PECO
ENERGY

SCENARIO MANUAL
for

LIMERICK GENERATING STATION

Emergency Preparedness
Annual Exercise

(General Scenario)

Scenario L53
October 24, 1995

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PECO ENERGY COMPANY
LIMERICK GENERATING STATION
1995 ANNUAL EXERCISE
SCENARIO CONFIDENTIALITY

This scenario manual which you have received is confidential and must remain in your possession or be kept under lock and key at all times. The scenario cannot be discussed with anyone who is not authorized to be scenario knowledgeable.

Any violation of this would invalidate the scenario for use in this Emergency Preparedness Exercise.

Your cooperation is greatly appreciated. Thank You.

Rick Howard

Manager - Emergency Preparedness

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INTRODUCTION

This exercise shall demonstrate the capabilities of the Limerick Emergency Response Organization to respond to simulated accident conditions.

This scenario manual contains information for use by controllers and evaluators. The scenario shall be kept confidential to allow participants to respond realistically to unanticipated events.

At no time should actions be taken which would impact normal plant operations.

MISSION

This exercise was developed in order to provide the ERO with the opportunity to be challenged in a severe radiological event. The scenario includes fuel damage resulting in an offsite Iodine release requiring a Site Area Emergency declaration and subsequent drywell radiation levels leading to a General Emergency.

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EXERCISE SCHEDULE

FRIDAY, OCTOBER 20, 1995

8:00 am — Controller/Evaluator Training
(Limerick Training Center - Classroom 1)

10:00 am — Controller/Evaluator Briefing
(Limerick Training Center - Classroom 1)

MONDAY, OCTOBER 23, 1995

10:00 am — LGS Player Briefing

TUESDAY, OCTOBER 24, 1995

10:00 am — NRC Entrance
(Limerick Training Center - Classroom 5)

3:00 pm — Commence Exercise

9:00 pm — Terminate Exercise/Facility Debriefing

WEDNESDAY, OCTOBER 25, 1995

9:00 am — Controller/Evaluator Critique Preparation
(Limerick Training Center - Classroom 12/13)

THURSDAY, OCTOBER 26, 1995

10:00 am — PECO/NRC Critique
(Limerick Training Center - Classroom 12/13)

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PARTICIPANTS

PECO Energy Company

All PECO Energy Emergency Response Organizations per the scenario.

Linfield Fire Company

Federal, State, Local Agencies & INPO ***(Notifications Only, unless they would like more)***

Nuclear Regulatory Commission (NRC)

Institute of Nuclear Power Operations (INPO)

Bureau of Radiation Protection (BRP)

Pennsyvania Emergency Management Agency (PEMA)

Berks County Emergency Management Agency

Chester County Department of Emergency Services

Montgomery County Office of Emergency Preparedness

SUPPORT ORGANIZATIONS ***(NOT PARTICIPATING)***

Goodwill & Trappe Ambulance

Montgomery & Pottstown Hospital

Environmental Resources

Police / FBI

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A. DRILL CONDUCT

A1 Conduct an annual exercise.

A2 Conduct a full participation exercise (State can partially participate).

A3 Involve each state fully (with full participation by local governments) within the plume exposure EPZ.

A4 Involve each state within the ingestion exposure pathway EPZ.

A6 Conduct an unannounced, off-hours, full participation exercise.

A7 Conduct an exercise under varying weather conditions.

A8 Conduct a formal critique in order to identify weak or deficient areas that need correction.

A9 Conduct an exercise that tests the ERO's ability to respond to a rapidly degrading simulated situation.

A11 Conduct a Semi-Annual Health Physics Drill.

A12 Conduct a Semi-Annual Radiological Monitoring Drill.

B. INCIDENT ASSESSMENT AND CLASSIFICATION

B1 Recognize that an emergency action level has been reached (exceeded) and correctly classify the emergency.

B2 Continuously monitor applicable parameters and correctly upgrade/downgrade the emergency classification in a timely fashion.

B3 Determine the source term of a simulated airborne radiological release.

B4 Correctly determine the projected dose resulting from a simulated gaseous radiological release.

B8 Use field monitoring to effectively track and measure a simulated gaseous radioiodine release.

B9 Assess plant conditions and compare projected or actual (simulated) doses to Protective Action Guidelines to provide appropriate protective action recommendations.

B10 Assess the type and extent of simulated damage to station equipment.

B14 Determine actual or projected magnitude and locations of simulated radiological liquid or gaseous hazards.

B15 Access meteorological data for use in dose projections.

