.83E+04	2.35E+02	40
	0.07	29.16	58.86	6.68E-06	5.53E-07	7.99E-05	1.00E-06	6.32E+03	3.47E+04	4.75E+04	1.42E+02	40
	0.15	6.51	13.13	1.49E-06	1.23E-07	1.78E-05	2.23E-07	1.44E+03	7.77E+03	1.06E+04	3.18E+01	40
	0.22	0.53	1.08	1.22E-07	1.01E-08	1.46E-06	1.83E-08	1.55E+02	6.75E+02	9.09E+02	2.61E+00	40
1.5	0.00	25.73	51.95	5.97E-06	4.95E-07	7.04E-05	8.95E-07	5.65E+03	3.10E+04	4.25E+04	1.27E+02	40
	0.11	15.61	31.51	3.62E-06	3.00E-07	4.27E-05	5.43E-07	3.44E+03	1.88E+04	2.58E+04	7.73E+01	40
	0.22	3.48	7.03	8.08E-07	6.70E-08	9.53E-06	1.21E-07	8.00E+02	4.23E+03	5.78E+03	1.72E+01	40
	0.32	0.29	0.58	6.63E-08	5.50E-09	7.82E-07	9.95E-09	1.02E+02	3.84E+02	5.11E+02	1.42E+00	40
2.0	0.00	16.79	33.89	3.93E-06	3.26E-07	4.59E-05	5.90E-07	3.74E+03	2.05E+04	2.80E+04	8.39E+01	40
	0.14	10.18	20.56	2.39E-06	1.98E-07	2.78E-05	3.58E-07	2.28E+03	1.24E+04	1.70E+04	5.09E+01	40
	0.28	2.27	4.59	5.32E-07	4.41E-08	6.21E-06	7.98E-08	5.40E+02	2.80E+03	3.82E+03	1.14E+01	40
	0.42	0.19	0.38	4.37E-08	3.62E-09	5.10E-07	6.55E-09	8.11E+01	2.67E+02	3.51E+02	9.32E-01	40
3.0	0.00	9.41	18.99	2.23E-06	1.85E-07	2.57E-05	3.35E-07	2.14E+03	1.16E+04	1.59E+04	4.76E+01	40
	0.20	5.71	11.52	1.35E-06	1.12E-07	1.56E-05	2.03E-07	1.31E+03	7.07E+03	9.66E+03	2.89E+01	40
	0.39	1.27	2.57	3.02E-07	2.50E-08	3.48E-06	4.53E-08	3.24E+02	1.61E+03	2.19E+03	6.45E+00	40
	0.59	0.10	0.21	2.48E-08	2.06E-09	2.85E-07	3.72E-09	6.33E+01	1.69E+02	2.16E+02	5.29E-01	40
4.0	0.00	8.32	16.65	1.81E-06	1.68E-07	2.17E-05	2.59E-07	1.74E+03	1.06E+04	5.97E+03	1.78E+01	40
	0.25	5.04	10.10	1.10E-06	1.02E-07	1.31E-05	1.57E-07	1.07E+03	6.43E+03	3.64E+03	1.08E+01	40
	0.50	1.13	2.25	2.45E-07	2.28E-08	2.93E-06	3.51E-08	2.70E+02	1.47E+03	8.43E+02	2.41E+00	40
	0.75	0.09	0.18	2.01E-08	1.87E-09	2.41E-07	2.88E-09	5.89E+01	1.57E+02	1.06E+02	1.98E-01	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 10:45 RELATIVE TIME: H+03:15

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	6.18	12.38	1.36E-06	1.26E-07	1.61E-05	1.95E-07	1.32E+03	7.96E+03	4.50E+03	1.34E+01	40
	0.30	3.75	7.51	8.25E-07	7.67E-08	9.76E-06	1.18E-07	8.16E+02	4.84E+03	2.74E+03	8.12E+00	40
	0.60	0.84	1.67	1.84E-07	1.71E-08	2.18E-06	2.64E-08	2.13E+02	1.11E+03	6.43E+02	1.81E+00	40
	0.89	0.07	0.14	1.51E-08	1.40E-09	1.79E-07	2.17E-09	5.42E+01	1.28E+02	8.95E+01	1.49E-01	40
6.0	0.00	4.88	9.77	1.08E-06	1.01E-07	1.27E-05	1.55E-07	1.06E+03	6.34E+03	3.59E+03	1.07E+01	40
	0.34	2.96	5.93	6.57E-07	6.10E-08	7.69E-06	9.41E-08	6.57E+02	3.86E+03	2.19E+03	6.46E+00	40
	0.69	0.66	1.32	1.47E-07	1.36E-08	1.72E-06	2.10E-08	1.78E+02	8.93E+02	5.20E+02	1.44E+00	40
	1.03	0.05	0.11	1.20E-08	1.12E-09	1.41E-07	1.72E-09	5.13E+01	1.10E+02	7.94E+01	1.18E-01	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 11:00 RELATIVE TIME: H+03:30

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	12.00	NOBLE GAS (CI/SEC)	1.137E+01
DELTA-T (DEG. F/50M)	-1.20	IODINE (CI/SEC)	1.047E+00
STABILITY CLASS (PASQUILL)	D	PARTICULATE (CI/SEC)	7.874E-02
WIND DIRECTION (DEG./From)	205.0	TOTAL (CI/SEC)	1.250E+01
WIND TRAVEL (MI)	9.018E+00	AVERAGE GAMMA (MEV/DIS)	0.42
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.40

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	117.21	238.47	2.77E-05	2.08E-06	3.35E-04	4.33E-06	2.61E+04	1.31E+05	3.16E+05	9.48E+02	40
	0.04	71.09	144.64	1.68E-05	1.26E-06	2.03E-04	2.63E-06	1.58E+04	7.93E+04	1.92E+05	5.75E+02	40
	0.08	15.86	32.27	3.75E-06	2.82E-07	4.54E-05	5.86E-07	3.56E+03	1.77E+04	4.28E+04	1.28E+02	40
	0.12	1.30	2.65	3.08E-07	2.32E-08	3.73E-06	4.81E-08	3.29E+02	1.49E+03	3.55E+03	1.05E+01	40
1.0	0.00	37.79	76.88	8.98E-06	6.76E-07	1.08E-04	1.40E-06	8.47E+03	4.24E+04	1.02E+05	3.07E+02	40
	0.07	22.92	46.63	5.44E-06	4.10E-07	6.55E-05	8.51E-07	5.16E+03	2.57E+04	6.21E+04	1.86E+02	40
	0.15	5.11	10.40	1.21E-06	9.14E-08	1.46E-05	1.90E-07	1.18E+03	5.77E+03	1.39E+04	4.16E+01	40
	0.22	0.42	0.85	9.97E-08	7.51E-09	1.20E-06	1.56E-08	1.34E+02	5.10E+02	1.18E+03	3.41E+00	40
1.5	0.00	20.23	41.15	4.87E-06	3.66E-07	5.78E-05	7.61E-07	4.61E+03	2.30E+04	5.55E+04	1.67E+02	40
	0.11	12.27	24.96	2.95E-06	2.22E-07	3.50E-05	4.62E-07	2.81E+03	1.40E+04	3.37E+04	1.01E+02	40
	0.22	2.74	5.57	6.59E-07	4.96E-08	7.82E-06	1.03E-07	6.59E+02	3.15E+03	7.55E+03	2.26E+01	40
	0.32	0.22	0.46	5.41E-08	4.07E-09	6.42E-07	8.46E-09	9.08E+01	2.95E+02	6.56E+02	1.85E+00	40
2.0	0.00	13.19	26.84	3.21E-06	2.41E-07	3.77E-05	5.01E-07	3.05E+03	1.52E+04	3.66E+04	1.10E+02	40
	0.14	8.00	16.28	1.95E-06	1.46E-07	2.28E-05	3.04E-07	1.87E+03	9.21E+03	2.22E+04	6.66E+01	40
	0.28	1.79	3.63	4.34E-07	3.27E-08	5.10E-06	6.79E-08	4.48E+02	2.09E+03	4.99E+03	1.49E+01	40
	0.42	0.15	0.30	3.56E-08	2.68E-09	4.18E-07	5.57E-09	7.35E+01	2.08E+02	4.46E+02	1.22E+00	40
3.0	0.00	7.39	15.04	1.82E-06	1.37E-07	2.11E-05	2.85E-07	1.75E+03	8.62E+03	2.08E+04	6.23E+01	40
	0.20	4.48	9.12	1.10E-06	8.31E-08	1.28E-05	1.73E-07	1.08E+03	5.25E+03	1.26E+04	3.78E+01	40
	0.39	1.00	2.04	2.46E-07	1.85E-08	2.85E-06	3.85E-08	2.71E+02	1.20E+03	2.85E+03	8.43E+00	40
	0.59	0.08	0.17	2.02E-08	1.52E-09	2.34E-07	3.16E-09	5.90E+01	1.35E+02	2.71E+02	6.92E-01	40
4.0	0.00	6.29	12.70	1.43E-06	1.19E-07	1.72E-05	2.14E-07	1.38E+03	7.47E+03	1.02E+04	3.05E+01	40
	0.25	3.81	7.70	8.68E-07	7.19E-08	1.05E-05	1.30E-07	8.55E+02	4.55E+03	6.21E+03	1.85E+01	40
	0.50	0.85	1.72	1.94E-07	1.61E-08	2.33E-06	2.90E-08	2.22E+02	1.05E+03	1.42E+03	4.13E+00	40
	0.75	0.07	0.14	1.59E-08	1.32E-09	1.91E-07	2.38E-09	5.49E+01	1.23E+02	1.53E+02	3.39E-01	40

OTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise

22-AUG-2001

REAL TIME: 11:00

RELATIVE TIME: H+03:30

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	4.68	9.44	1.08E-06	8.91E-08	1.28E-05	1.61E-07	1.05E+03	5.62E+03	7.69E+03	2.30E+01	40
	0.30	2.84	5.72	6.52E-07	5.41E-08	7.76E-06	9.78E-08	6.53E+02	3.43E+03	4.68E+03	1.39E+01	40
	0.60	0.63	1.28	1.45E-07	1.21E-08	1.73E-06	2.18E-08	1.77E+02	7.96E+02	1.07E+03	3.11E+00	40
	0.89	0.05	0.10	1.19E-08	9.90E-10	1.42E-07	1.79E-09	5.12E+01	1.02E+02	1.25E+02	2.55E-01	40
6.0	0.00	3.69	7.45	8.56E-07	7.09E-08	1.01E-05	1.28E-07	8.44E+02	4.48E+03	6.13E+03	1.83E+01	40
	0.34	2.24	4.52	5.19E-07	4.30E-08	6.12E-06	7.78E-08	5.28E+02	2.74E+03	3.73E+03	1.11E+01	40
	0.69	0.50	1.01	1.16E-07	9.60E-09	1.37E-06	1.74E-08	1.49E+02	6.41E+02	8.64E+02	2.47E+00	40
	1.03	0.04	0.08	9.50E-09	7.88E-10	1.12E-07	1.43E-09	4.89E+01	8.94E+01	1.08E+02	2.03E-01	40
7.0	0.00	3.99	7.98	8.57E-07	7.97E-08	1.04E-05	1.23E-07	8.45E+02	5.03E+03	2.85E+03	8.43E+00	40
	0.38	2.42	4.84	5.20E-07	4.83E-08	6.30E-06	7.45E-08	5.28E+02	3.07E+03	1.74E+03	5.11E+00	40
	0.77	0.54	1.08	1.16E-07	1.08E-08	1.41E-06	1.66E-08	1.49E+02	7.15E+02	4.20E+02	1.14E+00	40
	1.15	0.04	0.09	9.52E-09	8.85E-10	1.15E-07	1.36E-09	4.89E+01	9.54E+01	7.12E+01	9.36E-02	40
8.0	0.00	3.37	6.75	7.31E-07	6.80E-08	8.79E-06	1.05E-07	7.27E+02	4.30E+03	2.43E+03	7.19E+00	40
	0.42	2.05	4.10	4.43E-07	4.12E-08	5.33E-06	6.35E-08	4.57E+02	2.62E+03	1.49E+03	4.36E+00	40
	0.85	0.46	0.91	9.89E-08	9.20E-09	1.19E-06	1.42E-08	1.33E+02	6.16E+02	3.64E+02	9.73E-01	40
	1.27	0.04	0.08	8.12E-09	7.55E-10	9.76E-08	1.16E-09	4.76E+01	8.73E+01	6.66E+01	7.99E-02	40
9.0	0.00	2.92	5.84	6.36E-07	5.92E-08	7.60E-06	9.12E-08	6.38E+02	3.75E+03	2.12E+03	6.26E+00	40
	0.46	1.77	3.54	3.86E-07	3.59E-08	4.61E-06	5.53E-08	4.03E+02	2.29E+03	1.30E+03	3.80E+00	40
	0.92	0.39	0.79	8.61E-08	8.01E-09	1.03E-06	1.23E-08	1.21E+02	5.42E+02	3.22E+02	8.47E-01	40
	1.38	0.03	0.06	7.07E-09	6.57E-10	8.44E-08	1.01E-09	4.66E+01	8.12E+01	6.32E+01	6.96E-02	40

NOTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 11:15 RELATIVE TIME: H+03:45

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	12.00	NOBLE GAS (CI/SEC)	6.640E+00
DELTA-T (DEG. F/50M)	-1.40	IODINE (CI/SEC)	6.074E-01
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	3.820E-02
WIND DIRECTION (DEG./From)	195.0	TOTAL (CI/SEC)	7.286E+00
WIND TRAVEL (MI)	1.202E+01	AVERAGE GAMMA (MEV/DIS)	0.41
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.39

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	26.09	53.47	6.44E-06	4.06E-07	7.75E-05	1.05E-06	6.09E+03	2.54E+04	3.19E+05	9.58E+02	40
	0.05	15.82	32.43	3.91E-06	2.46E-07	4.70E-05	6.35E-07	3.71E+03	1.54E+04	1.93E+05	5.81E+02	40
	0.11	3.53	7.24	8.72E-07	5.49E-08	1.05E-05	1.42E-07	8.59E+02	3.48E+03	4.32E+04	1.30E+02	40
	0.16	0.29	0.59	7.16E-08	4.50E-09	8.61E-07	1.16E-08	1.07E+02	3.22E+02	3.58E+03	1.06E+01	40
1.0	0.00	7.24	14.83	1.85E-06	1.16E-07	2.14E-05	3.00E-07	1.78E+03	7.33E+03	1.03E+05	3.08E+02	40
	0.10	4.39	8.99	1.12E-06	7.06E-08	1.30E-05	1.82E-07	1.09E+03	4.46E+03	6.23E+04	1.87E+02	40
	0.20	0.98	2.01	2.50E-07	1.58E-08	2.90E-06	4.07E-08	2.75E+02	1.03E+03	1.39E+04	4.17E+01	40
	0.31	0.08	0.16	2.05E-08	1.29E-09	2.38E-07	3.34E-09	5.93E+01	1.21E+02	1.18E+03	3.42E+00	40
1.5	0.00	3.53	7.23	9.15E-07	5.76E-08	1.04E-05	1.49E-07	9.00E+02	3.65E+03	5.54E+04	1.66E+02	40
	0.15	2.14	4.38	5.55E-07	3.49E-08	6.33E-06	9.02E-08	5.62E+02	2.23E+03	3.36E+04	1.01E+02	40
	0.30	0.48	0.98	1.24E-07	7.80E-09	1.41E-06	2.01E-08	1.56E+02	5.28E+02	7.53E+03	2.25E+01	40
	0.44	0.04	0.08	1.02E-08	6.40E-10	1.16E-07	1.65E-09	4.96E+01	8.01E+01	6.55E+02	1.85E+00	40
2.0	0.00	2.16	4.42	5.64E-07	3.55E-08	6.37E-06	9.17E-08	5.70E+02	2.26E+03	3.64E+04	1.09E+02	40
	0.19	1.31	2.68	3.42E-07	2.15E-08	3.87E-06	5.56E-08	3.62E+02	1.39E+03	2.21E+04	6.62E+01	40
	0.38	0.29	0.60	7.63E-08	4.81E-09	8.63E-07	1.24E-08	1.12E+02	3.41E+02	4.96E+03	1.48E+01	40
	0.57	0.02	0.05	6.27E-09	3.95E-10	7.08E-08	1.02E-09	4.59E+01	6.47E+01	4.44E+02	1.21E+00	40
3.0	0.00	1.11	2.28	2.93E-07	1.84E-08	3.28E-06	4.76E-08	3.15E+02	1.20E+03	2.06E+04	6.17E+01	40
	0.27	0.67	1.38	1.78E-07	1.12E-08	1.99E-06	2.89E-08	2.07E+02	7.41E+02	1.25E+04	3.74E+01	40
	0.54	0.15	0.31	3.97E-08	2.50E-09	4.44E-07	6.44E-09	7.73E+01	1.96E+02	2.82E+03	8.35E+00	40
	0.81	0.01	0.03	3.26E-09	2.05E-10	3.64E-08	5.29E-10	4.31E+01	5.28E+01	2.68E+02	6.85E-01	40
4.0	0.00	1.26	2.56	3.17E-07	2.39E-08	3.58E-06	4.96E-08	3.38E+02	1.54E+03	1.06E+04	3.18E+01	40
	0.34	0.76	1.55	1.92E-07	1.45E-08	2.17E-06	3.01E-08	2.21E+02	9.48E+02	6.46E+03	1.93E+01	40
	0.69	0.17	0.35	4.29E-08	3.23E-09	4.84E-07	6.71E-09	8.03E+01	2.43E+02	1.47E+03	4.30E+00	40
	1.03	0.01	0.03	3.52E-09	2.66E-10	3.97E-08	5.51E-10	4.33E+01	5.66E+01	1.58E+02	3.53E-01	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 11:15 RELATIVE TIME: H+03:45

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	0.90	1.83	2.29E-07	1.72E-08	2.56E-06	3.57E-08	2.55E+02	1.12E+03	7.97E+03	2.38E+01	40
	0.41	0.55	1.11	1.39E-07	1.04E-08	1.55E-06	2.17E-08	1.70E+02	6.94E+02	4.85E+03	1.44E+01	40
	0.82	0.12	0.25	3.09E-08	2.33E-09	3.47E-07	4.84E-09	6.91E+01	1.86E+02	1.11E+03	3.22E+00	40
	1.23	0.01	0.02	2.54E-09	1.91E-10	2.85E-08	3.97E-10	4.24E+01	5.20E+01	1.28E+02	2.64E-01	40
6.0	0.00	0.69	1.41	1.76E-07	1.33E-08	1.97E-06	2.76E-08	2.06E+02	8.72E+02	6.33E+03	1.89E+01	40
	0.47	0.42	0.85	1.07E-07	8.06E-09	1.19E-06	1.67E-08	1.40E+02	5.45E+02	3.86E+03	1.15E+01	40
	0.94	0.09	0.19	2.39E-08	1.80E-09	2.66E-07	3.73E-09	6.24E+01	1.53E+02	8.91E+02	2.56E+00	40
	1.41	0.01	0.02	1.96E-09	1.48E-10	2.19E-08	3.06E-10	4.18E+01	4.92E+01	1.10E+02	2.10E-01	40
7.0	0.00	0.71	1.43	1.72E-07	1.43E-08	1.92E-06	2.58E-08	2.02E+02	9.34E+02	3.22E+03	9.55E+00	40
	0.53	0.43	0.86	1.04E-07	8.66E-09	1.17E-06	1.56E-08	1.38E+02	5.82E+02	1.97E+03	5.79E+00	40
	1.06	0.10	0.19	2.33E-08	1.93E-09	2.60E-07	3.49E-09	6.19E+01	1.61E+02	4.70E+02	1.29E+00	40
	1.58	0.01	0.02	1.91E-09	1.59E-10	2.14E-08	2.86E-10	4.18E+01	4.99E+01	7.53E+01	1.06E-01	40
8.0	0.00	0.59	1.19	1.44E-07	1.19E-08	1.60E-06	2.15E-08	1.75E+02	7.87E+02	2.74E+03	8.12E+00	40
	0.58	0.36	0.72	8.71E-08	7.23E-09	9.71E-07	1.31E-08	1.22E+02	4.93E+02	1.68E+03	4.92E+00	40
	1.16	0.08	0.16	1.94E-08	1.61E-09	2.17E-07	2.91E-09	5.83E+01	1.41E+02	4.06E+02	1.10E+00	40
	1.75	0.01	0.01	1.60E-09	1.32E-10	1.78E-08	2.39E-10	4.15E+01	4.83E+01	7.00E+01	9.02E-02	40
9.0	0.00	0.50	1.01	1.23E-07	1.02E-08	1.37E-06	1.84E-08	1.56E+02	6.79E+02	2.39E+03	7.05E+00	40
	0.63	0.30	0.61	7.46E-08	6.19E-09	8.29E-07	1.12E-08	1.10E+02	4.28E+02	1.46E+03	4.27E+00	40
	1.27	0.07	0.14	1.66E-08	1.38E-09	1.85E-07	2.49E-09	5.56E+01	1.27E+02	3.58E+02	9.54E-01	40
	1.90	0.01	0.01	1.37E-09	1.13E-10	1.52E-08	2.05E-10	4.13E+01	4.71E+01	6.61E+01	7.83E-02	40
0.0	0.00	0.58	1.15	1.34E-07	1.25E-08	1.49E-06	1.92E-08	1.66E+02	8.21E+02	4.79E+02	1.32E+00	40
	0.68	0.35	0.70	8.13E-08	7.57E-09	9.03E-07	1.16E-08	1.16E+02	5.14E+02	3.06E+02	8.00E-01	40
	1.36	0.08	0.16	1.81E-08	1.69E-09	2.01E-07	2.60E-09	5.70E+01	1.46E+02	9.94E+01	1.78E-01	40
	2.04	0.01	0.01	1.49E-09	1.39E-10	1.65E-08	2.13E-10	4.14E+01	4.87E+01	4.49E+01	1.46E-02	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

LAL TIME: 11:30 RELATIVE TIME: H+04:00

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	12.00	NOBLE GAS (CI/SEC)	4.278E+00
DELTA-T (DEG. F/50M)	-1.40	IODINE (CI/SEC)	3.890E-01
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	2.039E-02
WIND DIRECTION (DEG./From)	195.0	TOTAL (CI/SEC)	4.687E+00
WIND TRAVEL (MI)	1.503E+01	AVERAGE GAMMA (MEV/DIS)	0.40
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.37

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN IND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	16.23	33.51	4.13E-06	2.16E-07	4.99E-05	6.94E-07	3.92E+03	1.36E+04	3.17E+05	9.51E+02	40
	0.05	9.85	20.33	2.50E-06	1.31E-07	3.03E-05	4.21E-07	2.39E+03	8.26E+03	1.92E+05	5.77E+02	40
	0.11	2.20	4.54	5.58E-07	2.93E-08	6.76E-06	9.40E-08	5.65E+02	1.87E+03	4.29E+04	1.29E+02	40
	0.16	0.18	0.37	4.58E-08	2.40E-09	5.55E-07	7.71E-09	8.31E+01	1.91E+02	3.56E+03	1.06E+01	40
1.0	0.00	4.50	9.29	1.18E-06	6.21E-08	1.38E-05	1.99E-07	1.15E+03	3.93E+03	1.01E+05	3.05E+02	40
	0.10	2.73	5.64	7.18E-07	3.77E-08	8.37E-06	1.21E-07	7.15E+02	2.40E+03	6.16E+04	1.85E+02	40
	0.20	0.61	1.26	1.60E-07	8.41E-09	1.87E-06	2.70E-08	1.91E+02	5.67E+02	1.38E+04	4.12E+01	40
	0.31	0.05	0.10	1.32E-08	6.90E-10	1.53E-07	2.21E-09	5.24E+01	8.32E+01	1.17E+03	3.38E+00	40
1.5	0.00	2.19	4.53	5.86E-07	3.07E-08	6.72E-06	9.86E-08	5.91E+02	1.97E+03	5.46E+04	1.64E+02	40
	0.15	1.33	2.75	3.55E-07	1.86E-08	4.08E-06	5.98E-08	3.74E+02	1.21E+03	3.32E+04	9.94E+01	40
	0.30	0.30	0.61	7.93E-08	4.16E-09	9.09E-07	1.33E-08	1.15E+02	3.01E+02	7.43E+03	2.22E+01	40
	0.44	0.02	0.05	6.51E-09	3.41E-10	7.46E-08	1.10E-09	4.61E+01	6.14E+01	6.46E+02	1.82E+00	40
2.0	0.00	1.34	2.77	3.61E-07	1.89E-08	4.11E-06	6.08E-08	3.79E+02	1.23E+03	3.58E+04	1.07E+02	40
	0.19	0.81	1.68	2.19E-07	1.15E-08	2.49E-06	3.69E-08	2.46E+02	7.60E+02	2.17E+04	6.52E+01	40
	0.38	0.18	0.37	4.89E-08	2.56E-09	5.56E-07	8.23E-09	8.59E+01	2.01E+02	4.88E+03	1.45E+01	40
	0.57	0.01	0.03	4.01E-09	2.11E-10	4.56E-08	6.76E-10	4.38E+01	5.32E+01	4.37E+02	1.19E+00	40
3.0	0.00	0.69	1.43	1.88E-07	9.84E-09	2.11E-06	3.16E-08	2.16E+02	6.57E+02	2.02E+04	6.06E+01	40
	0.27	0.42	0.87	1.14E-07	5.97E-09	1.28E-06	1.92E-08	1.47E+02	4.14E+02	1.23E+04	3.67E+01	40
	0.54	0.09	0.19	2.54E-08	1.33E-09	2.86E-07	4.28E-09	6.39E+01	1.23E+02	2.77E+03	8.19E+00	40
	0.81	0.01	0.02	2.08E-09	1.09E-10	2.35E-08	3.51E-10	4.20E+01	4.69E+01	2.64E+02	6.73E-01	40
4.0	0.00	0.71	1.45	1.84E-07	1.16E-08	2.09E-06	2.99E-08	2.13E+02	7.66E+02	1.07E+04	3.19E+01	40
	0.34	0.43	0.88	1.12E-07	7.03E-09	1.27E-06	1.81E-08	1.45E+02	4.81E+02	6.49E+03	1.94E+01	40
	0.69	0.10	0.20	2.49E-08	1.57E-09	2.83E-07	4.05E-09	6.34E+01	1.38E+02	1.48E+03	4.32E+00	40
	1.03	0.01	0.02	2.04E-09	1.29E-10	2.32E-08	3.32E-10	4.19E+01	4.81E+01	1.58E+02	3.55E-01	40

TE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

REAL TIME: 11:30 RELATIVE TIME: H+04:00

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	0.51	1.04	1.33E-07	8.35E-09	1.50E-06	2.15E-08	1.65E+02	5.63E+02	7.98E+03	2.39E+01	40
	0.41	0.31	0.63	8.04E-08	5.07E-09	9.07E-07	1.31E-08	1.16E+02	3.57E+02	4.86E+03	1.45E+01	40
	0.82	0.07	0.14	1.79E-08	1.13E-09	2.02E-07	2.92E-09	5.69E+01	1.11E+02	1.12E+03	3.23E+00	40
	1.23	0.01	0.01	1.47E-09	9.28E-11	1.66E-08	2.39E-10	4.14E+01	4.58E+01	1.28E+02	2.65E-01	40
6.0	0.00	0.39	0.80	1.02E-07	6.44E-09	1.15E-06	1.66E-08	1.36E+02	4.44E+02	6.33E+03	1.89E+01	40
	0.47	0.24	0.48	6.20E-08	3.91E-09	6.97E-07	1.01E-08	9.83E+01	2.85E+02	3.86E+03	1.15E+01	40
	0.94	0.05	0.11	1.38E-08	8.72E-10	1.55E-07	2.25E-09	5.30E+01	9.46E+01	8.92E+02	2.56E+00	40
	1.41	0.00	0.01	1.14E-09	7.16E-11	1.28E-08	1.85E-10	4.11E+01	4.45E+01	1.10E+02	2.10E-01	40
7.0	0.00	0.56	1.13	1.40E-07	1.06E-08	1.58E-06	2.19E-08	1.72E+02	7.02E+02	3.49E+03	1.04E+01	40
	0.53	0.34	0.68	8.50E-08	6.41E-09	9.57E-07	1.33E-08	1.20E+02	4.42E+02	2.13E+03	6.29E+00	40
	1.06	0.08	0.15	1.90E-08	1.43E-09	2.14E-07	2.97E-09	5.78E+01	1.30E+02	5.07E+02	1.40E+00	40
	1.58	0.01	0.01	1.56E-09	1.17E-10	1.75E-08	2.43E-10	4.15E+01	4.74E+01	7.84E+01	1.15E-01	40
8.0	0.00	0.46	0.94	1.17E-07	8.83E-09	1.31E-06	1.83E-08	1.50E+02	5.93E+02	2.97E+03	8.80E+00	40
	0.58	0.28	0.57	7.10E-08	5.36E-09	7.97E-07	1.11E-08	1.07E+02	3.76E+02	1.82E+03	5.33E+00	40
	1.16	0.06	0.13	1.58E-08	1.20E-09	1.78E-07	2.48E-09	5.49E+01	1.15E+02	4.36E+02	1.19E+00	40
	1.75	0.01	0.01	1.30E-09	9.81E-11	1.46E-08	2.03E-10	4.12E+01	4.61E+01	7.25E+01	9.77E-02	40
9.0	0.00	0.39	0.80	1.00E-07	7.56E-09	1.12E-06	1.57E-08	1.34E+02	5.13E+02	2.58E+03	7.62E+00	40
	0.63	0.24	0.49	6.08E-08	4.58E-09	6.80E-07	9.50E-09	9.71E+01	3.27E+02	1.58E+03	4.62E+00	40
	1.27	0.05	0.11	1.36E-08	1.02E-09	1.52E-07	2.12E-09	5.27E+01	1.04E+02	3.84E+02	1.03E+00	40
	1.90	0.00	0.01	1.11E-09	8.40E-11	1.25E-08	1.74E-10	4.10E+01	4.53E+01	6.82E+01	8.47E-02	40
10.0	0.00	0.44	0.88	1.06E-07	8.80E-09	1.18E-06	1.59E-08	1.39E+02	5.91E+02	7.94E+02	2.27E+00	40
	0.68	0.26	0.53	6.42E-08	5.34E-09	7.19E-07	9.63E-09	1.00E+02	3.74E+02	4.98E+02	1.37E+00	40
	1.36	0.06	0.12	1.43E-08	1.19E-09	1.60E-07	2.15E-09	5.35E+01	1.15E+02	1.42E+02	3.07E-01	40
	2.04	0.00	0.01	1.18E-09	9.77E-11	1.32E-08	1.76E-10	4.11E+01	4.61E+01	4.84E+01	2.52E-02	40

NOTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 11:45 RELATIVE TIME: H+04:15

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	10.00	NOBLE GAS (CI/SEC)	2.996E+00
DELTA-T (DEG. F/50M)	-1.40	IODINE (CI/SEC)	2.708E-01
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	1.219E-02
WIND DIRECTION (DEG./From)	197.0	TOTAL (CI/SEC)	3.279E+00
WIND TRAVEL (MI)	1.753E+01	AVERAGE GAMMA (MEV/DIS)	0.38
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.36

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
0.5	0.00	13.22	27.49	3.45E-06	1.55E-07	4.20E-05	6.00E-07	3.28E+03	9.77E+03	3.15E+05	9.45E+02	40
	0.05	8.02	16.67	2.09E-06	9.42E-08	2.55E-05	3.64E-07	2.00E+03	5.94E+03	1.91E+05	5.73E+02	40
	0.11	1.79	3.72	4.66E-07	2.10E-08	5.68E-06	8.11E-08	4.78E+02	1.36E+03	4.26E+04	1.28E+02	40
	0.16	0.15	0.31	3.83E-08	1.72E-09	4.66E-07	6.66E-09	7.60E+01	1.48E+02	3.53E+03	1.05E+01	40
1.0	0.00	3.67	7.62	9.89E-07	4.46E-08	1.16E-05	1.72E-07	9.70E+02	2.83E+03	1.00E+05	3.02E+02	40
	0.10	2.22	4.62	6.00E-07	2.70E-08	7.04E-06	1.04E-07	6.04E+02	1.73E+03	6.09E+04	1.83E+02	40
	0.20	0.50	1.03	1.34E-07	6.03E-09	1.57E-06	2.33E-08	1.66E+02	4.18E+02	1.36E+04	4.08E+01	40
	0.31	0.04	0.08	1.10E-08	4.95E-10	1.29E-07	1.91E-09	5.03E+01	7.10E+01	1.16E+03	3.35E+00	40
1.5	0.00	1.79	3.71	4.90E-07	2.21E-08	5.65E-06	8.52E-08	5.00E+02	1.42E+03	5.39E+04	1.62E+02	40
	0.15	1.08	2.25	2.97E-07	1.34E-08	3.43E-06	5.17E-08	3.19E+02	8.78E+02	3.27E+04	9.82E+01	40
	0.30	0.24	0.50	6.63E-08	2.98E-09	7.64E-07	1.15E-08	1.02E+02	2.27E+02	7.33E+03	2.19E+01	40
	0.44	0.02	0.04	5.44E-09	2.45E-10	6.27E-08	9.46E-10	4.51E+01	5.53E+01	6.39E+02	1.80E+00	40
2.0	0.00	1.09	2.27	3.02E-07	1.36E-08	3.45E-06	5.25E-08	3.24E+02	8.92E+02	3.53E+04	1.06E+02	40
	0.19	0.66	1.38	1.83E-07	8.25E-09	2.09E-06	3.18E-08	2.12E+02	5.57E+02	2.14E+04	6.42E+01	40
	0.38	0.15	0.31	4.08E-08	1.84E-09	4.67E-07	7.11E-09	7.84E+01	1.55E+02	4.81E+03	1.43E+01	40
	0.57	0.01	0.03	3.35E-09	1.51E-10	3.83E-08	5.83E-10	4.32E+01	4.95E+01	4.32E+02	1.18E+00	40
3.0	0.00	0.56	1.17	1.57E-07	7.06E-09	1.78E-06	2.73E-08	1.87E+02	4.82E+02	1.99E+04	5.96E+01	40
	0.27	0.34	0.71	9.51E-08	4.28E-09	1.08E-06	1.65E-08	1.29E+02	3.08E+02	1.21E+04	3.61E+01	40
	0.54	0.08	0.16	2.12E-08	9.56E-10	2.40E-07	3.69E-09	5.99E+01	9.99E+01	2.72E+03	8.06E+00	40
	0.81	0.01	0.01	1.74E-09	7.85E-11	1.97E-08	3.03E-10	4.16E+01	4.49E+01	2.60E+02	6.62E-01	40
4.0	0.00	0.53	1.09	1.41E-07	7.43E-09	1.61E-06	2.38E-08	1.73E+02	5.05E+02	1.07E+04	3.19E+01	40
	0.34	0.32	0.66	8.58E-08	4.50E-09	9.79E-07	1.44E-08	1.21E+02	3.22E+02	6.48E+03	1.93E+01	40
	0.69	0.07	0.15	1.91E-08	1.00E-09	2.19E-07	3.22E-09	5.80E+01	1.03E+02	1.48E+03	4.31E+00	40
	1.03	0.01	0.01	1.57E-09	8.25E-11	1.79E-08	2.64E-10	4.15E+01	4.52E+01	1.58E+02	3.54E-01	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 11:45 RELATIVE TIME: H+04:15

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	0.38	0.78	1.02E-07	5.35E-09	1.16E-06	1.72E-08	1.36E+02	3.75E+02	7.96E+03	2.38E+01	40
	0.41	0.23	0.47	6.18E-08	3.24E-09	7.01E-07	1.04E-08	9.81E+01	2.43E+02	4.84E+03	1.44E+01	40
	0.82	0.05	0.11	1.38E-08	7.24E-10	1.56E-07	2.32E-09	5.30E+01	8.54E+01	1.11E+03	3.22E+00	40
	1.23	0.00	0.01	1.13E-09	5.94E-11	1.28E-08	1.91E-10	4.11E+01	4.37E+01	1.28E+02	2.64E-01	40
6.0	0.00	0.29	0.60	7.86E-08	4.13E-09	8.88E-07	1.32E-08	1.14E+02	2.98E+02	6.31E+03	1.88E+01	40
	0.47	0.18	0.36	4.77E-08	2.50E-09	5.39E-07	8.02E-09	8.48E+01	1.97E+02	3.84E+03	1.14E+01	40
	0.94	0.04	0.08	1.06E-08	5.58E-10	1.20E-07	1.79E-09	5.00E+01	7.50E+01	8.88E+02	2.55E+00	40
	1.41	0.00	0.01	8.73E-10	4.58E-11	9.87E-09	1.47E-10	4.08E+01	4.29E+01	1.10E+02	2.09E-01	40
7.0	0.00	0.37	0.77	9.76E-08	6.15E-09	1.11E-06	1.59E-08	1.32E+02	4.26E+02	3.64E+03	1.08E+01	40
	0.53	0.23	0.47	5.92E-08	3.73E-09	6.71E-07	9.62E-09	9.56E+01	2.74E+02	2.22E+03	6.56E+00	40
	1.06	0.05	0.10	1.32E-08	8.33E-10	1.50E-07	2.15E-09	5.24E+01	9.22E+01	5.27E+02	1.46E+00	40
	1.58	0.00	0.01	1.08E-09	6.84E-11	1.23E-08	1.76E-10	4.10E+01	4.43E+01	8.00E+01	1.20E-01	40
8.0	0.00	0.31	0.64	8.15E-08	5.14E-09	9.21E-07	1.32E-08	1.17E+02	3.62E+02	3.09E+03	9.15E+00	40
	0.58	0.19	0.39	4.94E-08	3.12E-09	5.58E-07	8.03E-09	8.65E+01	2.35E+02	1.89E+03	5.55E+00	40
	1.16	0.04	0.09	1.10E-08	6.96E-10	1.25E-07	1.79E-09	5.04E+01	8.36E+01	4.53E+02	1.24E+00	40
	1.75	0.00	0.01	9.06E-10	5.71E-11	1.02E-08	1.47E-10	4.09E+01	4.36E+01	7.39E+01	1.02E-01	40
9.0	0.00	0.27	0.55	6.98E-08	4.40E-09	7.86E-07	1.13E-08	1.06E+02	3.16E+02	2.68E+03	7.92E+00	40
	0.63	0.16	0.33	4.23E-08	2.67E-09	4.77E-07	6.88E-09	7.98E+01	2.07E+02	1.64E+03	4.81E+00	40
	1.27	0.04	0.07	9.44E-09	5.95E-10	1.06E-07	1.53E-09	4.89E+01	7.73E+01	3.97E+02	1.07E+00	40
	1.90	0.00	0.01	7.75E-10	4.89E-11	8.73E-09	1.26E-10	4.07E+01	4.31E+01	6.93E+01	8.80E-02	40
0.0	0.00	0.41	0.83	1.04E-07	7.82E-09	1.17E-06	1.62E-08	1.37E+02	5.30E+02	1.09E+03	3.14E+00	40
	0.68	0.25	0.51	6.28E-08	4.74E-09	7.08E-07	9.82E-09	9.90E+01	3.37E+02	6.74E+02	1.90E+00	40
	1.36	0.06	0.11	1.40E-08	1.06E-09	1.58E-07	2.19E-09	5.32E+01	1.06E+02	1.82E+02	4.25E-01	40
	2.04	0.00	0.01	1.15E-09	8.69E-11	1.30E-08	1.80E-10	4.11E+01	4.54E+01	5.16E+01	3.49E-02	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 12:00 RELATIVE TIME: H+04:30

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	10.00	NOBLE GAS (CI/SEC)	2.112E+00
DELTA-T (DEG. F/50M)	-1.40	IODINE (CI/SEC)	1.898E-01
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	7.531E-03
WIND DIRECTION (DEG./From)	200.0	TOTAL (CI/SEC)	2.309E+00
WIND TRAVEL (MI)	2.004E+01	AVERAGE GAMMA (MEV/DIS)	0.37
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.35

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN IND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	9.05	18.95	2.41E-06	9.59E-08	2.96E-05	4.33E-07	2.31E+03	6.05E+03	3.11E+05	9.33E+02	40
	0.05	5.49	11.49	1.46E-06	5.82E-08	1.79E-05	2.63E-07	1.42E+03	3.69E+03	1.89E+05	5.66E+02	40
	0.11	1.23	2.56	3.27E-07	1.30E-08	4.00E-06	5.86E-08	3.47E+02	8.53E+02	4.21E+04	1.26E+02	40
	0.16	0.10	0.21	2.68E-08	1.07E-09	3.29E-07	4.81E-09	6.52E+01	1.07E+02	3.49E+03	1.04E+01	40
1.0	0.00	2.51	5.25	6.93E-07	2.75E-08	8.18E-06	1.24E-07	6.91E+02	1.77E+03	9.90E+04	2.97E+02	40
	0.10	1.52	3.19	4.20E-07	1.67E-08	4.96E-06	7.54E-08	4.35E+02	1.09E+03	6.01E+04	1.80E+02	40
	0.20	0.34	0.71	9.38E-08	3.73E-09	1.11E-06	1.68E-08	1.28E+02	2.73E+02	1.34E+04	4.02E+01	40
	0.31	0.03	0.06	7.70E-09	3.06E-10	9.08E-08	1.38E-09	4.72E+01	5.92E+01	1.14E+03	3.30E+00	40
1.5	0.00	1.22	2.56	3.43E-07	1.36E-08	3.98E-06	6.15E-08	3.62E+02	8.94E+02	5.31E+04	1.59E+02	40
	0.15	0.74	1.55	2.08E-07	8.26E-09	2.41E-06	3.73E-08	2.35E+02	5.58E+02	3.22E+04	9.66E+01	40
	0.30	0.17	0.35	4.64E-08	1.84E-09	5.39E-07	8.32E-09	8.36E+01	1.56E+02	7.22E+03	2.16E+01	40
	0.44	0.01	0.03	3.81E-09	1.51E-10	4.42E-08	6.83E-10	4.36E+01	4.95E+01	6.29E+02	1.77E+00	40
2.0	0.00	0.75	1.57	2.11E-07	8.40E-09	2.43E-06	3.79E-08	2.39E+02	5.66E+02	3.47E+04	1.04E+02	40
	0.19	0.45	0.95	1.28E-07	5.10E-09	1.48E-06	2.30E-08	1.61E+02	3.59E+02	2.11E+04	6.31E+01	40
	0.38	0.10	0.21	2.86E-08	1.14E-09	3.29E-07	5.13E-09	6.69E+01	1.11E+02	4.73E+03	1.41E+01	40
	0.57	0.01	0.02	2.35E-09	9.33E-11	2.70E-08	4.21E-10	4.22E+01	4.58E+01	4.25E+02	1.16E+00	40
3.0	0.00	0.39	0.81	1.10E-07	4.36E-09	1.25E-06	1.97E-08	1.43E+02	3.13E+02	1.95E+04	5.85E+01	40
	0.27	0.23	0.49	6.66E-08	2.65E-09	7.59E-07	1.19E-08	1.03E+02	2.06E+02	1.18E+04	3.55E+01	40
	0.54	0.05	0.11	1.49E-08	5.91E-10	1.69E-07	2.67E-09	5.40E+01	7.70E+01	2.67E+03	7.91E+00	40
	0.81	0.00	0.01	1.22E-09	4.85E-11	1.39E-08	2.19E-10	4.11E+01	4.30E+01	2.56E+02	6.49E-01	40
4.0	0.00	0.36	0.74	9.85E-08	4.44E-09	1.13E-06	1.71E-08	1.33E+02	3.18E+02	1.06E+04	3.16E+01	40
	0.34	0.22	0.45	5.97E-08	2.69E-09	6.86E-07	1.04E-08	9.61E+01	2.09E+02	6.42E+03	1.92E+01	40
	0.69	0.05	0.10	1.33E-08	6.01E-10	1.53E-07	2.32E-09	5.25E+01	7.76E+01	1.46E+03	4.28E+00	40
	1.03	0.00	0.01	1.09E-09	4.93E-11	1.26E-08	1.90E-10	4.10E+01	4.31E+01	1.57E+02	3.51E-01	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 12:00 RELATIVE TIME: H+04:30