** Satisfy Iodine release actions per NRC inspection finding IFI 50-352,353/93-19-02 (ref. AR# A0801099).

C. NOTIFICATION AND COMMUNICATION

C1 Perform initial notification of the counties and state(s) within 15 minutes of emergency declaration.

C2 Perform initial notification of the NRC immediately after notification of appropriate state or local agencies and not longer than one hour of emergency declaration.

C3 Complete secondary notifications in a timely fashion.

C5 Make follow-up notifications to agencies notified initially upon escalation or downgrade of the emergency classification/situation.

C6 Activate the ERO using the public address system, telephone, and/or pagers.

C8 Conduct two-way communications between the TSC/EOF and state/risk county emergency operations centers.

C9 Conduct two-way communications between the TSC/EOF and field monitoring teams.

C10 Conduct two-way communications between emergency teams and their controlling emergency facilities (Operations Support Center, Technical Support Center).

C14 Maintain and update status boards.

C15 Maintain and update emergency logs

C16 Periodically update emergency response personnel using the public address system or other appropriate means.

C17 Establish communications within and between emergency response facilities.

D. EMERGENCY FACILITY ACTIVATION AND STAFFING

D1 Activate the TSC within approximately 1 hour of communication of Alert declaration.

D2 Activate the OSC within approximately 1 hour of communication of Alert declaration.

D3 Activate the EOF within approximately 1 hour of communication of Site Area Emergency declaration.

D4 Activate the ENC in accordance with the emergency communications plan.

E. RADIOLOGICAL EXPOSURE CONTROL

E1 Distribute dosimetry and/or ensure the radiological habitability in the emergency response facilities.

E2 Evaluate the need to authorize emergency exposure limits in excess of those in 10CFR20 and authorize, as appropriate.

E3 Issue respiratory protection to emergency response personnel, as appropriate.

E4 Issue protective clothing to emergency response personnel, as appropriate

E5 Evaluate the need to issue radio protective drugs to emergency response personnel and issue, as appropriate.

E6 Institute measures to control the spread of contamination.

E7 Perform decontamination of simulated, contaminated personnel as required by the scenario.

E8 Simulate equipment decontamination as required by the scenario.

E9 Establish onsite ingestion control measures including prohibition of eating, drinking, and smoking.

F. EMERGENCY DIRECTION AND CONTROL

F1 Shift management assumes position of Emergency Director until relieved by designated personnel in the TSC.

F2 Shift personnel initially respond to classify and mitigate the emergency.

F3 Perform Emergency Director turnover and responsibility transfer from shift management to designated station management personnel.

F7 Dispatch the First/Aid Search and Rescue Group to administer simulated first aid.

F8 Deploy, direct, and track Field Survey Teams to gather environmental radiological data.

F10 Dispatch the Fire Brigade to fight a simulated fire.

F11 Request assistance from and coordinate station access for offsite fire department.

F16 Make Protective Action Recommendations to offsite agencies as appropriate to the Emergency Action Levels and/or Dose Assessment.

G. PUBLIC INFORMATION

G1 Implement rumor control procedures.

G2 Prepare, review and approve emergency news releases.

G3 Coordinate with PEMA on wording of news releases.

G4 Forward copies of prepared news releases to corporate headquarters and have prepared statements ready for distribution to the customer service centers for use in rumor control.

G5 Conduct periodic news conferences.

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SECTION 3.1
GUIDELINES AND CONDUCT

I. PURPOSE

A. This document provides guidance for conducting the Limerick Generating Station Exercise. It provides methods for demonstrating emergency response capability, conducting the exercise, and evaluating results.

II. CONCEPT OF OPERATIONS AND CONTROL OF THE EXERCISE

A. PECO Energy Company will supply official controllers and/or evaluators for each location where an emergency response is being demonstrated. Prior to the exercise, controllers and evaluators will be provided with the appropriate locations, maps, time periods, guidelines, and evaluation checklists corresponding to their assignments. Controllers and evaluators will be trained in their duties and briefed on scenario specifics.

B. Control Room activities will be conducted in the simulator control room. The simulator will provide most operational data and will provide input to the Simulated Emergency Response Facility Data System (ERFDS) and the Emergency Preparedness Data System (EPDS) at the EOF.

C. Controllers will hand out messages and cue cards and will make judgement decisions. Selected controllers will use the message forms to place the scenario events in effect and to trigger response from the involved emergency response organizations. Each controller will have copies of the messages controlling the portion of the drill for which he/she is responsible.