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	0.26	0.53	7.09E-08	3.20E-09	8.10E-07	1.23E-08	1.07E+02	2.40E+02	7.88E+03	2.35E+01	40
	0.41	0.16	0.32	4.30E-08	1.94E-09	4.91E-07	7.49E-09	8.04E+01	1.62E+02	4.80E+03	1.43E+01	40
	0.82	0.03	0.07	9.60E-09	4.33E-10	1.10E-07	1.67E-09	4.90E+01	6.71E+01	1.10E+03	3.19E+00	40
	1.23	0.00	0.01	7.88E-10	3.55E-11	9.00E-09	1.37E-10	4.07E+01	4.22E+01	1.27E+02	2.62E-01	40
6.0	0.00	0.20	0.41	5.47E-08	2.47E-09	6.22E-07	9.52E-09	9.14E+01	1.95E+02	6.24E+03	1.86E+01	40
	0.47	0.12	0.25	3.32E-08	1.50E-09	3.77E-07	5.77E-09	7.12E+01	1.34E+02	3.80E+03	1.13E+01	40
	0.94	0.03	0.06	7.41E-09	3.34E-10	8.42E-08	1.29E-09	4.70E+01	6.09E+01	8.79E+02	2.52E+00	40
	1.41	0.00	0.00	6.08E-10	2.74E-11	6.91E-09	1.06E-10	4.06E+01	4.17E+01	1.09E+02	2.07E-01	40
7.0	0.00	0.23	0.48	6.25E-08	3.28E-09	7.13E-07	1.05E-08	9.87E+01	2.46E+02	3.69E+03	1.10E+01	40
	0.53	0.14	0.29	3.79E-08	1.99E-09	4.32E-07	6.38E-09	7.56E+01	1.65E+02	2.25E+03	6.64E+00	40
	1.06	0.03	0.07	8.46E-09	4.44E-10	9.64E-08	1.42E-09	4.79E+01	6.78E+01	5.34E+02	1.48E+00	40
	1.58	0.00	0.01	6.94E-10	3.65E-11	7.92E-09	1.17E-10	4.07E+01	4.23E+01	8.05E+01	1.22E-01	40
8.0	0.00	0.19	0.40	5.22E-08	2.74E-09	5.93E-07	8.79E-09	8.91E+01	2.12E+02	3.13E+03	9.27E+00	40
	0.58	0.12	0.24	3.17E-08	1.66E-09	3.60E-07	5.33E-09	6.98E+01	1.44E+02	1.91E+03	5.62E+00	40
	1.16	0.03	0.05	7.07E-09	3.71E-10	8.03E-08	1.19E-09	4.66E+01	6.33E+01	4.58E+02	1.25E+00	40
	1.75	0.00	0.00	5.80E-10	3.05E-11	6.59E-09	9.76E-11	4.05E+01	4.19E+01	7.43E+01	1.03E-01	40
9.0	0.00	0.17	0.34	4.47E-08	2.35E-09	5.06E-07	7.52E-09	8.20E+01	1.87E+02	2.71E+03	8.02E+00	40
	0.63	0.10	0.21	2.71E-08	1.42E-09	3.07E-07	4.56E-09	6.55E+01	1.29E+02	1.66E+03	4.87E+00	40
	1.27	0.02	0.05	6.05E-09	3.18E-10	6.85E-08	1.02E-09	4.57E+01	5.99E+01	4.01E+02	1.09E+00	40
	1.90	0.00	0.00	4.96E-10	2.61E-11	5.62E-09	8.36E-11	4.05E+01	4.16E+01	6.97E+01	8.91E-02	40
10.0	0.00	0.23	0.47	6.01E-08	3.79E-09	6.81E-07	9.76E-09	9.65E+01	2.78E+02	1.23E+03	3.56E+00	40
	0.68	0.14	0.29	3.65E-08	2.30E-09	4.13E-07	5.92E-09	7.43E+01	1.84E+02	7.59E+02	2.16E+00	40
	1.36	0.03	0.06	8.13E-09	5.13E-10	9.22E-08	1.32E-09	4.76E+01	7.22E+01	2.00E+02	4.82E-01	40
	2.04	0.00	0.01	6.68E-10	4.21E-11	7.57E-09	1.08E-10	4.06E+01	4.26E+01	5.32E+01	3.96E-02	40

OTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 12:15 RELATIVE TIME: H+04:45

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	10.00	NOBLE GAS (CI/SEC)	1.505E+00
DELTA-T (DEG. F/50M)	-1.40	IODINE (CI/SEC)	1.344E-01
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	4.809E-03
WIND DIRECTION (DEG./From)	200.0	TOTAL (CI/SEC)	1.644E+00
WIND TRAVEL (MI)	2.254E+01	AVERAGE GAMMA (MEV/DIS)	0.36
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.34

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
0.5	0.00	6.28	13.23	1.71E-06	6.13E-08	2.11E-05	3.15E-07	1.65E+03	3.88E+03	3.06E+05	9.19E+02	40
	0.05	3.81	8.02	1.04E-06	3.72E-08	1.28E-05	1.91E-07	1.01E+03	2.37E+03	1.86E+05	5.58E+02	40
	0.11	0.85	1.79	2.31E-07	8.29E-09	2.85E-06	4.27E-08	2.57E+02	5.59E+02	4.15E+04	1.24E+02	40
	0.16	0.07	0.15	1.90E-08	6.80E-10	2.34E-07	3.50E-09	5.79E+01	8.26E+01	3.44E+03	1.02E+01	40
1.0	0.00	1.74	3.67	4.91E-07	1.76E-08	5.83E-06	9.06E-08	5.01E+02	1.14E+03	9.74E+04	2.92E+02	40
	0.10	1.06	2.23	2.98E-07	1.07E-08	3.54E-06	5.49E-08	3.20E+02	7.08E+02	5.91E+04	1.77E+02	40
	0.20	0.24	0.50	6.64E-08	2.38E-09	7.89E-07	1.23E-08	1.02E+02	1.89E+02	1.32E+04	3.96E+01	40
	0.31	0.02	0.04	5.45E-09	1.95E-10	6.47E-08	1.01E-09	4.51E+01	5.22E+01	1.12E+03	3.25E+00	40
1.5	0.00	0.85	1.79	2.43E-07	8.70E-09	2.84E-06	4.48E-08	2.68E+02	5.85E+02	5.21E+04	1.56E+02	40
	0.15	0.51	1.08	1.47E-07	5.28E-09	1.72E-06	2.72E-08	1.78E+02	3.71E+02	3.16E+04	9.49E+01	40
	0.30	0.11	0.24	3.29E-08	1.18E-09	3.84E-07	6.06E-09	7.09E+01	1.14E+02	7.09E+03	2.12E+01	40
	0.44	0.01	0.02	2.70E-09	9.67E-11	3.15E-08	4.98E-10	4.25E+01	4.61E+01	6.19E+02	1.74E+00	40
2.0	0.00	0.52	1.09	1.50E-07	5.36E-09	1.73E-06	2.76E-08	1.81E+02	3.76E+02	3.41E+04	1.02E+02	40
	0.19	0.31	0.66	9.08E-08	3.25E-09	1.05E-06	1.68E-08	1.25E+02	2.44E+02	2.07E+04	6.20E+01	40
	0.38	0.07	0.15	2.03E-08	7.26E-10	2.35E-07	3.74E-09	5.90E+01	8.55E+01	4.64E+03	1.38E+01	40
	0.57	0.01	0.01	1.66E-09	5.96E-11	1.93E-08	3.07E-10	4.16E+01	4.37E+01	4.18E+02	1.13E+00	40
3.0	0.00	0.27	0.56	7.78E-08	2.79E-09	8.92E-07	1.44E-08	1.13E+02	2.15E+02	1.91E+04	5.73E+01	40
	0.27	0.16	0.34	4.72E-08	1.69E-09	5.41E-07	8.70E-09	8.43E+01	1.46E+02	1.16E+04	3.48E+01	40
	0.54	0.04	0.08	1.05E-08	3.77E-10	1.21E-07	1.94E-09	4.99E+01	6.36E+01	2.62E+03	7.76E+00	40
	0.81	0.00	0.01	8.64E-10	3.10E-11	9.91E-09	1.59E-10	4.08E+01	4.19E+01	2.52E+02	6.37E-01	40
4.0	0.00	0.25	0.51	6.90E-08	2.74E-09	7.97E-07	1.24E-08	1.05E+02	2.12E+02	1.04E+04	3.12E+01	40
	0.34	0.15	0.31	4.18E-08	1.66E-09	4.83E-07	7.50E-09	7.93E+01	1.44E+02	6.34E+03	1.89E+01	40
	0.69	0.03	0.07	9.34E-09	3.71E-10	1.08E-07	1.67E-09	4.88E+01	6.33E+01	1.45E+03	4.22E+00	40
	1.03	0.00	0.01	7.66E-10	3.05E-11	8.85E-09	1.37E-10	4.07E+01	4.19E+01	1.55E+02	3.46E-01	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

LAL TIME: 12:15 RELATIVE TIME: H+04:45

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	0.18	0.37	4.97E-08	1.98E-09	5.71E-07	8.91E-09	8.67E+01	1.64E+02	7.78E+03	2.32E+01	40
	0.41	0.11	0.22	3.01E-08	1.20E-09	3.46E-07	5.41E-09	6.83E+01	1.15E+02	4.73E+03	1.41E+01	40
	0.82	0.02	0.05	6.73E-09	2.67E-10	7.72E-08	1.21E-09	4.63E+01	5.68E+01	1.09E+03	3.14E+00	40
	1.23	0.00	0.00	5.52E-10	2.20E-11	6.34E-09	9.90E-11	4.05E+01	4.14E+01	1.26E+02	2.58E-01	40
6.0	0.00	0.13	0.28	3.83E-08	1.52E-09	4.38E-07	6.87E-09	7.60E+01	1.35E+02	6.16E+03	1.84E+01	40
	0.47	0.08	0.17	2.33E-08	9.25E-10	2.66E-07	4.17E-09	6.19E+01	9.79E+01	3.75E+03	1.11E+01	40
	0.94	0.02	0.04	5.19E-09	2.06E-10	5.93E-08	9.30E-10	4.49E+01	5.29E+01	8.68E+02	2.49E+00	40
	1.41	0.00	0.00	4.26E-10	1.69E-11	4.87E-09	7.64E-11	4.04E+01	4.11E+01	1.08E+02	2.04E-01	40
7.0	0.00	0.16	0.33	4.35E-08	1.96E-09	4.99E-07	7.57E-09	8.09E+01	1.63E+02	3.69E+03	1.10E+01	40
	0.53	0.10	0.20	2.64E-08	1.19E-09	3.03E-07	4.59E-09	6.48E+01	1.15E+02	2.26E+03	6.65E+00	40
	1.06	0.02	0.04	5.89E-09	2.66E-10	6.76E-08	1.02E-09	4.55E+01	5.66E+01	5.34E+02	1.48E+00	40
	1.58	0.00	0.00	4.83E-10	2.18E-11	5.54E-09	8.41E-11	4.05E+01	4.14E+01	8.06E+01	1.22E-01	40
8.0	0.00	0.13	0.27	3.63E-08	1.64E-09	4.15E-07	6.32E-09	7.42E+01	1.43E+02	3.13E+03	9.28E+00	40
	0.58	0.08	0.17	2.20E-08	9.95E-10	2.52E-07	3.84E-09	6.07E+01	1.02E+02	1.91E+03	5.63E+00	40
	1.16	0.02	0.04	4.92E-09	2.22E-10	5.62E-08	8.56E-10	4.46E+01	5.39E+01	4.58E+02	1.26E+00	40
	1.75	0.00	0.00	4.04E-10	1.82E-11	4.62E-09	7.02E-11	4.04E+01	4.11E+01	7.43E+01	1.03E-01	40
9.0	0.00	0.11	0.23	3.11E-08	1.40E-09	3.55E-07	5.41E-09	6.92E+01	1.28E+02	2.71E+03	8.03E+00	40
	0.63	0.07	0.14	1.89E-08	8.52E-10	2.15E-07	3.28E-09	5.77E+01	9.33E+01	1.66E+03	4.87E+00	40
	1.27	0.02	0.03	4.21E-09	1.90E-10	4.80E-08	7.32E-10	4.40E+01	5.19E+01	4.02E+02	1.09E+00	40
	1.90	0.00	0.00	3.46E-10	1.56E-11	3.94E-09	6.01E-11	4.03E+01	4.10E+01	6.97E+01	8.92E-02	40
0.0	0.00	0.14	0.30	3.85E-08	2.02E-09	4.39E-07	6.48E-09	7.62E+01	1.67E+02	1.30E+03	3.78E+00	40
	0.68	0.09	0.18	2.33E-08	1.23E-09	2.66E-07	3.93E-09	6.19E+01	1.17E+02	8.03E+02	2.29E+00	40
	1.36	0.02	0.04	5.21E-09	2.74E-10	5.94E-08	8.77E-10	4.49E+01	5.72E+01	2.10E+02	5.11E-01	40
	2.04	0.00	0.00	4.28E-10	2.25E-11	4.88E-09	7.20E-11	4.04E+01	4.14E+01	5.40E+01	4.19E-02	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 12:30 RELATIVE TIME: H+05:00

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	13.00	NOBLE GAS (CI/SEC)	1.059E+00
DELTA-T (DEG. F/50M)	-1.40	IODINE (CI/SEC)	9.429E-02
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	3.119E-03
WIND DIRECTION (DEG./From)	200.0	TOTAL (CI/SEC)	1.157E+00
WIND TRAVEL (MI)	2.580E+01	AVERAGE GAMMA (MEV/DIS)	0.35
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.33

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN WIND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	3.32	7.03	9.23E-07	3.06E-08	1.14E-05	1.75E-07	9.07E+02	1.95E+03	3.00E+05	9.01E+02	40
	0.05	2.01	4.26	5.60E-07	1.85E-08	6.92E-06	1.06E-07	5.66E+02	1.20E+03	1.82E+05	5.47E+02	40
	0.11	0.45	0.95	1.25E-07	4.14E-09	1.54E-06	2.37E-08	1.57E+02	2.99E+02	4.07E+04	1.22E+02	40
	0.16	0.04	0.08	1.03E-08	3.39E-10	1.27E-07	1.94E-09	4.96E+01	6.13E+01	3.37E+03	1.00E+01	40
1.0	0.00	0.92	1.95	2.65E-07	8.77E-09	3.16E-06	5.02E-08	2.89E+02	5.89E+02	9.54E+04	2.86E+02	40
	0.10	0.56	1.18	1.61E-07	5.32E-09	1.91E-06	3.04E-08	1.91E+02	3.73E+02	5.79E+04	1.74E+02	40
	0.20	0.12	0.26	3.59E-08	1.19E-09	4.27E-07	6.79E-09	7.37E+01	1.14E+02	1.29E+04	3.87E+01	40
	0.31	0.01	0.02	2.94E-09	9.74E-11	3.51E-08	5.58E-10	4.28E+01	4.61E+01	1.10E+03	3.18E+00	40
1.5	0.00	0.45	0.95	1.31E-07	4.34E-09	1.54E-06	2.48E-08	1.63E+02	3.12E+02	5.10E+04	1.53E+02	40
	0.15	0.27	0.58	7.95E-08	2.63E-09	9.31E-07	1.51E-08	1.15E+02	2.05E+02	3.10E+04	9.29E+01	40
	0.30	0.06	0.13	1.77E-08	5.87E-10	2.08E-07	3.36E-09	5.67E+01	7.68E+01	6.94E+03	2.07E+01	40
	0.44	0.00	0.01	1.46E-09	4.82E-11	1.71E-08	2.76E-10	4.14E+01	4.30E+01	6.07E+02	1.70E+00	40
2.0	0.00	0.27	0.58	8.08E-08	2.68E-09	9.38E-07	1.53E-08	1.16E+02	2.08E+02	3.33E+04	1.00E+02	40
	0.19	0.17	0.35	4.90E-08	1.62E-09	5.69E-07	9.29E-09	8.61E+01	1.42E+02	2.02E+04	6.06E+01	40
	0.38	0.04	0.08	1.09E-08	3.62E-10	1.27E-07	2.07E-09	5.03E+01	6.27E+01	4.54E+03	1.35E+01	40
	0.57	0.00	0.01	8.98E-10	2.97E-11	1.04E-08	1.70E-10	4.08E+01	4.19E+01	4.10E+02	1.11E+00	40
3.0	0.00	0.14	0.30	4.20E-08	1.39E-09	4.83E-07	7.95E-09	7.95E+01	1.27E+02	1.87E+04	5.61E+01	40
	0.27	0.09	0.18	2.55E-08	8.43E-10	2.93E-07	4.82E-09	6.39E+01	9.28E+01	1.14E+04	3.40E+01	40
	0.54	0.02	0.04	5.68E-09	1.88E-10	6.54E-08	1.08E-09	4.53E+01	5.18E+01	2.57E+03	7.59E+00	40
	0.81	0.00	0.00	4.66E-10	1.54E-11	5.37E-09	8.84E-11	4.04E+01	4.10E+01	2.47E+02	6.23E-01	40
4.0	0.00	0.13	0.28	3.76E-08	1.35E-09	4.37E-07	6.93E-09	7.53E+01	1.24E+02	1.02E+04	3.06E+01	40
	0.34	0.08	0.17	2.28E-08	8.17E-10	2.65E-07	4.20E-09	6.14E+01	9.12E+01	6.22E+03	1.86E+01	40
	0.69	0.02	0.04	5.09E-09	1.82E-10	5.91E-08	9.38E-10	4.48E+01	5.14E+01	1.42E+03	4.14E+00	40
	1.03	0.00	0.00	4.18E-10	1.50E-11	4.85E-09	7.70E-11	4.04E+01	4.09E+01	1.53E+02	3.40E-01	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 12:30 RELATIVE TIME: H+05:00

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
5.0	0.00	0.09	0.20	2.71E-08	9.71E-10	3.13E-07	4.99E-09	6.54E+01	1.01E+02	7.63E+03	2.28E+01	40
	0.41	0.06	0.12	1.64E-08	5.89E-10	1.90E-07	3.03E-09	5.54E+01	7.69E+01	4.64E+03	1.38E+01	40
	0.82	0.01	0.03	3.66E-09	1.31E-10	4.24E-08	6.76E-10	4.34E+01	4.82E+01	1.07E+03	3.08E+00	40
	1.23	0.00	0.00	3.01E-10	1.08E-11	3.48E-09	5.55E-11	4.03E+01	4.07E+01	1.24E+02	2.53E-01	40
6.0	0.00	0.07	0.15	2.09E-08	7.49E-10	2.40E-07	3.85E-09	5.96E+01	8.69E+01	6.04E+03	1.80E+01	40
	0.47	0.04	0.09	1.27E-08	4.54E-10	1.46E-07	2.34E-09	5.19E+01	6.84E+01	3.68E+03	1.09E+01	40
	0.94	0.01	0.02	2.83E-09	1.01E-10	3.25E-08	5.21E-10	4.27E+01	4.63E+01	8.52E+02	2.44E+00	40
	1.41	0.00	0.00	2.32E-10	8.32E-12	2.67E-09	4.28E-11	4.02E+01	4.05E+01	1.07E+02	2.00E-01	40
7.0	0.00	0.08	0.17	2.35E-08	9.33E-10	2.71E-07	4.21E-09	6.20E+01	9.85E+01	3.65E+03	1.08E+01	40
	0.53	0.05	0.11	1.42E-08	5.66E-10	1.64E-07	2.55E-09	5.34E+01	7.55E+01	2.23E+03	6.58E+00	40
	1.06	0.01	0.02	3.17E-09	1.26E-10	3.66E-08	5.69E-10	4.30E+01	4.79E+01	5.29E+02	1.47E+00	40
	1.58	0.00	0.00	2.61E-10	1.04E-11	3.01E-09	4.67E-11	4.02E+01	4.06E+01	8.01E+01	1.21E-01	40
8.0	0.00	0.07	0.15	1.96E-08	7.80E-10	2.25E-07	3.51E-09	5.84E+01	8.88E+01	3.10E+03	9.17E+00	40
	0.58	0.04	0.09	1.19E-08	4.73E-10	1.37E-07	2.13E-09	5.12E+01	6.96E+01	1.89E+03	5.56E+00	40
	1.16	0.01	0.02	2.65E-09	1.06E-10	3.05E-08	4.75E-10	4.25E+01	4.66E+01	4.53E+02	1.24E+00	40
	1.75	0.00	0.00	2.18E-10	8.66E-12	2.50E-09	3.90E-11	4.02E+01	4.05E+01	7.39E+01	1.02E-01	40
9.0	0.00	0.06	0.12	1.68E-08	6.67E-10	1.92E-07	3.01E-09	5.58E+01	8.18E+01	2.68E+03	7.93E+00	40
	0.63	0.04	0.08	1.02E-08	4.05E-10	1.17E-07	1.82E-09	4.96E+01	6.54E+01	1.64E+03	4.81E+00	40
	1.27	0.01	0.02	2.27E-09	9.03E-11	2.60E-08	4.07E-10	4.21E+01	4.57E+01	3.98E+02	1.07E+00	40
	1.90	0.00	0.00	1.86E-10	7.41E-12	2.14E-09	3.34E-11	4.02E+01	4.05E+01	6.93E+01	8.81E-02	40
10.0	0.00	0.07	0.16	2.06E-08	9.31E-10	2.37E-07	3.59E-09	5.94E+01	9.83E+01	1.32E+03	3.83E+00	40
	0.68	0.05	0.09	1.25E-08	5.65E-10	1.43E-07	2.17E-09	5.17E+01	7.54E+01	8.14E+02	2.33E+00	40
	1.36	0.01	0.02	2.79E-09	1.26E-10	3.20E-08	4.85E-10	4.26E+01	4.79E+01	2.13E+02	5.19E-01	40
	2.04	0.00	0.00	2.29E-10	1.03E-11	2.63E-09	3.98E-11	4.02E+01	4.06E+01	5.42E+01	4.26E-02	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 12:45 RELATIVE TIME: H+05:15

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	13.00	NOBLE GAS (CI/SEC)	7.576E-01
DELTA-T (DEG. F/50M)	-1.50	IODINE (CI/SEC)	6.719E-02
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	2.070E-03
WIND DIRECTION (DEG./From)	203.0	TOTAL (CI/SEC)	8.269E-01
WIND TRAVEL (MI)	2.906E+01	AVERAGE GAMMA (MEV/DIS)	0.34
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.32

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN WIND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00	2.32	4.94	6.58E-07	2.03E-08	8.16E-06	1.28E-07	6.58E+02	1.31E+03	2.94E+05	8.84E+02	40
	0.05	1.41	3.00	3.99E-07	1.23E-08	4.95E-06	7.75E-08	4.15E+02	8.11E+02	1.79E+05	5.36E+02	40
	0.11	0.31	0.67	8.90E-08	2.74E-09	1.10E-06	1.73E-08	1.24E+02	2.12E+02	3.99E+04	1.20E+02	40
	0.16	0.03	0.05	7.31E-09	2.25E-10	9.07E-08	1.42E-09	4.69E+01	5.41E+01	3.31E+03	9.82E+00	40
1.0	0.00	0.64	1.37	1.89E-07	5.82E-09	2.26E-06	3.67E-08	2.17E+02	4.05E+02	9.35E+04	2.81E+02	40
	0.10	0.39	0.83	1.15E-07	3.53E-09	1.37E-06	2.22E-08	1.48E+02	2.61E+02	5.67E+04	1.70E+02	40
	0.20	0.09	0.19	2.56E-08	7.88E-10	3.05E-07	4.96E-09	6.40E+01	8.94E+01	1.27E+04	3.80E+01	40
	0.31	0.01	0.02	2.10E-09	6.47E-11	2.51E-08	4.07E-10	4.20E+01	4.41E+01	1.08E+03	3.12E+00	40
1.5	0.00	0.31	0.67	9.34E-08	2.88E-09	1.10E-06	1.81E-08	1.28E+02	2.20E+02	5.00E+04	1.50E+02	40
	0.15	0.19	0.41	5.67E-08	1.75E-09	6.66E-07	1.10E-08	9.33E+01	1.49E+02	3.03E+04	9.10E+01	40
	0.30	0.04	0.09	1.26E-08	3.90E-10	1.49E-07	2.46E-09	5.19E+01	6.44E+01	6.80E+03	2.03E+01	40
	0.44	0.00	0.01	1.04E-09	3.20E-11	1.22E-08	2.02E-10	4.10E+01	4.20E+01	5.95E+02	1.67E+00	40
2.0	0.00	0.19	0.41	5.76E-08	1.78E-09	6.71E-07	1.12E-08	9.41E+01	1.51E+02	3.26E+04	9.79E+01	40
	0.19	0.12	0.25	3.49E-08	1.08E-09	4.07E-07	6.78E-09	7.28E+01	1.07E+02	1.98E+04	5.94E+01	40
	0.38	0.03	0.06	7.80E-09	2.40E-10	9.08E-08	1.51E-09	4.73E+01	5.51E+01	4.45E+03	1.32E+01	40
	0.57	0.00	0.00	6.40E-10	1.97E-11	7.46E-09	1.24E-10	4.06E+01	4.12E+01	4.02E+02	1.09E+00	40
3.0	0.00	0.10	0.21	2.99E-08	9.22E-10	3.45E-07	5.81E-09	6.81E+01	9.78E+01	1.83E+04	5.49E+01	40
	0.27	0.06	0.13	1.81E-08	5.60E-10	2.10E-07	3.52E-09	5.71E+01	7.51E+01	1.11E+04	3.33E+01	40
	0.54	0.01	0.03	4.05E-09	1.25E-10	4.67E-08	7.86E-10	4.38E+01	4.78E+01	2.51E+03	7.43E+00	40
	0.81	0.00	0.00	3.32E-10	1.02E-11	3.84E-09	6.45E-11	4.03E+01	4.06E+01	2.43E+02	6.10E-01	40
4.0	0.00	0.09	0.19	2.64E-08	8.74E-10	3.08E-07	4.99E-09	6.48E+01	9.47E+01	1.00E+04	3.00E+01	40
	0.34	0.05	0.12	1.60E-08	5.30E-10	1.87E-07	3.03E-09	5.50E+01	7.32E+01	6.11E+03	1.82E+01	40
	0.69	0.01	0.03	3.57E-09	1.18E-10	4.16E-08	6.76E-10	4.34E+01	4.74E+01	1.39E+03	4.07E+00	40
	1.03	0.00	0.00	2.93E-10	9.71E-12	3.42E-09	5.55E-11	4.03E+01	4.06E+01	1.51E+02	3.34E-01	40

TE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 12:45 RELATIVE TIME: H+05:15

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
5.0	0.00	0.06	0.14	1.90E-08	6.30E-10	2.20E-07	3.60E-09	5.79E+01	7.94E+01	7.49E+03	2.24E+01	40
	0.41	0.04	0.08	1.15E-08	3.82E-10	1.34E-07	2.18E-09	5.08E+01	6.39E+01	4.56E+03	1.36E+01	40
	0.82	0.01	0.02	2.57E-09	8.52E-11	2.98E-08	4.87E-10	4.24E+01	4.53E+01	1.05E+03	3.03E+00	40
	1.23	0.00	0.00	2.11E-10	6.99E-12	2.45E-09	4.00E-11	4.02E+01	4.04E+01	1.23E+02	2.48E-01	40
6.0	0.00	0.05	0.10	1.47E-08	4.86E-10	1.69E-07	2.78E-09	5.38E+01	7.04E+01	5.92E+03	1.77E+01	40
	0.47	0.03	0.06	8.89E-09	2.95E-10	1.03E-07	1.68E-09	4.84E+01	5.84E+01	3.61E+03	1.07E+01	40
	0.94	0.01	0.01	1.98E-09	6.57E-11	2.29E-08	3.76E-10	4.19E+01	4.41E+01	8.36E+02	2.39E+00	40
	1.41	0.00	0.00	1.63E-10	5.39E-12	1.88E-09	3.08E-11	4.02E+01	4.03E+01	1.05E+02	1.96E-01	40
7.0	0.00	0.06	0.12	1.66E-08	5.96E-10	1.93E-07	3.06E-09	5.56E+01	7.73E+01	3.60E+03	1.07E+01	40
	0.53	0.04	0.07	1.01E-08	3.61E-10	1.17E-07	1.86E-09	4.95E+01	6.26E+01	2.20E+03	6.49E+00	40
	1.06	0.01	0.02	2.25E-09	8.07E-11	2.61E-08	4.15E-10	4.21E+01	4.51E+01	5.22E+02	1.45E+00	40
	1.58	0.00	0.00	1.85E-10	6.62E-12	2.14E-09	3.40E-11	4.02E+01	4.04E+01	7.96E+01	1.19E-01	40
8.0	0.00	0.05	0.10	1.39E-08	4.98E-10	1.61E-07	2.56E-09	5.30E+01	7.12E+01	3.05E+03	9.05E+00	40
	0.58	0.03	0.06	8.41E-09	3.02E-10	9.74E-08	1.55E-09	4.79E+01	5.89E+01	1.87E+03	5.49E+00	40
	1.16	0.01	0.01	1.88E-09	6.74E-11	2.17E-08	3.46E-10	4.18E+01	4.42E+01	4.48E+02	1.22E+00	40
	1.75	0.00	0.00	1.54E-10	5.53E-12	1.78E-09	2.84E-11	4.01E+01	4.03E+01	7.35E+01	1.01E-01	40
9.0	0.00	0.04	0.09	1.19E-08	4.26E-10	1.37E-07	2.19E-09	5.12E+01	6.67E+01	2.64E+03	7.82E+00	40
	0.63	0.02	0.05	7.20E-09	2.58E-10	8.31E-08	1.33E-09	4.68E+01	5.62E+01	1.62E+03	4.74E+00	40
	1.27	0.01	0.01	1.61E-09	5.77E-11	1.85E-08	2.96E-10	4.15E+01	4.36E+01	3.93E+02	1.06E+00	40
	1.90	0.00	0.00	1.32E-10	4.73E-12	1.52E-09	2.43E-11	4.01E+01	4.03E+01	6.89E+01	8.69E-02	40
10.0	0.00	0.05	0.11	1.44E-08	5.75E-10	1.67E-07	2.59E-09	5.36E+01	7.60E+01	1.32E+03	3.85E+00	40
	0.68	0.03	0.07	8.76E-09	3.49E-10	1.01E-07	1.57E-09	4.82E+01	6.19E+01	8.18E+02	2.34E+00	40
	1.36	0.01	0.01	1.95E-09	7.78E-11	2.26E-08	3.50E-10	4.18E+01	4.49E+01	2.14E+02	5.21E-01	40
	2.04	0.00	0.00	1.60E-10	6.39E-12	1.85E-09	2.88E-11	4.02E+01	4.04E+01	5.42E+01	4.28E-02	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 13:00 RELATIVE TIME: H+05:30

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	13.00	NOBLE GAS (CI/SEC)	5.384E-01
DELTA-T (DEG. F/50M)	-1.50	IODINE (CI/SEC)	4.753E-02
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	1.419E-03
WIND DIRECTION (DEG./From)	203.0	TOTAL (CI/SEC)	5.873E-01
WIND TRAVEL (MI)	3.231E+01	AVERAGE GAMMA (MEV/DIS)	0.33
PLUME TRAILING EDGE (MI)	0.000E+00	AVERAGE BETA (MEV/DIS)	0.32

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
0.5	0.00	1.61	3.46	4.65E-07	1.39E-08	5.80E-06	9.25E-08	4.77E+02	9.11E+02	2.89E+05	8.67E+02	40
	0.05	0.98	2.10	2.82E-07	8.43E-09	3.52E-06	5.61E-08	3.05E+02	5.68E+02	1.75E+05	5.26E+02	40
	0.11	0.22	0.47	6.30E-08	1.88E-09	7.85E-07	1.25E-08	9.92E+01	1.58E+02	3.91E+04	1.17E+02	40
	0.16	0.02	0.04	5.17E-09	1.54E-10	6.44E-08	1.03E-09	4.49E+01	4.97E+01	3.25E+03	9.63E+00	40
1.0	0.00	0.45	0.96	1.34E-07	3.99E-09	1.60E-06	2.65E-08	1.66E+02	2.90E+02	9.16E+04	2.75E+02	40
	0.10	0.27	0.58	8.10E-08	2.42E-09	9.73E-07	1.61E-08	1.16E+02	1.92E+02	5.56E+04	1.67E+02	40
	0.20	0.06	0.13	1.81E-08	5.40E-10	2.17E-07	3.59E-09	5.70E+01	7.38E+01	1.24E+04	3.72E+01	40
	0.31	0.00	0.01	1.48E-09	4.43E-11	1.78E-08	2.95E-10	4.14E+01	4.28E+01	1.06E+03	3.05E+00	40
1.5	0.00	0.22	0.47	6.61E-08	1.97E-09	7.81E-07	1.31E-08	1.02E+02	1.64E+02	4.90E+04	1.47E+02	40
	0.15	0.13	0.28	4.01E-08	1.20E-09	4.73E-07	7.97E-09	7.77E+01	1.15E+02	2.97E+04	8.91E+01	40
	0.30	0.03	0.06	8.95E-09	2.67E-10	1.06E-07	1.78E-09	4.84E+01	5.67E+01	6.66E+03	1.99E+01	40
	0.44	0.00	0.01	7.34E-10	2.19E-11	8.67E-09	1.46E-10	4.07E+01	4.14E+01	5.84E+02	1.63E+00	40
2.0	0.00	0.13	0.29	4.07E-08	1.22E-09	4.77E-07	8.10E-09	7.83E+01	1.16E+02	3.20E+04	9.59E+01	40
	0.19	0.08	0.17	2.47E-08	7.38E-10	2.89E-07	4.91E-09	6.32E+01	8.62E+01	1.94E+04	5.81E+01	40
	0.38	0.02	0.04	5.51E-09	1.65E-10	6.46E-08	1.10E-09	4.52E+01	5.03E+01	4.36E+03	1.30E+01	40
	0.57	0.00	0.00	4.53E-10	1.35E-11	5.30E-09	9.00E-11	4.04E+01	4.08E+01	3.95E+02	1.07E+00	40
3.0	0.00	0.07	0.15	2.12E-08	6.32E-10	2.45E-07	4.21E-09	5.99E+01	7.96E+01	1.79E+04	5.37E+01	40
	0.27	0.04	0.09	1.28E-08	3.84E-10	1.49E-07	2.55E-09	5.21E+01	6.40E+01	1.09E+04	3.26E+01	40
	0.54	0.01	0.02	2.86E-09	8.56E-11	3.32E-08	5.69E-10	4.27E+01	4.54E+01	2.46E+03	7.27E+00	40
	0.81	0.00	0.00	2.35E-10	7.02E-12	2.73E-09	4.67E-11	4.02E+01	4.04E+01	2.39E+02	5.97E-01	40
4.0	0.00	0.06	0.13	1.88E-08	5.80E-10	2.20E-07	3.65E-09	5.77E+01	7.63E+01	9.85E+03	2.95E+01	40
	0.34	0.04	0.08	1.14E-08	3.52E-10	1.33E-07	2.21E-09	5.07E+01	6.20E+01	5.99E+03	1.79E+01	40
	0.69	0.01	0.02	2.54E-09	7.85E-11	2.98E-08	4.94E-10	4.24E+01	4.49E+01	1.37E+03	3.99E+00	40
	1.03	0.00	0.00	2.09E-10	6.44E-12	2.44E-09	4.05E-11	4.02E+01	4.04E+01	1.49E+02	3.27E-01	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 13:00 RELATIVE TIME: H+05:30

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00	0.04	0.10	1.35E-08	4.18E-10	1.58E-07	2.63E-09	5.27E+01	6.62E+01	7.34E+03	2.19E+01	40
	0.41	0.03	0.06	8.21E-09	2.53E-10	9.55E-08	1.59E-09	4.77E+01	5.59E+01	4.47E+03	1.33E+01	40
	0.82	0.01	0.01	1.83E-09	5.65E-11	2.13E-08	3.56E-10	4.17E+01	4.35E+01	1.03E+03	2.97E+00	40
	1.23	0.00	0.00	1.50E-10	4.64E-12	1.75E-09	2.92E-11	4.01E+01	4.03E+01	1.21E+02	2.44E-01	40
6.0	0.00	0.03	0.07	1.04E-08	3.22E-10	1.21E-07	2.03E-09	4.98E+01	6.02E+01	5.81E+03	1.73E+01	40
	0.47	0.02	0.04	6.33E-09	1.95E-10	7.34E-08	1.23E-09	4.60E+01	5.22E+01	3.54E+03	1.05E+01	40
	0.94	0.00	0.01	1.41E-09	4.36E-11	1.64E-08	2.74E-10	4.13E+01	4.27E+01	8.21E+02	2.35E+00	40
	1.41	0.00	0.00	1.16E-10	3.58E-12	1.34E-09	2.25E-11	4.01E+01	4.02E+01	1.04E+02	1.93E-01	40
7.0	0.00	0.04	0.08	1.17E-08	3.86E-10	1.36E-07	2.21E-09	5.10E+01	6.42E+01	3.55E+03	1.05E+01	40
	0.53	0.02	0.05	7.07E-09	2.34E-10	8.23E-08	1.34E-09	4.66E+01	5.47E+01	2.17E+03	6.39E+00	40
	1.06	0.01	0.01	1.58E-09	5.23E-11	1.84E-08	2.99E-10	4.15E+01	4.33E+01	5.15E+02	1.43E+00	40
	1.58	0.00	0.00	1.29E-10	4.29E-12	1.51E-09	2.45E-11	4.01E+01	4.03E+01	7.90E+01	1.17E-01	40
8.0	0.00	0.03	0.07	9.73E-09	3.23E-10	1.13E-07	1.84E-09	4.91E+01	6.02E+01	3.01E+03	8.91E+00	40
	0.58	0.02	0.04	5.90E-09	1.96E-10	6.85E-08	1.12E-09	4.55E+01	5.23E+01	1.84E+03	5.40E+00	40
	1.16	0.00	0.01	1.32E-09	4.37E-11	1.53E-08	2.50E-10	4.12E+01	4.27E+01	4.41E+02	1.21E+00	40
	1.75	0.00	0.00	1.08E-10	3.59E-12	1.26E-09	2.05E-11	4.01E+01	4.02E+01	7.30E+01	9.89E-02	40
9.0	0.00	0.03	0.06	8.33E-09	2.76E-10	9.64E-08	1.58E-09	4.78E+01	5.73E+01	2.60E+03	7.70E+00	40
	0.63	0.02	0.04	5.05E-09	1.68E-10	5.85E-08	9.57E-10	4.47E+01	5.05E+01	1.60E+03	4.67E+00	40
	1.27	0.00	0.01	1.13E-09	3.74E-11	1.30E-08	2.14E-10	4.11E+01	4.23E+01	3.87E+02	1.04E+00	40
	1.90	0.00	0.00	9.25E-11	3.07E-12	1.07E-09	1.75E-11	4.01E+01	4.02E+01	6.85E+01	8.55E-02	40
10.0	0.00	0.04	0.07	1.02E-08	3.67E-10	1.19E-07	1.89E-09	4.96E+01	6.30E+01	1.32E+03	3.84E+00	40
	0.68	0.02	0.05	6.20E-09	2.23E-10	7.21E-08	1.14E-09	4.58E+01	5.40E+01	8.15E+02	2.33E+00	40
	1.36	0.00	0.01	1.38E-09	4.97E-11	1.61E-08	2.55E-10	4.13E+01	4.31E+01	2.13E+02	5.20E-01	40
	2.04	0.00	0.00	1.14E-10	4.08E-12	1.32E-09	2.10E-11	4.01E+01	4.03E+01	5.42E+01	4.27E-02	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 13:15 RELATIVE TIME: H+05:45

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	13.00	NOBLE GAS (CI/SEC)	0.000E+00
DELTA-T (DEG. F/50M)	-1.50	IODINE (CI/SEC)	0.000E+00
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	0.000E+00
WIND DIRECTION (DEG./From)	203.0	TOTAL (CI/SEC)	0.000E+00
WIND TRAVEL (MI)	3.557E+01	AVERAGE GAMMA (MEV/DIS)	0.33
PLUME TRAILING EDGE (MI)	3.256E+00	AVERAGE BETA (MEV/DIS)	0.31

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN WIND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00									2.82E+05	8.47E+02	40
	0.05									1.71E+05	5.14E+02	40
	0.11									3.82E+04	1.15E+02	40
	0.16									3.17E+03	9.41E+00	40
1.0	0.00									8.95E+04	2.69E+02	40
	0.10									5.43E+04	1.63E+02	40
	0.20									1.21E+04	3.64E+01	40
	0.31									1.03E+03	2.98E+00	40
1.5	0.00									4.79E+04	1.44E+02	40
	0.15									2.90E+04	8.71E+01	40
	0.30									6.51E+03	1.94E+01	40
	0.44									5.71E+02	1.60E+00	40
2.0	0.00									3.12E+04	9.37E+01	40
	0.19									1.90E+04	5.68E+01	40
	0.38									4.26E+03	1.27E+01	40
	0.57									3.87E+02	1.04E+00	40
3.0	0.00									1.75E+04	5.25E+01	40
	0.27									1.06E+04	3.19E+01	40
	0.54									2.41E+03	7.11E+00	40
	0.81									2.34E+02	5.83E-01	40
4.0	0.00	0.04	0.09	1.33E-08	3.97E-10	1.56E-07	2.64E-09	5.25E+01	6.49E+01	9.67E+03	2.89E+01	40
	0.34	0.03	0.06	8.06E-09	2.41E-10	9.48E-08	1.60E-09	4.76E+01	5.51E+01	5.88E+03	1.75E+01	40
	0.69	0.01	0.01	1.80E-09	5.38E-11	2.12E-08	3.58E-10	4.17E+01	4.34E+01	1.34E+03	3.91E+00	40
	1.03	0.00	0.00	1.48E-10	4.42E-12	1.74E-09	2.94E-11	4.01E+01	4.03E+01	1.47E+02	3.21E-01	40