D. Three kinds of messages will be used:

a. Controlling messages are used as a primary means of implementing scenario events by announcing or placing an event in effect by hypothesizing conditions resulting from previous actions. Controlling messages will be presented to the designated exercise participant at the time specified in the event schedule. The controller may follow up with an explanation of the message and answer questions to ensure that the participant understands the message.

b. Contingency messages are used at the discretion of the controllers with

the approval of the Lead Facility Controller in order to maintain the exercise continuity or schedule. Contingency messages are used to correct player deficiencies and to react to multiple-path events.

c. Simulator messages are to be used in the event that a halting of the simulator occurs or a sequence of operator actions causes a deviation from the scenario which would lead to inconsistencies with other data or failure to meet an objective. At the discretion of the Lead Drill Controller in the simulator, drill control will be transitioned from using live simulator data to using simulator messages in conjunction with strip charts and data handouts.

d. All scenario messages will be prefixed and suffixed with the words "THIS IS A DRILL". Controllers stationed at areas vital to maintaining generating capability should be especially aware and take extra precautions in issuing messages or giving instructions regarding the scenario events.

E. If a crisis situations should arise, controllers will contact the Lead Facility Controller in their assigned Emergency Response Facility (ERF) for advice or resolution of the problem. Lead Facility Controllers are designated for the Simulator Control Room (CR), Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), and Emergency News Center (ENC) to keep these ERFs on track. If required, they will contact the Lead Drill Controller, stationed in the simulator, to force play of some events. The Lead Drill Controller will be in overall charge of conducting the drill. All requests for modifications or holding periods must be cleared through the Lead Drill Controller. Additionally, there is a Controller assigned to the Main Control Room (MCR) to ensure that there is no impact to normal operations caused by the exercise.

F. Hypothesized initiating events are presented to players in a variety of ways: live simulator data; computer screens or printouts; written or verbal messages given to players; strip charts; telephone calls from controllers to players. The Lead Drill Controller has the authority to determine the time sequence of these initiating events to ensure an orderly flow of exercise events. All other actions during the exercise will occur through a free-play response as the players respond to the initiating events. The operational data provided in this scenario manual was generated by the simulator during a dry-run. Variation of operator action is possible which would cause some deviation of the data. This will be allowed as long as it does not cause an inconsistency with other data or failure to meet an objective.

G. As the initiating events are provided to the players, they will determine the nature of the emergency and the implementation of the appropriate emergency response procedures. These procedures are expected to include a determination of the emergency classification in accordance with NUREG-0654, FEMA-REP-1, Revision 1. Players are expected to perform all actions, unless

simulation is specified. Players should make sure evaluators are aware of all actions performed or simulated to ensure proper credit is given.

H. The hypothesized emergency will continue to develop based on data and information provided to the control room and TSC personnel. As the situation develops, information will be forwarded to appropriate players for the determination of actions to be taken in response to the hypothesized emergency. Where information would normally be confirmed via an independent source (such as National Weather Service for weather data), the confirmation data will be simulated. If a conflict exists between the hypothesized data and the actual data, the hypothesized data will be utilized.

I. Certain inconsistencies (such as plume width, release duration, technical reason for the simulated release, etc.) may be intentional and required to provide a drill basis which challenges the player's capabilities to the maximum extent feasible in a limited time frame. If an inconsistency is known or determined to be intentional, then the player will note the inconsistency and ignore it. The Lead Facility Controllers will have the authority to resolve or explain any inconsistencies or problems that may occur during the exercise.

J. With the exception of the already cited and potential inconsistencies, the internal operations of the ERFs will be identical with their intended operation in a real emergency.

III. EVALUATING EXERCISE PERFORMANCE

A. Evaluation of exercise performance is necessary to ensure effectiveness of the critique. Players' actions are evaluated against a specific list of objectives which correspond to the various emergency response procedures used. These specific objectives (handed to controllers in checklist format) relate directly to the overall exercise objectives given in Section 2.1. Satisfaction of individual objectives will mean satisfaction of the main objectives. Objectives which are not satisfied will be discussed in the post exercise critique.

IV. GENERAL GUIDANCE FOR THE CONDUCT OF THE EXERCISE

1. Simulating Emergency Actions

   a. Since exercises are intended to demonstrate actual capabilities as realistically as possible, participants should act as they would during a real emergency. Wherever possible, actions should be carried out. Only when it is not feasible to perform an action should it be simulated. Any orders given that for any reason cannot or should not actually be performed should begin with the word "Simulate". For example, the order to put out a fire that is being hypothesized would state: "Simulate discharging the fire extinguisher." Where such actions are being taken,

it is suggested that participants inform any observers in the area of what action really would be taken had the emergency been real.

b. Radiation Work Permits (RWPs) have not been issued for the conduct of the Emergency Response Exercise. If scenario events direct players to areas that are actually RWP controlled due to high radiation, surface contamination, or airborne radioactivity, players will simulate the activities they would have performed without actually entering the RWP controlled area even if they are authorized on the RWP for some other duty.