TE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

:AL TIME: 13:15 RELATIVE TIME: H+05:45

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGR(
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGR(COUN' RATE (CPM
5.0	0.00	0.03	0.07	9.58E-09	2.86E-10	1.12E-07	1.90E-09	4.90E+01	5.79E+01	7.20E+03	2.15E+01	40
	0.41	0.02	0.04	5.81E-09	1.74E-10	6.79E-08	1.15E-09	4.55E+01	5.09E+01	4.39E+03	1.30E+01	40
	0.82	0.00	0.01	1.30E-09	3.88E-11	1.51E-08	2.58E-10	4.12E+01	4.24E+01	1.01E+03	2.91E+00	40
	1.23	0.00	0.00	1.06E-10	3.18E-12	1.24E-09	2.11E-11	4.01E+01	4.02E+01	1.20E+02	2.39E-01	40
6.0	0.00	0.02	0.05	7.39E-09	2.21E-10	8.60E-08	1.47E-09	4.69E+01	5.38E+01	5.70E+03	1.70E+01	40
	0.47	0.01	0.03	4.48E-09	1.34E-10	5.21E-08	8.91E-10	4.42E+01	4.84E+01	3.47E+03	1.03E+01	40
	0.94	0.00	0.01	1.00E-09	2.99E-11	1.16E-08	1.99E-10	4.09E+01	4.19E+01	8.06E+02	2.30E+00	40
	1.41	0.00	0.00	8.21E-11	2.45E-12	<LLD	1.63E-11	4.01E+01	4.02E+01	1.03E+02	1.89E-01	40
7.0	0.00	0.03	0.06	8.30E-09	2.56E-10	9.71E-08	1.61E-09	4.78E+01	5.61E+01	3.49E+03	1.04E+01	40
	0.53	0.02	0.04	5.04E-09	1.56E-10	5.89E-08	9.78E-10	4.47E+01	4.97E+01	2.13E+03	6.29E+00	40
	1.06	0.00	0.01	1.12E-09	3.47E-11	1.31E-08	2.18E-10	4.11E+01	4.22E+01	5.07E+02	1.40E+00	40
	1.58	0.00	0.00	9.23E-11	2.85E-12	1.08E-09	1.79E-11	4.01E+01	4.02E+01	7.83E+01	1.15E-01	40
8.0	0.00	0.02	0.05	6.94E-09	2.14E-10	8.08E-08	1.35E-09	4.65E+01	5.34E+01	2.96E+03	8.76E+00	40
	0.58	0.01	0.03	4.21E-09	1.30E-10	4.90E-08	8.17E-10	4.40E+01	4.81E+01	1.81E+03	5.31E+00	40
	1.16	0.00	0.01	9.39E-10	2.90E-11	1.09E-08	1.82E-10	4.09E+01	4.18E+01	4.35E+02	1.19E+00	40
	1.75	0.00	0.00	7.71E-11	2.38E-12	<LLD	1.50E-11	4.01E+01	4.01E+01	7.24E+01	9.73E-02	40
9.0	0.00	0.02	0.04	5.94E-09	1.83E-10	6.90E-08	1.15E-09	4.56E+01	5.15E+01	2.56E+03	7.57E+00	40
	0.63	0.01	0.03	3.60E-09	1.11E-10	4.18E-08	6.99E-10	4.34E+01	4.70E+01	1.57E+03	4.59E+00	40
	1.27	0.00	0.01	8.03E-10	2.48E-11	9.33E-09	1.56E-10	4.08E+01	4.16E+01	3.81E+02	1.03E+00	40
	1.90	0.00	0.00	6.60E-11	2.04E-12	<LLD	1.28E-11	4.01E+01	4.01E+01	6.80E+01	8.41E-02	40
10.0	0.00	0.02	0.05	7.18E-09	2.38E-10	8.36E-08	1.36E-09	4.67E+01	5.49E+01	1.31E+03	3.81E+00	40
	0.68	0.01	0.03	4.35E-09	1.44E-10	5.07E-08	8.24E-10	4.41E+01	4.91E+01	8.10E+02	2.31E+00	40
	1.36	0.00	0.01	9.71E-10	3.22E-11	1.13E-08	1.84E-10	4.09E+01	4.20E+01	2.12E+02	5.16E-01	40
	2.04	0.00	0.00	7.97E-11	2.65E-12	<LLD	1.51E-11	4.01E+01	4.02E+01	5.41E+01	4.23E-02	40

IOTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

REAL TIME: 13:30 RELATIVE TIME: H+06:00

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	13.00	NOBLE GAS (CI/SEC)	0.000E+00
DELTA-T (DEG. F/50M)	-1.50	IODINE (CI/SEC)	0.000E+00
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	0.000E+00
WIND DIRECTION (DEG./From)	205.0	TOTAL (CI/SEC)	0.000E+00
WIND TRAVEL (MI)	3.883E+01	AVERAGE GAMMA (MEV/DIS)	0.32
PLUME TRAILING EDGE (MI)	6.513E+00	AVERAGE BETA (MEV/DIS)	0.30

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
0.5	0.00									2.76E+05	8.29E+02	40
	0.05									1.67E+05	5.03E+02	40
	0.11									3.74E+04	1.12E+02	40
	0.16									3.11E+03	9.20E+00	40
1.0	0.00									8.76E+04	2.63E+02	40
	0.10									5.31E+04	1.59E+02	40
	0.20									1.19E+04	3.56E+01	40
	0.31									1.01E+03	2.92E+00	40
1.5	0.00									4.68E+04	1.41E+02	40
	0.15									2.84E+04	8.52E+01	40
	0.30									6.37E+03	1.90E+01	40
	0.44									5.60E+02	1.56E+00	40
2.0	0.00									3.06E+04	9.17E+01	40
	0.19									1.86E+04	5.56E+01	40
	0.38									4.17E+03	1.24E+01	40
	0.57									3.79E+02	1.02E+00	40
3.0	0.00									1.72E+04	5.14E+01	40
	0.27									1.04E+04	3.12E+01	40
	0.54									2.36E+03	6.96E+00	40
	0.81									2.30E+02	5.71E-01	40
4.0	0.00									9.46E+03	2.83E+01	40
	0.34									5.75E+03	1.72E+01	40
	0.69									1.31E+03	3.83E+00	40
	1.03									1.45E+02	3.14E-01	40

NOTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise

22-AUG-2001

AL TIME: 13:30

RELATIVE TIME: H+06:00

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
5.0	0.00									7.05E+03	2.11E+01	40
	0.41									4.29E+03	1.28E+01	40
	0.82									9.89E+02	2.85E+00	40
	1.23									1.18E+02	2.34E-01	40
6.0	0.00									5.58E+03	1.66E+01	40
	0.47									3.40E+03	1.01E+01	40
	0.94									7.90E+02	2.25E+00	40
	1.41									1.02E+02	1.85E-01	40
7.0	0.00	0.02	0.04	5.87E-09	1.76E-10	6.90E-08	1.17E-09	4.55E+01	5.10E+01	3.43E+03	1.02E+01	40
	0.53	0.01	0.03	3.56E-09	1.07E-10	4.18E-08	7.08E-10	4.33E+01	4.67E+01	2.10E+03	6.18E+00	40
	1.06	0.00	0.01	7.95E-10	2.38E-11	9.34E-09	1.58E-10	4.07E+01	4.15E+01	4.99E+02	1.38E+00	40
	1.58	0.00	0.00	6.53E-11	1.95E-12	<LLD	1.30E-11	4.01E+01	4.01E+01	7.77E+01	1.13E-01	40
8.0	0.00	0.02	0.03	4.91E-09	1.47E-10	5.74E-08	9.75E-10	4.46E+01	4.92E+01	2.91E+03	8.62E+00	40
	0.58	0.01	0.02	2.98E-09	8.91E-11	3.48E-08	5.92E-10	4.28E+01	4.56E+01	1.78E+03	5.23E+00	40
	1.16	0.00	0.00	6.64E-10	1.99E-11	7.77E-09	1.32E-10	4.06E+01	4.12E+01	4.28E+02	1.17E+00	40
	1.75	0.00	0.00	5.45E-11	1.63E-12	<LLD	1.08E-11	4.01E+01	4.01E+01	7.19E+01	9.57E-02	40
9.0	0.00	0.01	0.03	4.20E-09	1.26E-10	4.90E-08	8.35E-10	4.39E+01	4.79E+01	2.52E+03	7.45E+00	40
	0.63	0.01	0.02	2.55E-09	7.62E-11	2.97E-08	5.06E-10	4.24E+01	4.48E+01	1.54E+03	4.52E+00	40
	1.27	0.00	0.00	5.68E-10	1.70E-11	6.63E-09	1.13E-10	4.05E+01	4.11E+01	3.76E+02	1.01E+00	40
	1.90	0.00	0.00	4.67E-11	1.40E-12	<LLD	9.27E-12	4.00E+01	4.01E+01	6.75E+01	8.27E-02	40
10.0	0.00	0.02	0.04	5.11E-09	1.58E-10	5.98E-08	9.93E-10	4.48E+01	4.99E+01	1.30E+03	3.77E+00	40
	0.68	0.01	0.02	3.10E-09	9.59E-11	3.63E-08	6.02E-10	4.29E+01	4.60E+01	8.02E+02	2.29E+00	40
	1.36	0.00	0.00	6.92E-10	2.14E-11	8.09E-09	1.34E-10	4.07E+01	4.13E+01	2.10E+02	5.10E-01	40
	2.04	0.00	0.00	5.68E-11	1.76E-12	<LLD	1.10E-11	4.01E+01	4.01E+01	5.39E+01	4.19E-02	40

OTE: The average background count rate is 40

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 13:45 RELATIVE TIME: H+06:15

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	15.00	NOBLE GAS (CI/SEC)	0.000E+00
DELTA-T (DEG. F/50M)	-1.50	IODINE (CI/SEC)	0.000E+00
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	0.000E+00
WIND DIRECTION (DEG./From)	205.0	TOTAL (CI/SEC)	0.000E+00
WIND TRAVEL (MI)	4.258E+01	AVERAGE GAMMA (MEV/DIS)	0.32
PLUME TRAILING EDGE (MI)	1.027E+01	AVERAGE BETA (MEV/DIS)	0.30

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
OWN IND IST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00									2.70E+05	8.12E+02	40
	0.05									1.64E+05	4.92E+02	40
	0.11									3.66E+04	1.10E+02	40
	0.16									3.04E+03	9.02E+00	40
1.0	0.00									8.58E+04	2.58E+02	40
	0.10									5.21E+04	1.56E+02	40
	0.20									1.16E+04	3.49E+01	40
	0.31									9.93E+02	2.86E+00	40
1.5	0.00									4.59E+04	1.38E+02	40
	0.15									2.78E+04	8.35E+01	40
	0.30									6.24E+03	1.86E+01	40
	0.44									5.49E+02	1.53E+00	40
2.0	0.00									2.99E+04	8.98E+01	40
	0.19									1.82E+04	5.45E+01	40
	0.38									4.09E+03	1.22E+01	40
	0.57									3.72E+02	9.98E-01	40
3.0	0.00									1.68E+04	5.03E+01	40
	0.27									1.02E+04	3.05E+01	40
	0.54									2.31E+03	6.81E+00	40
	0.81									2.26E+02	5.59E-01	40
4.0	0.00									9.27E+03	2.77E+01	40
	0.34									5.64E+03	1.68E+01	40
	0.69									1.29E+03	3.75E+00	40
	1.03									1.43E+02	3.08E-01	40

TE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise

22-AUG-2001

.EAL TIME: 13:45

RELATIVE TIME: H+06:15

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGRO
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGRO COUNT RATE (CPM)
5.0	0.00									6.91E+03	2.06E+01	40
	0.41									4.20E+03	1.25E+01	40
	0.82									9.69E+02	2.79E+00	40
	1.23									1.16E+02	2.29E-01	40
6.0	0.00									5.47E+03	1.63E+01	40
	0.47									3.33E+03	9.88E+00	40
	0.94									7.74E+02	2.21E+00	40
	1.41									1.00E+02	1.81E-01	40
7.0	0.00									3.36E+03	9.98E+00	40
	0.53									2.06E+03	6.05E+00	40
	1.06									4.90E+02	1.35E+00	40
	1.58									7.69E+01	1.11E-01	40
8.0	0.00									2.85E+03	8.44E+00	40
	0.58									1.74E+03	5.12E+00	40
	1.16									4.20E+02	1.14E+00	40
	1.75									7.12E+01	9.37E-02	40
9.0	0.00									2.47E+03	7.29E+00	40
	0.63									1.51E+03	4.42E+00	40
	1.27									3.69E+02	9.87E-01	40
	1.90									6.70E+01	8.10E-02	40
10.0	0.00									1.27E+03	3.69E+00	40
	0.68									7.85E+02	2.24E+00	40
	1.36									2.06E+02	4.99E-01	40
	2.04									5.37E+01	4.10E-02	40

OTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

AL TIME: 14:00 RELATIVE TIME: H+06:30

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OFFSITE RADIOLOGICAL SURVEY DATA

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METEOROLOGICAL DATA		RELEASE DATA	
WIND SPEED (MPH)	15.00	NOBLE GAS (CI/SEC)	0.000E+00
DELTA-T (DEG. F/50M)	-1.50	IODINE (CI/SEC)	0.000E+00
STABILITY CLASS (PASQUILL)	C	PARTICULATE (CI/SEC)	0.000E+00
WIND DIRECTION (DEG./From)	205.0	TOTAL (CI/SEC)	0.000E+00
WIND TRAVEL (MI)	4.634E+01	AVERAGE GAMMA (MEV/DIS)	0.31
PLUME TRAILING EDGE (MI)	1.403E+01	AVERAGE BETA (MEV/DIS)	0.29

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
0.5	0.00									2.65E+05	7.96E+02	40
	0.05									1.61E+05	4.83E+02	40
	0.11									3.59E+04	1.08E+02	40
	0.16									2.98E+03	8.84E+00	40
1.0	0.00									8.41E+04	2.53E+02	40
	0.10									5.10E+04	1.53E+02	40
	0.20									1.14E+04	3.42E+01	40
	0.31									9.74E+02	2.81E+00	40
1.5	0.00									4.50E+04	1.35E+02	40
	0.15									2.73E+04	8.19E+01	40
	0.30									6.12E+03	1.83E+01	40
	0.44									5.39E+02	1.50E+00	40
2.0	0.00									2.94E+04	8.81E+01	40
	0.19									1.78E+04	5.34E+01	40
	0.38									4.01E+03	1.19E+01	40
	0.57									3.66E+02	9.78E-01	40
3.0	0.00									1.65E+04	4.94E+01	40
	0.27									1.00E+04	2.99E+01	40
	0.54									2.26E+03	6.68E+00	40
	0.81									2.23E+02	5.48E-01	40
4.0	0.00									9.09E+03	2.72E+01	40
	0.34									5.53E+03	1.65E+01	40
	0.69									1.26E+03	3.68E+00	40
	1.03									1.41E+02	3.02E-01	40

OTE: The average background count rate is 40

TXU Electric

2001-TXU-Graded Exercise 22-AUG-2001

LAL TIME: 14:00 RELATIVE TIME: H+06:30

LOCATION		DOSE RATE		AIR CONCENTRATION				AIR SAMPLE CPM		GROUND DEPOSITION		BACKGROU
DOWN WIND DIST (MI)	DIST. OFF CENT. (MI)	CLOSED WINDOW DOSE R. (MR/HR)	OPEN WINDOW DOSE R. (MR/HR)	GROSS IODINE ACTIVITY (UCI/CC)	GROSS PART. ACTIVITY (UCI/CC)	NOBLE GAS ACTIVITY (UCI/CC)	IODINE 131 ACTIVITY (UCI/CC)	GROSS IODINE COUNT R. (CPM)	GROSS PART. COUNT R. (CPM)	GROSS DEPOSIT. COUNT R. (CPM)	NET GROUND DEPOSIT. (UCI/M2)	BACKGROU COUNT RATE (CPM)
5.0	0.00									6.77E+03	2.02E+01	40
	0.41									4.12E+03	1.23E+01	40
	0.82									9.51E+02	2.74E+00	40
	1.23									1.15E+02	2.25E-01	40
6.0	0.00									5.36E+03	1.60E+01	40
	0.47									3.27E+03	9.69E+00	40
	0.94									7.60E+02	2.16E+00	40
	1.41									9.91E+01	1.77E-01	40
7.0	0.00									3.30E+03	9.78E+00	40
	0.53									2.02E+03	5.93E+00	40
	1.06									4.81E+02	1.32E+00	40
	1.58									7.62E+01	1.09E-01	40
8.0	0.00									2.79E+03	8.27E+00	40
	0.58									1.71E+03	5.02E+00	40
	1.16									4.13E+02	1.12E+00	40
	1.75									7.06E+01	9.19E-02	40
9.0	0.00									2.42E+03	7.15E+00	40
	0.63									1.48E+03	4.34E+00	40
	1.27									3.62E+02	9.68E-01	40
	1.90									6.64E+01	7.94E-02	40
10.0	0.00									1.24E+03	3.62E+00	40
	0.68									7.70E+02	2.19E+00	40
	1.36									2.03E+02	4.89E-01	40
	2.04									5.34E+01	4.02E-02	40

OTE: The average background count rate is 40

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION

2001 GRADED EXERCISE

CHEMISTRY DATA and CONTROLLER INSTRUCTIONS

Event: RC PASS

Location: OSC

Time: After H+00:24 (07:54)

Initiating Event:

OSC attempts to dispatch a RCPASS sampling team.

Anticipated Player Response:

From 0754, and for the duration of the exercise, the 1EA1 electrical bus will be unavailable to support RCPASS sampling activities. Facility management team should realize this existing plant condition and not request a PASS sample.

CAUTION

All actions to manipulate actual plant equipment or systems should be simulated.

TXU Electric
2001-TXU-Graded Exercise
REAL TIME: 07:30

22-AUG-2001
RELATIVE TIME: H+00:00

****

IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
----PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD./PAR.
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		RELEASE:
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.22E-01					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 07:45 RELATIVE TIME: H+00:15

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
---PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD./PAR.
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		RELEASE:
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.22E-01					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 08:00 RELATIVE TIME: H+00:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
----PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD./PAR.
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		RELEASE:
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.22E-01					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 08:15

22-AUG-2001
RELATIVE TIME: H+00:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
---PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD: 0.0%
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		PAR: 0.0%
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		

RCS I-131 EQUIVALENT = 4.22E-01

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 08:30 RELATIVE TIME: H+01:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
----PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD./PAR.
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		RELEASE:
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.22E-01					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 08:45

22-AUG-2001
RELATIVE TIME: H+01:15

****

IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
----PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD./PAR.
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		RELEASE:
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.22E-01					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 09:00 RELATIVE TIME: H+01:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.95E-01	0.00E+00	0.00E+00		0.00E+00
KR-85	1.19E-02	0.00E+00	0.00E+00		0.00E+00
KR-85M	4.70E-01	0.00E+00	0.00E+00		0.00E+00
KR-87	9.02E-01	0.00E+00	0.00E+00		0.00E+00
KR-88	1.28E-01	0.00E+00	0.00E+00		0.00E+00
XE-133	2.41E-01	0.00E+00	0.00E+00		0.00E+00
XE-133M	6.13E-02	0.00E+00	0.00E+00		0.00E+00
XE-135	6.60E-01	0.00E+00	0.00E+00		0.00E+00
XE-135M	6.49E-01	0.00E+00	0.00E+00		0.00E+00
XE-138	2.13E-01	0.00E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	2.25E-01	0.00E+00	0.00E+00		0.00E+00
I-132	3.42E-01	0.00E+00	0.00E+00		0.00E+00
I-133	5.03E-01	0.00E+00	0.00E+00		0.00E+00
I-134	5.90E-01	0.00E+00	0.00E+00		0.00E+00
I-135	4.57E-01	0.00E+00	0.00E+00		0.00E+00
---PARTICULATES----------					----------
RB-88	5.29E-05	0.00E+00	0.00E+00		0.00E+00
RU-106	8.43E-03	0.00E+00	0.00E+00		0.00E+00
TE-132	4.75E-02	0.00E+00	0.00E+00		0.00E+00
CS-134	1.05E-03	0.00E+00	0.00E+00		0.00E+00
CS-137	6.37E-02	0.00E+00	0.00E+00		0.00E+00
CS-138	3.17E-03	0.00E+00	0.00E+00		0.00E+00
LA-140	6.20E-03	0.00E+00	0.00E+00		0.00E+00
BA-140	6.10E-03	0.00E+00	0.00E+00		0.00E+00
CE-144	4.96E-03	0.00E+00	0.00E+00		0.00E+00
----------					----------
TOTAL N.G.	3.53E+00	0.00E+00	0.00E+00		RATIO OF
TOTAL IOD.	2.12E+00	0.00E+00	0.00E+00		IOD./PAR.
TOTAL PART.	1.41E-01	0.00E+00	0.00E+00		RELEASE:
----------					IOD:
TOTAL/SYSTEM	5.79E+00	0.00E+00	0.00E+00		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 4.22E-01					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 09:15 RELATIVE TIME: H+01:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	4.22E+00	6.45E-01	0.00E+00		0.00E+00
KR-85	2.57E-01	3.93E-02	0.00E+00		0.00E+00
KR-85M	1.02E+01	1.55E+00	0.00E+00		0.00E+00
KR-87	1.95E+01	2.98E+00	0.00E+00		0.00E+00
KR-88	2.78E+00	4.24E-01	0.00E+00		0.00E+00
XE-133	5.22E+00	7.98E-01	0.00E+00		0.00E+00
XE-133M	1.33E+00	2.03E-01	0.00E+00		0.00E+00
XE-135	1.43E+01	2.18E+00	0.00E+00		0.00E+00
XE-135M	1.40E+01	2.15E+00	0.00E+00		0.00E+00
XE-138	4.61E+00	7.03E-01	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	9.36E+00	8.31E-01	0.00E+00		0.00E+00
I-132	1.43E+01	1.27E+00	0.00E+00		0.00E+00
I-133	2.10E+01	1.86E+00	0.00E+00		0.00E+00
I-134	2.46E+01	2.18E+00	0.00E+00		0.00E+00
I-135	1.90E+01	1.69E+00	0.00E+00		0.00E+00
----PARTICULATES----------					----------
RB-88	9.89E-04	6.04E-05	0.00E+00		0.00E+00
RU-106	1.57E-01	9.62E-03	0.00E+00		0.00E+00
TE-132	8.88E-01	5.42E-02	0.00E+00		0.00E+00
CS-134	1.97E-02	1.20E-03	0.00E+00		0.00E+00
CS-137	1.19E+00	7.27E-02	0.00E+00		0.00E+00
CS-138	5.93E-02	3.62E-03	0.00E+00		0.00E+00
LA-140	1.16E-01	7.08E-03	0.00E+00		0.00E+00
BA-140	1.14E-01	6.96E-03	0.00E+00		0.00E+00
CE-144	9.26E-02	5.65E-03	0.00E+00		0.00E+00
TOTAL N.G.	7.64E+01	1.17E+01	0.00E+00		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	8.82E+01	7.83E+00	0.00E+00		
TOTAL PART.	2.64E+00	1.61E-01	0.00E+00		
TOTAL/SYSTEM	1.67E+02	1.97E+01	0.00E+00		IOD: 0.0%
RCS I-131 EQUIVALENT = 1.76E+01					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 09:30 RELATIVE TIME: H+02:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.42E+00	2.48E+00	0.00E+00		0.00E+00
KR-85	1.25E-01	2.19E-01	0.00E+00		0.00E+00
KR-85M	3.61E+00	6.31E+00	0.00E+00		0.00E+00
KR-87	6.29E+00	1.10E+01	0.00E+00		0.00E+00
KR-88	9.66E-01	1.69E+00	0.00E+00		0.00E+00
XE-133	2.09E+00	3.44E+00	0.00E+00		0.00E+00
XE-133M	4.94E-01	8.57E-01	0.00E+00		0.00E+00
XE-135	8.07E+00	1.37E+01	0.00E+00		0.00E+00
XE-135M	2.77E+00	4.66E+00	0.00E+00		0.00E+00
XE-138	9.40E-01	1.64E+00	0.00E+00		0.00E+00
---IODINES----------					----------
I-131	8.99E+00	3.52E+00	0.00E+00		0.00E+00
I-132	1.27E+01	4.98E+00	0.00E+00		0.00E+00
I-133	2.00E+01	7.83E+00	0.00E+00		0.00E+00
I-134	1.94E+01	7.60E+00	0.00E+00		0.00E+00
I-135	1.78E+01	6.99E+00	0.00E+00		0.00E+00
---PARTICULATES----------					----------
RB-88	6.18E-02	1.06E-01	0.00E+00		0.00E+00
RU-106	2.87E-01	4.34E-02	0.00E+00		0.00E+00
TE-132	1.61E+00	2.44E-01	0.00E+00		0.00E+00
CS-134	3.58E-02	5.42E-03	0.00E+00		0.00E+00
CS-137	2.17E+00	3.28E-01	0.00E+00		0.00E+00
CS-138	8.40E-01	1.34E+00	0.00E+00		0.00E+00
LA-140	2.10E-01	3.18E-02	0.00E+00		0.00E+00
BA-140	2.07E-01	3.14E-02	0.00E+00		0.00E+00
CE-144	1.69E-01	2.55E-02	0.00E+00		0.00E+00
----------					----------
TOTAL N.G.	2.68E+01	4.60E+01	0.00E+00		RATIO OF
TOTAL IOD.	7.89E+01	3.09E+01	0.00E+00		IOD./PAR.
TOTAL PART.	5.59E+00	2.16E+00	0.00E+00		RELEASE:
----------					IOD:
TOTAL/SYSTEM	1.11E+02	7.90E+01	0.00E+00		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 1.67E+01					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 09:45

22-AUG-2001
RELATIVE TIME: H+02:15

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	9.58E-01	5.60E+00	0.00E+00		0.00E+00
KR-85	1.14E-01	6.69E-01	0.00E+00		0.00E+00
KR-85M	2.57E+00	1.50E+01	0.00E+00		0.00E+00
KR-87	4.06E+00	2.37E+01	0.00E+00		0.00E+00
KR-88	6.72E-01	3.93E+00	0.00E+00		0.00E+00
XE-133	1.65E+00	8.88E+00	0.00E+00		0.00E+00
XE-133M	3.67E-01	2.12E+00	0.00E+00		0.00E+00
XE-135	7.08E+00	3.97E+01	0.00E+00		0.00E+00
XE-135M	1.14E+00	6.11E+00	0.00E+00		0.00E+00
XE-138	3.84E-01	2.24E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	6.43E+00	1.28E+01	0.00E+00		0.00E+00
I-132	8.47E+00	1.68E+01	0.00E+00		0.00E+00
I-133	1.42E+01	2.81E+01	0.00E+00		0.00E+00
I-134	1.14E+01	2.26E+01	0.00E+00		0.00E+00
I-135	1.24E+01	2.47E+01	0.00E+00		0.00E+00
---PARTICULATES----------					----------
RB-88	4.65E-02	3.41E-01	0.00E+00		0.00E+00
RU-106	2.58E-01	1.18E-01	0.00E+00		0.00E+00
TE-132	1.45E+00	6.62E-01	0.00E+00		0.00E+00
CS-134	3.22E-02	1.47E-02	0.00E+00		0.00E+00
CS-137	1.95E+00	8.92E-01	0.00E+00		0.00E+00
CS-138	4.22E-01	3.37E+00	0.00E+00		0.00E+00
LA-140	1.88E-01	8.62E-02	0.00E+00		0.00E+00
BA-140	1.86E-01	8.53E-02	0.00E+00		0.00E+00
CE-144	1.52E-01	6.94E-02	0.00E+00		0.00E+00
----------					----------
TOTAL N.G.	1.90E+01	1.08E+02	0.00E+00		RATIO OF
TOTAL IOD.	5.29E+01	1.05E+02	0.00E+00		IOD./PAR.
TOTAL PART.	4.68E+00	5.64E+00	0.00E+00		RELEASE:
----------					IOD:
TOTAL/SYSTEM	7.66E+01	2.19E+02	0.00E+00		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 1.18E+01					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 10:00

22-AUG-2001
RELATIVE TIME: H+02:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	8.12E-01	6.76E+00	0.00E+00		0.00E+00
KR-85	1.26E-01	1.05E+00	0.00E+00		0.00E+00
KR-85M	2.30E+00	1.91E+01	0.00E+00		0.00E+00
KR-87	3.29E+00	2.74E+01	0.00E+00		0.00E+00
KR-88	5.88E-01	4.89E+00	0.00E+00		0.00E+00
XE-133	1.60E+00	1.22E+01	0.00E+00		0.00E+00
XE-133M	3.43E-01	2.81E+00	0.00E+00		0.00E+00
XE-135	7.12E+00	5.64E+01	0.00E+00		0.00E+00
XE-135M	5.94E-01	4.39E+00	0.00E+00		0.00E+00
XE-138	1.97E-01	1.64E+00	0.00E+00		0.00E+00
----IODINES----------					----------
I-131	3.96E+00	1.67E+01	0.00E+00		0.00E+00
I-132	4.85E+00	2.04E+01	0.00E+00		0.00E+00
I-133	8.68E+00	3.66E+01	0.00E+00		0.00E+00
I-134	5.76E+00	2.43E+01	0.00E+00		0.00E+00
I-135	7.47E+00	3.15E+01	0.00E+00		0.00E+00
---PARTICULATES----------					----------
RB-88	5.13E-02	5.01E-01	0.00E+00		0.00E+00
RU-106	3.69E-01	1.27E-01	0.00E+00		0.00E+00
TE-132	2.07E+00	7.10E-01	0.00E+00		0.00E+00
CS-134	4.60E-02	1.58E-02	0.00E+00		0.00E+00
CS-137	2.79E+00	9.58E-01	0.00E+00		0.00E+00
CS-138	3.80E-01	3.82E+00	0.00E+00		0.00E+00
LA-140	2.68E-01	9.22E-02	0.00E+00		0.00E+00
BA-140	2.67E-01	9.16E-02	0.00E+00		0.00E+00
CE-144	2.17E-01	7.45E-02	0.00E+00		0.00E+00
TOTAL N.G.	1.70E+01	1.37E+02	0.00E+00		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	3.07E+01	1.29E+02	0.00E+00		IOD: 0.0%
TOTAL PART.	6.45E+00	6.39E+00	0.00E+00		PAR: 0.0%
TOTAL/SYSTEM	5.41E+01	2.72E+02	0.00E+00		
RCS I-131 EQUIVALENT = 7.21E+00					

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 10:20

22-AUG-2001
RELATIVE TIME: H+02:50

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	7.15E-01	3.08E+00	4.51E-02		0.00E+00
KR-85	1.39E-01	6.01E-01	8.80E-03		0.00E+00
KR-85M	2.13E+00	9.18E+00	1.34E-01		0.00E+00
KR-87	2.77E+00	1.19E+01	1.75E-01		0.00E+00
KR-88	5.34E-01	2.30E+00	3.37E-02		0.00E+00
XE-133	1.61E+00	6.23E+00	8.93E-02		0.00E+00
XE-133M	3.32E-01	1.41E+00	2.06E-02		0.00E+00
XE-135	7.15E+00	2.90E+01	4.22E-01		0.00E+00
XE-135M	3.47E-01	1.24E+00	1.65E-02		0.00E+00
XE-138	1.05E-01	4.52E-01	6.63E-03		0.00E+00
----IODINES----------					----------
I-131	3.82E+00	8.34E+00	1.22E-02		0.00E+00
I-132	4.35E+00	9.45E+00	1.38E-02		0.00E+00
I-133	8.30E+00	1.81E+01	2.65E-02		0.00E+00
I-134	4.56E+00	9.96E+00	1.46E-02		0.00E+00
I-135	7.02E+00	1.53E+01	2.24E-02		0.00E+00
---PARTICULATES----------					----------
RB-88	6.11E-02	2.84E-01	2.17E-03		0.00E+00
RU-106	3.56E-01	6.34E-02	2.19E-05		0.00E+00
TE-132	1.99E+00	3.54E-01	1.23E-04		0.00E+00
CS-134	4.44E-02	7.91E-03	2.74E-06		0.00E+00
CS-137	2.69E+00	4.79E-01	1.66E-04		0.00E+00
CS-138	3.50E-01	1.75E+00	5.86E-03		0.00E+00
LA-140	2.58E-01	4.60E-02	1.59E-05		0.00E+00
BA-140	2.57E-01	4.58E-02	1.59E-05		0.00E+00
CE-144	2.09E-01	3.73E-02	1.29E-05		0.00E+00
TOTAL N.G.	1.58E+01	6.55E+01	9.52E-01		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	2.81E+01	6.12E+01	8.96E-02		IOD: 0.0%
TOTAL PART.	6.22E+00	3.07E+00	8.38E-03		PAR: 0.0%
TOTAL/SYSTEM	5.01E+01	1.30E+02	1.05E+00		

RCS I-131 EQUIVALENT = 6.89E+00

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 10:30 RELATIVE TIME: H+03:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
---NOBLE GASES---					
KR-83M	6.30E-01	1.40E+00	4.06E-02		4.51E-02
KR-85	1.52E-01	3.38E-01	9.78E-03		1.08E-02
KR-85M	1.98E+00	4.41E+00	1.28E-01		1.42E-01
KR-87	2.34E+00	5.21E+00	1.51E-01		1.67E-01
KR-88	4.86E-01	1.08E+00	3.13E-02		3.48E-02
XE-133	1.63E+00	3.19E+00	8.93E-02		9.91E-02
XE-133M	3.22E-01	7.04E-01	2.03E-02		2.25E-02
XE-135	7.07E+00	1.47E+01	4.19E-01		4.65E-01
XE-135M	2.23E-01	3.73E-01	8.82E-03		9.79E-03
XE-138	5.61E-02	1.25E-01	3.62E-03		4.01E-03
---IODINES---					
I-131	3.69E+00	4.17E+00	1.21E-02		1.43E-01
I-132	3.91E+00	4.39E+00	1.27E-02		1.51E-01
I-133	7.97E+00	8.99E+00	2.60E-02		3.09E-01
I-134	3.62E+00	4.09E+00	1.18E-02		1.40E-01
I-135	6.62E+00	7.47E+00	2.16E-02		2.57E-01
---PARTICULATES---					
RB-88	6.34E-02	1.47E-01	2.57E-03		3.30E-01
RU-106	3.44E-01	3.18E-02	1.10E-05		1.41E-03
TE-132	1.92E+00	1.77E-01	6.12E-05		7.84E-03
CS-134	4.30E-02	3.96E-03	1.37E-06		1.75E-04
CS-137	2.60E+00	2.40E-01	8.30E-05		1.06E-02
CS-138	2.91E-01	7.36E-01	5.05E-03		6.47E-01
LA-140	2.49E-01	2.29E-02	7.93E-06		1.02E-03
BA-140	2.48E-01	2.29E-02	7.92E-06		1.01E-03
CE-144	2.02E-01	1.87E-02	6.45E-06		8.26E-04
TOTAL N.G.	1.49E+01	3.15E+01	9.01E-01		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	2.58E+01	2.91E+01	8.42E-02		IOD: 91.5%
TOTAL PART.	5.96E+00	1.40E+00	7.81E-03		PAR: 8.5%
TOTAL/SYSTEM	4.66E+01	6.20E+01	9.93E-01		

RCS I-131 EQUIVALENT = 6.60E+00

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 10:45 RELATIVE TIME: H+03:15

IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	5.57E-01	6.40E-01	3.06E-02		4.26E-02
KR-85	1.63E-01	1.87E-01	8.94E-03		1.25E-02
KR-85M	1.85E+00	2.12E+00	1.01E-01		1.41E-01
KR-87	1.98E+00	2.27E+00	1.09E-01		1.51E-01
KR-88	4.43E-01	5.10E-01	2.44E-02		3.40E-02
XE-133	1.64E+00	1.63E+00	7.49E-02		1.04E-01
XE-133M	3.13E-01	3.52E-01	1.67E-02		2.33E-02
XE-135	6.95E+00	7.37E+00	3.46E-01		4.82E-01
XE-135M	1.59E-01	1.24E-01	4.16E-03		5.80E-03
XE-138	3.00E-02	3.45E-02	1.65E-03		2.30E-03
----IODINES----------					----------
I-131	3.58E+00	2.08E+00	9.97E-03		1.50E-01
I-132	3.52E+00	2.04E+00	9.74E-03		1.47E-01
I-133	7.66E+00	4.46E+00	2.14E-02		3.21E-01
I-134	2.88E+00	1.68E+00	8.02E-03		1.21E-01
I-135	6.25E+00	3.64E+00	1.74E-02		2.62E-01
----PARTICULATES----------					----------
RB-88	6.20E-02	7.31E-02	2.25E-03		4.08E-01
RU-106	3.34E-01	1.59E-02	5.49E-06		9.97E-04
TE-132	1.86E+00	8.86E-02	3.05E-05		5.55E-03
CS-134	4.16E-02	1.99E-03	6.85E-07		1.24E-04
CS-137	2.52E+00	1.20E-01	4.15E-05		7.53E-03
CS-138	2.28E-01	2.95E-01	3.17E-03		5.75E-01
LA-140	2.40E-01	1.15E-02	3.95E-06		7.17E-04
BA-140	2.41E-01	1.15E-02	3.96E-06		7.19E-04
CE-144	1.96E-01	9.36E-03	3.23E-06		5.86E-04
TOTAL N.G.	1.41E+01	1.52E+01	7.17E-01		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	2.39E+01	1.39E+01	6.65E-02		IOD: 92.4%
TOTAL PART.	5.72E+00	6.28E-01	5.51E-03		PAR: 7.6%
TOTAL/SYSTEM	4.37E+01	2.98E+01	7.89E-01		
RCS I-131 EQUIVALENT = 6.35E+00					

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 11:00

22-AUG-2001
RELATIVE TIME: H+03:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----					
KR-83M	4.93E-01	2.92E-01	1.94E-02		4.03E-02
KR-85	1.72E-01	1.02E-01	6.78E-03		1.41E-02
KR-85M	1.72E+00	1.02E+00	6.77E-02		1.41E-01
KR-87	1.67E+00	9.93E-01	6.58E-02		1.37E-01
KR-88	4.05E-01	2.40E-01	1.59E-02		3.31E-02
XE-133	1.65E+00	8.33E-01	5.27E-02		1.09E-01
XE-133M	3.05E-01	1.76E-01	1.16E-02		2.41E-02
XE-135	6.81E+00	3.68E+00	2.39E-01		4.96E-01
XE-135M	1.26E-01	4.56E-02	1.73E-03		3.60E-03
XE-138	1.61E-02	9.54E-03	6.32E-04		1.32E-03
----IODINES----					
I-131	3.47E+00	1.04E+00	6.92E-03		1.56E-01
I-132	3.17E+00	9.46E-01	6.28E-03		1.42E-01
I-133	7.38E+00	2.22E+00	1.47E-02		3.32E-01
I-134	2.29E+00	6.89E-01	4.57E-03		1.03E-01
I-135	5.91E+00	1.78E+00	1.18E-02		2.66E-01
----PARTICULATES----					
RB-88	5.90E-02	3.56E-02	1.63E-03		4.88E-01
RU-106	3.24E-01	8.02E-03	2.74E-06		8.24E-04
TE-132	1.80E+00	4.45E-02	1.52E-05		4.57E-03
CS-134	4.04E-02	1.00E-03	3.42E-07		1.03E-04
CS-137	2.45E+00	6.06E-02	2.07E-05		6.23E-03
CS-138	1.74E-01	1.15E-01	1.66E-03		4.98E-01
LA-140	2.32E-01	5.75E-03	1.97E-06		5.91E-04
BA-140	2.34E-01	5.78E-03	1.98E-06		5.94E-04
CE-144	1.91E-01	4.72E-03	1.61E-06		4.84E-04
TOTAL N.G.	1.34E+01	7.40E+00	4.81E-01		RATIO OF
TOTAL IOD.	2.22E+01	6.67E+00	4.43E-02		IOD./PAR.
TOTAL PART.	5.50E+00	2.81E-01	3.33E-03		RELEASE:
TOTAL/SYSTEM	4.11E+01	1.43E+01	5.28E-01		IOD: 93.0%
RCS I-131 EQUIVALENT = 6.12E+00					PAR: 7.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 11:15 RELATIVE TIME: H+03:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	4.37E-01	1.34E-01	1.30E-02		3.78E-02
KR-85	1.82E-01	5.54E-02	5.40E-03		1.57E-02
KR-85M	1.61E+00	4.93E-01	4.80E-02		1.40E-01
KR-87	1.42E+00	4.34E-01	4.23E-02		1.23E-01
KR-88	3.71E-01	1.13E-01	1.10E-02		3.21E-02
XE-133	1.66E+00	4.27E-01	3.95E-02		1.15E-01
XE-133M	2.98E-01	8.84E-02	8.55E-03		2.49E-02
XE-135	6.67E+00	1.84E+00	1.75E-01		5.09E-01
XE-135M	1.07E-01	1.85E-02	8.70E-04		2.53E-03
XE-138	8.65E-03	2.64E-03	2.57E-04		7.49E-04
----IODINES----------					----------
I-131	3.38E+00	5.22E-01	5.11E-03		1.62E-01
I-132	2.87E+00	4.40E-01	4.31E-03		1.37E-01
I-133	7.12E+00	1.10E+00	1.08E-02		3.43E-01
I-134	1.83E+00	2.83E-01	2.77E-03		8.81E-02
I-135	5.61E+00	8.67E-01	8.49E-03		2.70E-01
---PARTICULATES----------					----------
RB-88	5.53E-02	1.72E-02	1.15E-03		5.80E-01
RU-106	3.16E-01	4.07E-03	1.37E-06		6.93E-04
TE-132	1.75E+00	2.26E-02	7.60E-06		3.84E-03
CS-134	3.94E-02	5.08E-04	1.71E-07		8.65E-05
CS-137	2.39E+00	3.08E-02	1.04E-05		5.24E-03
CS-138	1.29E-01	4.46E-02	8.09E-04		4.09E-01
LA-140	2.25E-01	2.91E-03	9.80E-07		4.95E-04
BA-140	2.27E-01	2.94E-03	9.89E-07		5.00E-04
CE-144	1.86E-01	2.39E-03	8.06E-07		4.08E-04
----------					----------
TOTAL N.G.	1.28E+01	3.61E+00	3.44E-01		RATIO OF
TOTAL IOD.	2.08E+01	3.21E+00	3.15E-02		IOD./PAR.
TOTAL PART.	5.31E+00	1.28E-01	1.98E-03		RELEASE:
----------					IOD:
TOTAL/SYSTEM	3.89E+01	6.95E+00	3.77E-01		94.1%
----------					PAR:
RCS I-131 EQUIVALENT = 5.91E+00					5.9%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 11:30