2. Avoiding Violation of Laws

a. Violation of laws is not justifiable during a drill or exercise. To implement this guideline, the following actions must be taken:

(1) All evaluators and potential exercise participants must be specifically informed of the need to avoid intentional violation of all federal, state, and local laws, regulations, ordinances, statutes, and other legal restrictions. The orders of all police, sheriffs, or other authorities shall be followed as would normally be the case.

(2) Exercise participants shall not direct illegal actions to be taken by other exercise participants or members of the general public.

(3) Exercise participants shall not take illegal actions when being called out to participate in a exercise. Specifically, local traffic laws such as speed laws shall be observed.

3. Avoiding Personnel and Property Endangerment

a. Participants and evaluators are instructed to avoid endangering property (public or private), other personnel responding to the exercise, members of the general public, animals, and the environment.

4. Actions to Minimize Public Endangerment

a. It is not the intent, nor is it desirable or feasible, to effectively train or test the public response during the conduct of radiological emergency exercises. Public inconvenience is to be minimized.

b. The actions of federal, state, and county agencies and nuclear power plant operators receive continuous public notice and scrutiny; therefore, the conduct of a drill could arouse public concern that an actual emergency is occurring. It is important that conversations which can be monitored by the public (radio, loudspeakers, etc) be prefaced and concluded with the words, "This is a drill; this is a drill."

5. Maintaining Emergency Readiness

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

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

   c. If an emergency occurs during the exercise requiring the actions of participants, then the exercise will be suspended or terminated. All messages about real events must be clearly identified as such. For example, precede a real message with: "This is NOT, repeat, NOT a drill" message.

6. Lunches will be provided by PECO; however, there are no scheduled lunch breaks in the drill. Players and controllers may be relieved for lunch as time permits. Emergency team leaders should decide when team members may take a lunch break.

V. EMERGENCY RESPONSE IMPLEMENTATION AND OPERATIONS

1. Initial Notification

   a. Initial notification will be made in accordance with the appropriate Emergency Plan procedures.

2. Plant Operations

   a. It should be emphasized that the exercise will in no way interrupt normal plant operations, production, and safety. Control Room personnel will participate from the simulator, where they can respond without affecting plant operations. The response of plant operators shall be simulated when taking action to combat the emergency which might affect plant operations. A controller will narrate the initiating events and the postulated plant response directly to the players who will then employ the appropriate actions per emergency procedures.

3. Environmental Monitoring Teams

   a. PECO will dispatch field environmental monitoring teams. The controllers will provide hypothesized field data which will be used to determine radiation readings at pre-selected locations. However, these

teams will be equipped with the necessary equipment to enable them to determine actual area gamma dose rates and airborne radioiodine concentrations.

4. Public Notification

   a. Actual emergency message transmissions via the Emergency Broadcast System (EBS) will not occur.

5. Public Information

   a. Press releases to the general public and news media will be prepared but release to the public will be simulated. The simulated press releases will contain all necessary information on the current status of the exercise but will not be transmitted.

6. Communications

   a. Communications between the exercise participants will occur in accordance with the appropriate Emergency Plan procedures. Should any primary communications path become inoperative or prove inadequate, backup means of communication will be utilized as appropriate.

VI. CLOSEOUT OF THE EXERCISE

A. The exercise will be terminated by the Lead Drill Controller when the scenario is completed and all objectives are satisfied.

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SECTION 3.2
CONTROLLER/EVALUATOR INSTRUCTIONS

A. Personnel are assigned as controllers or evaluators at all key functional areas to monitor and control the exercise. In addition, they will accompany radiological monitoring teams, plant health physics personnel, and maintenance repair/rescue teams.

B. Controllers have different types of data for the players. For example, HP Controllers in the OSC have radiological data and Damage Repair Controllers have system status. Ensure that you have the proper data for the player prior to leaving the facility. If a player asks if you are a controller, tell him/her what type of data you can present.

C. The Lead Facility Controllers will be coordinated by the Lead Drill Controller located at the simulator. He/she will be responsible for the overall conduct of the exercise. If unable to reach the Simulator Control Room, contact the Lead Facility Controller in the Technical Support Center.