22-AUG-2001
RELATIVE TIME: H+04:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	3.89E-01	6.13E-02	8.95E-03		3.55E-02
KR-85	1.90E-01	2.99E-02	4.37E-03		1.73E-02
KR-85M	1.51E+00	2.38E-01	3.48E-02		1.38E-01
KR-87	1.21E+00	1.91E-01	2.79E-02		1.10E-01
KR-88	3.41E-01	5.37E-02	7.84E-03		3.11E-02
XE-133	1.68E+00	2.19E-01	3.04E-02		1.20E-01
XE-133M	2.91E-01	4.45E-02	6.45E-03		2.55E-02
XE-135	6.54E+00	9.21E-01	1.31E-01		5.20E-01
XE-135M	9.54E-02	8.11E-03	5.03E-04		1.99E-03
XE-138	4.66E-03	7.34E-04	1.07E-04		4.25E-04
----IODINES----------					----------
I-131	3.29E+00	2.62E-01	3.86E-03		1.68E-01
I-132	2.60E+00	2.05E-01	3.02E-03		1.32E-01
I-133	6.89E+00	5.50E-01	8.09E-03		3.52E-01
I-134	1.47E+00	1.17E-01	1.72E-03		7.50E-02
I-135	5.33E+00	4.25E-01	6.25E-03		2.72E-01
---PARTICULATES----------					----------
RB-88	5.14E-02	8.32E-03	8.12E-04		6.75E-01
RU-106	3.08E-01	2.11E-03	6.86E-07		5.70E-04
TE-132	1.70E+00	1.17E-02	3.79E-06		3.15E-03
CS-134	3.84E-02	2.63E-04	8.56E-08		7.11E-05
CS-137	2.33E+00	1.60E-02	5.18E-06		4.31E-03
CS-138	9.52E-02	1.73E-02	3.80E-04		3.16E-01
LA-140	2.19E-01	1.50E-03	4.88E-07		4.06E-04
BA-140	2.22E-01	1.52E-03	4.94E-07		4.11E-04
CE-144	1.81E-01	1.24E-03	4.03E-07		3.35E-04
----------					----------
TOTAL N.G.	1.22E+01	1.77E+00	2.52E-01		RATIO OF
TOTAL IOD.	1.96E+01	1.56E+00	2.30E-02		IOD./PAR.
TOTAL PART.	5.15E+00	5.99E-02	1.20E-03		RELEASE:
----------					IOD:
TOTAL/SYSTEM	3.70E+01	3.39E+00	2.77E-01		95.0%
----------					PAR:
RCS I-131 EQUIVALENT = 5.72E+00					5.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 11:45

22-AUG-2001
RELATIVE TIME: H+04:15

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----					
KR-83M	3.47E-01	2.83E-02	6.15E-03		3.31E-02
KR-85	1.98E-01	1.61E-02	3.51E-03		1.89E-02
KR-85M	1.42E+00	1.16E-01	2.52E-02		1.36E-01
KR-87	1.03E+00	8.42E-02	1.83E-02		9.87E-02
KR-88	3.13E-01	2.56E-02	5.56E-03		3.00E-02
XE-133	1.69E+00	1.13E-01	2.33E-02		1.26E-01
XE-133M	2.86E-01	2.25E-02	4.86E-03		2.62E-02
XE-135	6.41E+00	4.64E-01	9.82E-02		5.29E-01
XE-135M	8.78E-02	3.75E-03	3.17E-04		1.71E-03
XE-138	2.52E-03	2.05E-04	4.46E-05		2.41E-04
----IODINES----					
I-131	3.22E+00	1.33E-01	2.92E-03		1.74E-01
I-132	2.37E+00	9.64E-02	2.12E-03		1.26E-01
I-133	6.69E+00	2.76E-01	6.06E-03		3.62E-01
I-134	1.18E+00	4.85E-02	1.07E-03		6.36E-02
I-135	5.08E+00	2.09E-01	4.60E-03		2.75E-01
----PARTICULATES----					
RB-88	4.76E-02	4.10E-03	5.75E-04		7.62E-01
RU-106	3.01E-01	1.14E-03	3.43E-07		4.54E-04
TE-132	1.66E+00	6.27E-03	1.89E-06		2.51E-03
CS-134	3.76E-02	1.42E-04	4.28E-08		5.67E-05
CS-137	2.28E+00	8.59E-03	2.59E-06		3.44E-03
CS-138	6.95E-02	6.91E-03	1.74E-04		2.30E-01
LA-140	2.13E-01	8.06E-04	2.43E-07		3.22E-04
BA-140	2.17E-01	8.18E-04	2.47E-07		3.27E-04
CE-144	1.77E-01	6.68E-04	2.02E-07		2.67E-04
TOTAL N.G.	1.18E+01	8.73E-01	1.85E-01		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	1.85E+01	7.62E-01	1.68E-02		IOD: 95.7%
TOTAL PART.	5.00E+00	2.94E-02	7.54E-04		PAR: 4.3%
TOTAL/SYSTEM	3.53E+01	1.67E+00	2.03E-01		

RCS I-131 EQUIVALENT = 5.56E+00

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 12:00

22-AUG-2001
RELATIVE TIME: H+04:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	3.10E-01	1.32E-02	4.25E-03		3.09E-02
KR-85	2.05E-01	8.75E-03	2.81E-03		2.05E-02
KR-85M	1.34E+00	5.72E-02	1.84E-02		1.34E-01
KR-87	8.83E-01	3.76E-02	1.21E-02		8.81E-02
KR-88	2.89E-01	1.23E-02	3.96E-03		2.89E-02
XE-133	1.71E+00	5.90E-02	1.80E-02		1.31E-01
XE-133M	2.81E-01	1.15E-02	3.68E-03		2.68E-02
XE-135	6.30E+00	2.36E-01	7.39E-02		5.38E-01
XE-135M	8.24E-02	1.81E-03	2.14E-04		1.56E-03
XE-138	1.36E-03	5.81E-05	1.87E-05		1.36E-04
----IODINES----------					----------
I-131	3.15E+00	6.78E-02	2.21E-03		1.79E-01
I-132	2.15E+00	4.57E-02	1.49E-03		1.21E-01
I-133	6.50E+00	1.40E-01	4.57E-03		3.70E-01
I-134	9.46E-01	2.03E-02	6.65E-04		5.38E-02
I-135	4.85E+00	1.04E-01	3.41E-03		2.76E-01
----PARTICULATES----------					----------
RB-88	4.41E-02	2.09E-03	4.09E-04		8.35E-01
RU-106	2.95E-01	6.55E-04	1.71E-07		3.50E-04
TE-132	1.62E+00	3.60E-03	9.44E-07		1.93E-03
CS-134	3.68E-02	8.17E-05	2.14E-08		4.37E-05
CS-137	2.23E+00	4.95E-03	1.30E-06		2.65E-03
CS-138	5.04E-02	2.93E-03	7.80E-05		1.59E-01
LA-140	2.08E-01	4.63E-04	1.21E-07		2.47E-04
BA-140	2.12E-01	4.71E-04	1.23E-07		2.52E-04
CE-144	1.74E-01	3.85E-04	1.01E-07		2.06E-04
TOTAL N.G.	1.14E+01	4.38E-01	1.37E-01		RATIO OF
TOTAL IOD.	1.76E+01	3.78E-01	1.23E-02		IOD./PAR.
TOTAL PART.	4.88E+00	1.56E-02	4.90E-04		RELEASE:
TOTAL/SYSTEM	3.39E+01	8.31E-01	1.50E-01		IOD: 96.2%
RCS I-131 EQUIVALENT = 5.41E+00					PAR: 3.8%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

:001-TXU-Graded Exercise
:EAL TIME: 12:15

22-AUG-2001
RELATIVE TIME: H+04:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	2.77E-01	6.32E-03	2.97E-03		2.88E-02
KR-85	2.12E-01	4.83E-03	2.27E-03		2.20E-02
KR-85M	1.27E+00	2.88E-02	1.36E-02		1.31E-01
KR-87	7.56E-01	1.72E-02	8.10E-03		7.85E-02
KR-88	2.67E-01	6.09E-03	2.86E-03		2.77E-02
XE-133	1.73E+00	3.15E-02	1.41E-02		1.37E-01
XE-133M	2.76E-01	6.05E-03	2.82E-03		2.74E-02
XE-135	6.20E+00	1.23E-01	5.64E-02		5.46E-01
XE-135M	7.81E-02	9.04E-04	1.53E-04		1.49E-03
XE-138	7.39E-04	1.68E-05	7.91E-06		7.67E-05
----IODINES----------					----------
I-131	3.09E+00	3.53E-02	1.70E-03		1.84E-01
I-132	1.97E+00	2.22E-02	1.07E-03		1.16E-01
I-133	6.33E+00	7.24E-02	3.48E-03		3.78E-01
I-134	7.62E-01	8.71E-03	4.19E-04		4.55E-02
I-135	4.64E+00	5.30E-02	2.55E-03		2.77E-01
----PARTICULATES----------					----------
RB-88	4.09E-02	1.13E-03	2.94E-04		8.91E-01
RU-106	2.90E-01	4.20E-04	8.57E-08		2.60E-04
TE-132	1.59E+00	2.31E-03	4.71E-07		1.43E-03
CS-134	3.62E-02	5.25E-05	1.07E-08		3.24E-05
CS-137	2.19E+00	3.18E-03	6.48E-07		1.97E-03
CS-138	3.64E-02	1.38E-03	3.47E-05		1.05E-01
LA-140	2.04E-01	2.96E-04	6.03E-08		1.83E-04
BA-140	2.09E-01	3.02E-04	6.16E-08		1.87E-04
CE-144	1.70E-01	2.47E-04	5.04E-08		1.53E-04
----------					----------
TOTAL N.G.	1.11E+01	2.25E-01	1.03E-01		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	1.68E+01	1.92E-01	9.22E-03		IOD: 96.5%
TOTAL PART.	4.77E+00	9.31E-03	3.30E-04		PAR: 3.5%

TOTAL/SYSTEM	3.26E+01	4.26E-01	1.13E-01		

RCS I-131 EQUIVALENT = 5.28E+00					

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 12:30

22-AUG-2001
RELATIVE TIME: H+05:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----					
KR-83M	2.51E-01	3.00E-03	2.06E-03		2.68E-02
KR-85	2.21E-01	2.64E-03	1.81E-03		2.36E-02
KR-85M	1.21E+00	1.44E-02	9.90E-03		1.29E-01
KR-87	6.55E-01	7.82E-03	5.36E-03		6.98E-02
KR-88	2.50E-01	2.98E-03	2.04E-03		2.66E-02
XE-133	1.77E+00	1.67E-02	1.09E-02		1.42E-01
XE-133M	2.75E-01	3.15E-03	2.14E-03		2.79E-02
XE-135	6.16E+00	6.35E-02	4.25E-02		5.53E-01
XE-135M	7.52E-02	4.52E-04	1.10E-04		1.43E-03
XE-138	4.05E-04	4.84E-06	3.32E-06		4.32E-05
----IODINES----					
I-131	3.07E+00	1.83E-02	1.29E-03		1.89E-01
I-132	1.82E+00	1.07E-02	7.54E-04		1.10E-01
I-133	6.24E+00	3.72E-02	2.63E-03		3.85E-01
I-134	6.21E-01	3.70E-03	2.62E-04		3.83E-02
I-135	4.49E+00	2.68E-02	1.89E-03		2.77E-01
----PARTICULATES----					
RB-88	3.83E-02	5.65E-04	2.10E-04		9.30E-01
RU-106	2.88E-01	2.53E-04	4.29E-08		1.90E-04
TE-132	1.58E+00	1.39E-03	2.35E-07		1.04E-03
CS-134	3.59E-02	3.16E-05	5.35E-09		2.37E-05
CS-137	2.18E+00	1.91E-03	3.24E-07		1.43E-03
CS-138	2.65E-02	6.04E-04	1.52E-05		6.74E-02
LA-140	2.02E-01	1.77E-04	3.01E-08		1.33E-04
BA-140	2.07E-01	1.82E-04	3.08E-08		1.36E-04
CE-144	1.69E-01	1.49E-04	2.52E-08		1.11E-04
TOTAL N.G.	1.09E+01	1.15E-01	7.68E-02		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	1.62E+01	9.66E-02	6.84E-03		IOD: 96.8%
TOTAL PART.	4.72E+00	5.26E-03	2.26E-04		PAR: 3.2%
TOTAL/SYSTEM	3.18E+01	2.17E-01	8.39E-02		

RCS I-131 EQUIVALENT = 5.21E+00

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 12:45

22-AUG-2001
RELATIVE TIME: H+05:15

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	2.27E-01	1.49E-03	1.45E-03		2.49E-02
KR-85	2.29E-01	1.51E-03	1.46E-03		2.51E-02
KR-85M	1.15E+00	7.58E-03	7.37E-03		1.27E-01
KR-87	5.68E-01	3.73E-03	3.62E-03		6.22E-02
KR-88	2.33E-01	1.53E-03	1.49E-03		2.56E-02
XE-133	1.80E+00	9.28E-03	8.56E-03		1.47E-01
XE-133M	2.74E-01	1.72E-03	1.66E-03		2.85E-02
XE-135	6.12E+00	3.44E-02	3.26E-02		5.59E-01
XE-135M	7.25E-02	2.38E-04	7.21E-05		1.24E-03
XE-138	2.22E-04	1.46E-06	1.42E-06		2.44E-05
----IODINES----------					----------
I-131	3.05E+00	9.89E-03	1.00E-03		1.94E-01
I-132	1.68E+00	5.35E-03	5.42E-04		1.05E-01
I-133	6.14E+00	2.00E-02	2.02E-03		3.92E-01
I-134	5.06E-01	1.64E-03	1.67E-04		3.23E-02
I-135	4.34E+00	1.41E-02	1.43E-03		2.77E-01
----PARTICULATES----------					----------
RB-88	3.58E-02	3.18E-04	1.52E-04		9.56E-01
RU-106	2.86E-01	1.79E-04	2.14E-08		1.35E-04
TE-132	1.56E+00	9.79E-04	1.17E-07		7.36E-04
CS-134	3.57E-02	2.24E-05	2.67E-09		1.68E-05
CS-137	2.16E+00	1.35E-03	1.62E-07		1.02E-03
CS-138	1.93E-02	3.10E-04	6.67E-06		4.19E-02
LA-140	2.00E-01	1.25E-04	1.50E-08		9.41E-05
BA-140	2.06E-01	1.29E-04	1.54E-08		9.67E-05
CE-144	1.68E-01	1.05E-04	1.26E-08		7.92E-05
TOTAL N.G.	1.07E+01	6.15E-02	5.83E-02		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	1.57E+01	5.09E-02	5.17E-03		IOD: 97.0%
TOTAL PART.	4.68E+00	3.52E-03	1.59E-04		PAR: 3.0%
TOTAL/SYSTEM	3.11E+01	1.16E-01	6.36E-02		

RCS I-131 EQUIVALENT = 5.14E+00

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 13:00

22-AUG-2001
RELATIVE TIME: H+05:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	2.06E-01	8.59E-04	1.06E-03		2.33E-02
KR-85	2.37E-01	9.89E-04	1.22E-03		2.68E-02
KR-85M	1.10E+00	4.60E-03	5.68E-03		1.25E-01
KR-87	4.92E-01	2.05E-03	2.53E-03		5.56E-02
KR-88	2.18E-01	9.09E-04	1.12E-03		2.46E-02
XE-133	1.84E+00	5.95E-03	6.88E-03		1.51E-01
XE-133M	2.73E-01	1.09E-03	1.32E-03		2.91E-02
XE-135	6.08E+00	2.16E-02	2.57E-02		5.64E-01
XE-135M	7.01E-02	1.44E-04	4.23E-05		9.29E-04
XE-138	1.22E-04	5.08E-07	6.27E-07		1.38E-05
----IODINES----------					----------
I-131	3.02E+00	6.09E-03	7.99E-04		1.99E-01
I-132	1.55E+00	3.06E-03	4.01E-04		9.98E-02
I-133	6.05E+00	1.22E-02	1.60E-03		3.98E-01
I-134	4.13E-01	8.31E-04	1.09E-04		2.71E-02
I-135	4.20E+00	8.46E-03	1.11E-03		2.76E-01
----PARTICULATES----------					----------
RB-88	3.35E-02	2.29E-04	1.17E-04		9.72E-01
RU-106	2.84E-01	1.87E-04	1.17E-08		9.73E-05
TE-132	1.55E+00	1.02E-03	6.37E-08		5.31E-04
CS-134	3.55E-02	2.34E-05	1.46E-09		1.21E-05
CS-137	2.15E+00	1.42E-03	8.83E-08		7.36E-04
CS-138	1.39E-02	2.18E-04	3.14E-06		2.62E-02
LA-140	1.98E-01	1.30E-04	8.12E-09		6.77E-05
BA-140	2.04E-01	1.35E-04	8.38E-09		6.99E-05
CE-144	1.67E-01	1.10E-04	6.86E-09		5.72E-05
TOTAL N.G.	1.05E+01	3.81E-02	4.55E-02		RATIO OF
TOTAL IOD.	1.52E+01	3.06E-02	4.02E-03		IOD./PAR.
TOTAL PART.	4.64E+00	3.47E-03	1.20E-04		RELEASE:
TOTAL/SYSTEM	3.04E+01	7.22E-02	4.97E-02		IOD: 97.1%
RCS I-131 EQUIVALENT = 5.08E+00					PAR: 2.9%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 13:15

22-AUG-2001
RELATIVE TIME: H+05:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.87E-01	5.38E-03	9.66E-04		2.17E-02
KR-85	2.45E-01	7.06E-03	1.27E-03		2.85E-02
KR-85M	1.05E+00	3.04E-02	5.46E-03		1.23E-01
KR-87	4.26E-01	1.23E-02	2.21E-03		4.97E-02
KR-88	2.04E-01	5.88E-03	1.06E-03		2.38E-02
XE-133	1.87E+00	4.63E-02	6.89E-03		1.55E-01
XE-133M	2.72E-01	7.60E-03	1.32E-03		2.97E-02
XE-135	6.04E+00	1.57E-01	2.52E-02		5.68E-01
XE-135M	6.78E-02	1.14E-03	3.01E-05		6.77E-04
XE-138	6.69E-05	1.93E-06	3.46E-07		7.80E-06
----IODINES----------					----------
I-131	3.00E+00	3.98E-02	7.98E-04		2.03E-01
I-132	1.43E+00	1.88E-02	3.72E-04		9.47E-02
I-133	5.97E+00	7.91E-02	1.59E-03		4.04E-01
I-134	3.36E-01	4.46E-03	8.95E-05		2.28E-02
I-135	4.07E+00	5.40E-02	1.08E-03		2.75E-01
----PARTICULATES----------					----------
RB-88	3.13E-02	1.13E-03	9.49E-05		9.86E-01
RU-106	2.82E-01	2.00E-03	5.12E-09		5.32E-05
TE-132	1.54E+00	1.09E-02	2.79E-08		2.90E-04
CS-134	3.53E-02	2.49E-04	6.39E-10		6.64E-06
CS-137	2.14E+00	1.51E-02	3.87E-08		4.02E-04
CS-138	1.01E-02	8.98E-04	1.28E-06		1.33E-02
LA-140	1.96E-01	1.39E-03	3.55E-09		3.69E-05
BA-140	2.03E-01	1.43E-03	3.68E-09		3.82E-05
CE-144	1.66E-01	1.17E-03	3.01E-09		3.13E-05
----------					----------
TOTAL N.G.	1.04E+01	2.74E-01	4.44E-02		RATIO OF
TOTAL IOD.	1.48E+01	1.96E-01	3.93E-03		IOD./PAR.
TOTAL PART.	4.60E+00	3.43E-02	9.62E-05		RELEASE:
----------					IOD:
TOTAL/SYSTEM	2.98E+01	5.04E-01	4.85E-02		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 5.01E+00					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 13:30 RELATIVE TIME: H+06:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.69E-01	8.89E-03	8.80E-04		2.03E-02
KR-85	2.52E-01	1.32E-02	1.31E-03		3.02E-02
KR-85M	1.01E+00	5.30E-02	5.24E-03		1.21E-01
KR-87	3.69E-01	1.94E-02	1.92E-03		4.44E-02
KR-88	1.91E-01	1.00E-02	9.93E-04		2.29E-02
XE-133	1.91E+00	8.80E-02	6.90E-03		1.59E-01
XE-133M	2.71E-01	1.39E-02	1.32E-03		3.04E-02
XE-135	6.00E+00	2.89E-01	2.48E-02		5.71E-01
XE-135M	6.56E-02	1.96E-03	2.37E-05		5.46E-04
XE-138	3.67E-05	1.93E-06	1.91E-07		4.41E-06
----IODINES----------					----------
I-131	2.98E+00	7.16E-02	7.98E-04		2.07E-01
I-132	1.32E+00	3.15E-02	3.45E-04		8.98E-02
I-133	5.88E+00	1.41E-01	1.57E-03		4.09E-01
I-134	2.74E-01	6.59E-03	7.34E-05		1.91E-02
I-135	3.94E+00	9.46E-02	1.05E-03		2.74E-01
----PARTICULATES----------					----------
RB-88	2.93E-02	1.38E-03	8.56E-05		9.93E-01
RU-106	2.81E-01	2.67E-03	2.25E-09		2.61E-05
TE-132	1.52E+00	1.45E-02	1.22E-08		1.42E-04
CS-134	3.50E-02	3.33E-04	2.80E-10		3.25E-06
CS-137	2.12E+00	2.02E-02	1.70E-08		1.97E-04
CS-138	7.29E-03	7.63E-04	5.61E-07		6.51E-03
LA-140	1.94E-01	1.84E-03	1.55E-09		1.80E-05
BA-140	2.01E-01	1.91E-03	1.61E-09		1.87E-05
CE-144	1.65E-01	1.57E-03	1.32E-09		1.53E-05
----------					----------
TOTAL N.G.	1.02E+01	4.98E-01	4.34E-02		RATIO OF
TOTAL IOD.	1.44E+01	3.45E-01	3.84E-03		IOD./PAR.
TOTAL PART.	4.56E+00	4.52E-02	8.62E-05		RELEASE:
----------					IOD:
TOTAL/SYSTEM	2.92E+01	8.89E-01	4.73E-02		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 4.95E+00					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise
EAL TIME: 13:45

22-AUG-2001
RELATIVE TIME: H+06:15

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.53E-01	1.16E-02	8.02E-04		1.89E-02
KR-85	2.58E-01	1.96E-02	1.35E-03		3.19E-02
KR-85M	9.62E-01	7.31E-02	5.04E-03		1.19E-01
KR-87	3.20E-01	2.43E-02	1.68E-03		3.96E-02
KR-88	1.78E-01	1.35E-02	9.35E-04		2.20E-02
XE-133	1.94E+00	1.30E-01	6.91E-03		1.63E-01
XE-133M	2.70E-01	2.00E-02	1.31E-03		3.10E-02
XE-135	5.95E+00	4.17E-01	2.44E-02		5.74E-01
XE-135M	6.35E-02	2.63E-03	2.02E-05		4.76E-04
XE-138	2.01E-05	1.53E-06	1.06E-07		2.49E-06
----IODINES----------					----------
I-131	2.96E+00	1.01E-01	7.97E-04		2.12E-01
I-132	1.22E+00	4.15E-02	3.20E-04		8.51E-02
I-133	5.80E+00	1.99E-01	1.56E-03		4.15E-01
I-134	2.24E-01	7.67E-03	6.02E-05		1.60E-02
I-135	3.81E+00	1.31E-01	1.03E-03		2.73E-01
----PARTICULATES----------					----------
RB-88	2.74E-02	1.65E-03	7.97E-05		9.97E-01
RU-106	2.79E-01	2.88E-03	9.86E-10		1.23E-05
TE-132	1.51E+00	1.56E-02	5.34E-09		6.68E-05
CS-134	3.48E-02	3.60E-04	1.23E-10		1.54E-06
CS-137	2.11E+00	2.18E-02	7.46E-09		9.33E-05
CS-138	5.26E-03	5.75E-04	2.64E-07		3.30E-03
LA-140	1.92E-01	1.98E-03	6.79E-10		8.49E-06
BA-140	2.00E-01	2.07E-03	7.07E-10		8.84E-06
CE-144	1.64E-01	1.69E-03	5.80E-10		7.25E-06
TOTAL N.G.	1.01E+01	7.12E-01	4.24E-02		RATIO OF
TOTAL IOD.	1.40E+01	4.80E-01	3.76E-03		IOD./PAR.
TOTAL PART.	4.52E+00	4.86E-02	8.00E-05		RELEASE:
TOTAL/SYSTEM	2.86E+01	1.24E+00	4.62E-02		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.89E+00					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 14:00

22-AUG-2001
RELATIVE TIME: H+06:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.39E-01	1.37E-02	7.31E-04		1.76E-02
KR-85	2.64E-01	2.62E-02	1.39E-03		3.36E-02
KR-85M	9.19E-01	9.10E-02	4.85E-03		1.17E-01
KR-87	2.78E-01	2.75E-02	1.46E-03		3.53E-02
KR-88	1.67E-01	1.65E-02	8.79E-04		2.12E-02
XE-133	1.98E+00	1.73E-01	6.91E-03		1.67E-01
XE-133M	2.68E-01	2.59E-02	1.31E-03		3.16E-02
XE-135	5.90E+00	5.40E-01	2.39E-02		5.77E-01
XE-135M	6.15E-02	3.19E-03	1.82E-05		4.39E-04
XE-138	1.11E-05	1.09E-06	5.83E-08		1.41E-06
----IODINES----------					----------
I-131	2.94E+00	1.30E-01	7.96E-04		2.16E-01
I-132	1.13E+00	4.93E-02	2.97E-04		8.05E-02
I-133	5.71E+00	2.52E-01	1.55E-03		4.19E-01
I-134	1.82E-01	8.04E-03	4.94E-05		1.34E-02
I-135	3.69E+00	1.63E-01	1.00E-03		2.71E-01
----PARTICULATES----------					----------
RB-88	2.56E-02	1.96E-03	7.47E-05		9.98E-01
RU-106	2.77E-01	2.91E-03	4.33E-10		5.78E-06
TE-132	1.50E+00	1.58E-02	2.34E-09		3.12E-05
CS-134	3.46E-02	3.64E-04	5.40E-11		7.21E-07
CS-137	2.10E+00	2.20E-02	3.27E-09		4.37E-05
CS-138	3.79E-03	4.18E-04	1.31E-07		1.75E-03
LA-140	1.90E-01	2.00E-03	2.97E-10		3.96E-06
BA-140	1.99E-01	2.09E-03	3.10E-10		4.14E-06
CE-144	1.63E-01	1.71E-03	2.54E-10		3.40E-06
----------					----------
TOTAL N.G.	9.97E+00	9.17E-01	4.15E-02		RATIO OF
TOTAL IOD.	1.37E+01	6.02E-01	3.69E-03		IOD./PAR.
TOTAL PART.	4.49E+00	4.92E-02	7.49E-05		RELEASE:
----------					IOD:
TOTAL/SYSTEM	2.81E+01	1.57E+00	4.52E-02		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 4.84E+00					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 14:15

22-AUG-2001
RELATIVE TIME: H+06:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	1.26E-01	1.53E-02	6.67E-04		1.64E-02
KR-85	2.70E-01	3.29E-02	1.43E-03		3.53E-02
KR-85M	8.78E-01	1.07E-01	4.66E-03		1.15E-01
KR-87	2.41E-01	2.93E-02	1.28E-03		3.14E-02
KR-88	1.56E-01	1.90E-02	8.27E-04		2.04E-02
XE-133	2.01E+00	2.17E-01	6.92E-03		1.70E-01
XE-133M	2.67E-01	3.17E-02	1.31E-03		3.21E-02
XE-135	5.85E+00	6.58E-01	2.35E-02		5.79E-01
XE-135M	5.95E-02	3.66E-03	1.70E-05		4.19E-04
XE-138	6.07E-06	7.39E-07	3.22E-08		7.93E-07
----IODINES----------					----------
I-131	2.92E+00	1.56E-01	7.95E-04		2.20E-01
I-132	1.05E+00	5.52E-02	2.76E-04		7.62E-02
I-133	5.63E+00	3.01E-01	1.53E-03		4.24E-01
I-134	1.49E-01	7.95E-03	4.05E-05		1.12E-02
I-135	3.57E+00	1.91E-01	9.74E-04		2.69E-01
----PARTICULATES----------					----------
RB-88	2.40E-02	2.27E-03	7.03E-05		9.99E-01
RU-106	2.76E-01	2.88E-03	1.90E-10		2.70E-06
TE-132	1.49E+00	1.55E-02	1.02E-09		1.46E-05
CS-134	3.44E-02	3.60E-04	2.37E-11		3.37E-07
CS-137	2.08E+00	2.18E-02	1.44E-09		2.04E-05
CS-138	2.73E-03	3.00E-04	6.77E-08		9.63E-04
LA-140	1.88E-01	1.97E-03	1.30E-10		1.84E-06
BA-140	1.97E-01	2.06E-03	1.36E-10		1.93E-06
CE-144	1.62E-01	1.69E-03	1.12E-10		1.59E-06
----------					----------
TOTAL N.G.	9.86E+00	1.11E+00	4.06E-02		RATIO OF
TOTAL IOD.	1.33E+01	7.11E-01	3.62E-03		IOD./PAR.
TOTAL PART.	4.46E+00	4.89E-02	7.03E-05		RELEASE:
----------					IOD:
TOTAL/SYSTEM	2.76E+01	1.87E+00	4.43E-02		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 4.78E+00					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 14:30

22-AUG-2001
RELATIVE TIME: H+07:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----					
KR-83M	1.14E-01	1.64E-02	6.08E-04		1.53E-02
KR-85	2.76E-01	3.98E-02	1.47E-03		3.70E-02
KR-85M	8.40E-01	1.21E-01	4.48E-03		1.13E-01
KR-87	2.09E-01	3.01E-02	1.11E-03		2.80E-02
KR-88	1.46E-01	2.10E-02	7.78E-04		1.96E-02
XE-133	2.04E+00	2.60E-01	6.93E-03		1.74E-01
XE-133M	2.66E-01	3.74E-02	1.30E-03		3.27E-02
XE-135	5.80E+00	7.71E-01	2.31E-02		5.80E-01
XE-135M	5.76E-02	4.06E-03	1.62E-05		4.07E-04
XE-138	3.33E-06	4.80E-07	1.78E-08		4.47E-07
----IODINES----					
I-131	2.90E+00	1.81E-01	7.95E-04		2.24E-01
I-132	9.70E-01	5.95E-02	2.56E-04		7.20E-02
I-133	5.55E+00	3.46E-01	1.52E-03		4.28E-01
I-134	1.21E-01	7.56E-03	3.32E-05		9.35E-03
I-135	3.46E+00	2.16E-01	9.49E-04		2.67E-01
----PARTICULATES----					
RB-88	2.24E-02	2.56E-03	6.61E-05		9.99E-01
RU-106	2.74E-01	2.83E-03	8.33E-11		1.26E-06
TE-132	1.48E+00	1.53E-02	4.48E-10		6.78E-06
CS-134	3.42E-02	3.54E-04	1.04E-11		1.57E-07
CS-137	2.07E+00	2.14E-02	6.30E-10		9.52E-06
CS-138	1.97E-03	2.14E-04	3.59E-08		5.43E-04
LA-140	1.87E-01	1.93E-03	5.67E-11		8.57E-07
BA-140	1.96E-01	2.03E-03	5.96E-11		9.01E-07
CE-144	1.61E-01	1.67E-03	4.90E-11		7.40E-07
TOTAL N.G.	9.75E+00	1.30E+00	3.98E-02		RATIO OF
TOTAL IOD.	1.30E+01	8.10E-01	3.55E-03		IOD./PAR.
TOTAL PART.	4.42E+00	4.83E-02	6.61E-05		RELEASE:
TOTAL/SYSTEM	2.72E+01	2.16E+00	4.34E-02		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.73E+00					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 14:45

22-AUG-2001
RELATIVE TIME: H+07:15

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----					
KR-83M	1.03E-01	1.72E-02	5.54E-04		1.42E-02
KR-85	2.81E-01	4.68E-02	1.51E-03		3.87E-02
KR-85M	8.02E-01	1.34E-01	4.31E-03		1.10E-01
KR-87	1.81E-01	3.01E-02	9.71E-04		2.49E-02
KR-88	1.36E-01	2.27E-02	7.32E-04		1.88E-02
XE-133	2.07E+00	3.04E-01	6.94E-03		1.78E-01
XE-133M	2.65E-01	4.29E-02	1.30E-03		3.33E-02
XE-135	5.75E+00	8.79E-01	2.27E-02		5.81E-01
XE-135M	5.58E-02	4.41E-03	1.56E-05		4.00E-04
XE-138	1.83E-06	3.04E-07	9.81E-09		2.52E-07
----IODINES----					
I-131	2.88E+00	2.04E-01	7.94E-04		2.27E-01
I-132	8.98E-01	6.24E-02	2.37E-04		6.80E-02
I-133	5.48E+00	3.88E-01	1.51E-03		4.32E-01
I-134	9.89E-02	7.00E-03	2.73E-05		7.81E-03
I-135	3.35E+00	2.37E-01	9.24E-04		2.65E-01
----PARTICULATES----					
RB-88	2.10E-02	2.82E-03	6.22E-05		1.00E+00
RU-106	2.72E-01	2.77E-03	3.65E-11		5.88E-07
TE-132	1.46E+00	1.49E-02	1.96E-10		3.16E-06
CS-134	3.40E-02	3.46E-04	4.56E-12		7.33E-08
CS-137	2.06E+00	2.10E-02	2.76E-10		4.44E-06
CS-138	1.42E-03	1.52E-04	1.94E-08		3.11E-04
LA-140	1.85E-01	1.88E-03	2.48E-11		3.98E-07
BA-140	1.95E-01	1.98E-03	2.61E-11		4.20E-07
CE-144	1.60E-01	1.63E-03	2.15E-11		3.45E-07
TOTAL N.G.	9.65E+00	1.48E+00	3.90E-02		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	1.27E+01	8.98E-01	3.49E-03		IOD: 0.0%
TOTAL PART.	4.39E+00	4.75E-02	6.22E-05		PAR: 0.0%
TOTAL/SYSTEM	2.67E+01	2.43E+00	4.25E-02		

RCS I-131 EQUIVALENT = 4.68E+00

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 15:00

22-AUG-2001
RELATIVE TIME: H+07:30

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----					
KR-83M	9.35E-02	1.76E-02	5.05E-04		1.32E-02
KR-85	2.86E-01	5.38E-02	1.54E-03		4.03E-02
KR-85M	7.67E-01	1.44E-01	4.14E-03		1.08E-01
KR-87	1.57E-01	2.96E-02	8.47E-04		2.22E-02
KR-88	1.28E-01	2.40E-02	6.89E-04		1.80E-02
XE-133	2.10E+00	3.47E-01	6.94E-03		1.82E-01
XE-133M	2.64E-01	4.83E-02	1.29E-03		3.38E-02
XE-135	5.70E+00	9.83E-01	2.23E-02		5.82E-01
XE-135M	5.41E-02	4.71E-03	1.51E-05		3.95E-04
XE-138	1.00E-06	1.89E-07	5.42E-09		1.42E-07
----IODINES----					
I-131	2.86E+00	2.26E-01	7.93E-04		2.31E-01
I-132	8.32E-01	6.42E-02	2.20E-04		6.42E-02
I-133	5.40E+00	4.26E-01	1.50E-03		4.36E-01
I-134	8.07E-02	6.36E-03	2.24E-05		6.52E-03
I-135	3.25E+00	2.56E-01	9.00E-04		2.62E-01
----PARTICULATES----					
RB-88	1.96E-02	3.04E-03	5.85E-05		1.00E+00
RU-106	2.71E-01	2.71E-03	1.60E-11		2.74E-07
TE-132	1.45E+00	1.45E-02	8.60E-11		1.47E-06
CS-134	3.38E-02	3.38E-04	2.00E-12		3.42E-08
CS-137	2.05E+00	2.05E-02	1.21E-10		2.07E-06
CS-138	1.02E-03	1.07E-04	1.05E-08		1.80E-04
LA-140	1.83E-01	1.83E-03	1.08E-11		1.85E-07
BA-140	1.94E-01	1.93E-03	1.15E-11		1.96E-07
CE-144	1.59E-01	1.59E-03	9.43E-12		1.61E-07
TOTAL N.G.	9.55E+00	1.65E+00	3.82E-02		RATIO OF
TOTAL IOD.	1.24E+01	9.78E-01	3.43E-03		IOD./PAR.
TOTAL PART.	4.36E+00	4.65E-02	5.85E-05		RELEASE:
TOTAL/SYSTEM	2.63E+01	2.68E+00	4.17E-02		IOD: 0.0%
RCS I-131 EQUIVALENT = 4.63E+00					PAR: 0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

001-TXU-Graded Exercise 22-AUG-2001

EAL TIME: 15:15 RELATIVE TIME: H+07:45

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

****

NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	8.48E-02	1.78E-02	4.60E-04		1.23E-02
KR-85	2.90E-01	6.11E-02	1.58E-03		4.20E-02
KR-85M	7.33E-01	1.54E-01	3.98E-03		1.06E-01
KR-87	1.36E-01	2.86E-02	7.39E-04		1.97E-02
KR-88	1.19E-01	2.51E-02	6.48E-04		1.73E-02
XE-133	2.13E+00	3.92E-01	6.95E-03		1.85E-01
XE-133M	2.63E-01	5.37E-02	1.29E-03		3.44E-02
XE-135	5.65E+00	1.08E+00	2.19E-02		5.83E-01
XE-135M	5.24E-02	4.98E-03	1.47E-05		3.91E-04
XE-138	5.51E-07	1.16E-07	2.99E-09		7.97E-08
----IODINES----------					----------
I-131	2.84E+00	2.46E-01	7.93E-04		2.35E-01
I-132	7.71E-01	6.52E-02	2.04E-04		6.05E-02
I-133	5.33E+00	4.61E-01	1.48E-03		4.40E-01
I-134	6.59E-02	5.70E-03	1.84E-05		5.44E-03
I-135	3.15E+00	2.72E-01	8.77E-04		2.60E-01
----PARTICULATES----------					----------
RB-88	1.84E-02	3.24E-03	5.50E-05		1.00E+00
RU-106	2.69E-01	2.65E-03	7.04E-12		1.28E-07
TE-132	1.44E+00	1.42E-02	3.76E-11		6.84E-07
CS-134	3.36E-02	3.31E-04	8.78E-13		1.60E-08
CS-137	2.04E+00	2.00E-02	5.32E-11		9.67E-07
CS-138	7.37E-04	7.63E-05	5.78E-09		1.05E-04
LA-140	1.81E-01	1.78E-03	4.74E-12		8.61E-08
BA-140	1.93E-01	1.89E-03	5.03E-12		9.13E-08
CE-144	1.58E-01	1.56E-03	4.14E-12		7.51E-08
----------					----------
TOTAL N.G.	9.46E+00	1.82E+00	3.75E-02		RATIO OF
TOTAL IOD.	1.22E+01	1.05E+00	3.38E-03		IOD./PAR.
TOTAL PART.	4.33E+00	4.58E-02	5.50E-05		RELEASE:
----------					IOD:
TOTAL/SYSTEM	2.59E+01	2.92E+00	4.10E-02		0.0%
----------					PAR:
RCS I-131 EQUIVALENT = 4.58E+00					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
2) ATMOSPHERIC NUCLIDE RATIOS ARE THE RELATIVE CONCENTRATION OF INDIVIDUAL NUCLIDES COMPARED TO THE TOTAL CONCENTRATION OF THE NUCLIDE GROUP
3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE

TXU Electric

2001-TXU-Graded Exercise
REAL TIME: 15:30

22-AUG-2001
RELATIVE TIME: H+08:00

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IN-PLANT CHEMISTRY AND ATMOSPHERIC NUCLIDE RATIOS

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NUCLIDE GROUP/ NUCLIDE	SYSTEM 1 RCS	SYSTEM 2 S/G 1-04	SYSTEM 3 Release mix	SYSTEM 4	ATMOSPHERIC NUCLIDE RATIOS
----NOBLE GASES----------					----------
KR-83M	7.71E-02	1.71E-02	4.19E-04		1.14E-02
KR-85	2.96E-01	6.55E-02	1.61E-03		4.37E-02
KR-85M	7.03E-01	1.56E-01	3.83E-03		1.04E-01
KR-87	1.18E-01	2.62E-02	6.44E-04		1.75E-02
KR-88	1.12E-01	2.48E-02	6.10E-04		1.65E-02
XE-133	2.16E+00	4.16E-01	6.96E-03		1.89E-01
XE-133M	2.63E-01	5.64E-02	1.29E-03		3.49E-02
XE-135	5.61E+00	1.13E+00	2.15E-02		5.83E-01
XE-135M	5.09E-02	4.93E-03	1.43E-05		3.87E-04
XE-138	3.03E-07	6.72E-08	1.65E-09		4.48E-08
----IODINES----------					----------
I-131	2.83E+00	2.56E-01	7.92E-04		2.38E-01
I-132	7.16E-01	6.31E-02	1.90E-04		5.71E-02
I-133	5.27E+00	4.76E-01	1.47E-03		4.43E-01
I-134	5.39E-02	4.87E-03	1.51E-05		4.53E-03
I-135	3.06E+00	2.76E-01	8.54E-04		2.57E-01
----PARTICULATES----------					----------
RB-88	1.72E-02	3.34E-03	5.86E-05		1.00E+00
RU-106	2.69E-01	2.62E-03	4.66E-12		7.95E-08
TE-132	1.43E+00	1.40E-02	2.49E-11		4.24E-07
CS-134	3.35E-02	3.27E-04	5.82E-13		9.92E-09
CS-137	2.03E+00	1.98E-02	3.52E-11		6.01E-07
CS-138	5.32E-04	5.46E-05	4.11E-09		7.01E-05
LA-140	1.80E-01	1.76E-03	3.13E-12		5.33E-08
BA-140	1.92E-01	1.87E-03	3.33E-12		5.68E-08
CE-144	1.58E-01	1.54E-03	2.74E-12		4.67E-08
TOTAL N.G.	9.39E+00	1.89E+00	3.68E-02		RATIO OF IOD./PAR. RELEASE:
TOTAL IOD.	1.19E+01	1.08E+00	3.32E-03		IOD:
TOTAL PART.	4.32E+00	4.53E-02	5.86E-05		0.0%
TOTAL/SYSTEM	2.56E+01	3.02E+00	4.02E-02		PAR:
RCS I-131 EQUIVALENT = 4.54E+00					0.0%

********** -NOTES- **********

1) CONCENTRATIONS ARE IN UCI/ML
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3) ATMOSPHERIC NUCLIDE RATIOS ARE CALCULATED AT THE POINT OF RELEASE