D. Some players may insist that certain parts of the scenario are unrealistic. The controllers have the authority, with approval from the Lead Facility Controllers, to clarify any questions regarding scenario content. In some cases, it may be necessary to exercise "controller prerogative" and say, "This is due to drill requirements" to preserve the continuity and objectives of the exercise.

E. Prior to commencement, all telecommunications should be tested to ensure satisfactory communications between the Lead Facility Controllers and all other controllers.

F. All controllers and evaluators should synchronize their watches to ensure that messages are delivered at the proper time.

G. Simulated equipment failures not covered in Section 4.0 of this manual will be developed by the Lead Facility Controllers and discussed with the Lead Drill Controller.

H. Be sure to have a hard hat and safety glasses with you when entering the plant.

I. The first time a chemistry sample is requested, give the current time sample data to the players 30 minutes after the request. For example, a sample is requested at 1:00 p.m. At 1:30 p.m., give the sample results for the 1:30 p.m. time period. Subsequent sample data should be provided 30 minutes after a sample team becomes available.

J. Do not allow observers to interfere with the performance of the players. If possible, correct the situation or identify any distractions to the Lead Facility Controller.

K. Return all scenario binders following the exercise.

I. **DOs**

A. Attend controller briefing and walkthrough.

B. Know the overall Controller's Organization.

C. Remember that there are two time designations: a scenario time and a clock time.

D. Identify the players by name and function.

E. Identify yourself at all times to players. Wear name tags provided.

F. Identify the phone (or radio for field teams) you will use to maintain communications with Lead Facility Controllers.

G. Position yourself to maximize your effectiveness in issuing messages and observing the players.

H. Be sure you understand the scenario.

I. Keep the play on schedule by checking your scenario.

J. Issue the message on time. Make sure the players understand it.

K. Remember to call your Lead Facility Controller to report on status of players' actions if off schedule or if in doubt about what to do. Call for advice if players depart significantly from the scenario script which will create a major delay. If necessary, intervene with player action and put players back on scenario track.

L. Allow the players reasonable flexibility to perform their functions and demonstrate their skill, knowledge, and initiative.

M. Review evaluation forms prior to the exercise so you know what to look for. Complete all forms according to the instructions.

N. Take detailed notes on the progress of the exercise and players' actions, strengths, weaknesses, and areas for improvements.

O. Attend the facility debrief/critique to provide your comments and recommendations.

P. If a real emergency occurs, suspend all activities and communications related to the exercise, and notify the Lead Facility Controller immediately.

Q. Controllers and evaluators do not have to follow the radiation exposure control practices appropriate for the simulated radiation levels. However, the players must follow the normal station radiation protection rules.

II. **DON'Ts**

A. Don't leave your post at key times.

B. Don't forget to call the Lead Facility Controllers to seek advice or help as necessary.

C. Don't forget that this is an exercise intended to demonstrate the capability of the emergency response organization. Prompting is NOT permitted.

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INITIAL CONDITIONS

Unit 1 - 100% power. All Unit 1 systems and equipment are operable with the following exceptions:

Recirc Sample Valves (HV-43-1F019&20) are open for routine chemistry sampling and analysis.

The A SBGT train is lined up for purging the drywell of oxygen, which should be completed later today (3hrs. of a 90 hr. limit per LCO 3.6.1.8). The B SBGT train is blocked OOS.

Backup Diesel Driven Fire Pump (10P402) is OOS due to a failed Battery Inspection Routine Test (RT-6-022-910-0). Scheduled for return to service at 20:00 today.

1B CRD is OOS due to pump motor bearing replacement.

Drywell Spray Valve HV-051-1F016B is blocked out due to high motor amps. New motor is being installed.

Initial chemistry offgas data indicates pin defects (i.e. 130,000 uci/sec). As a result, control rods 58-23, 02-23, 02-43 and 58-43 have been fully inserted to suppress power.

Diesel fuel delivery for D14 has arrived onsite and samples are being taken outside the TSC.

Unit 2 - Mini-outage is in progress.

Weather Forecast

Cloudy today with a 30% chance of showers. Highs today will be in the low to mid 60s. The skies will become partly cloudy tonight with lows in the mid 40s. The high tommorrow will be 65 to 68 degrees. Probability of precipitation is 30% tonight decreasing to 10% by tomorrow evening.

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SCENARIO ABSTRACT

At 15:00, The drill commences.

At 15:20, The control room receives an alarm indicative of an increasing offgas rad condition. Chemistry is contacted to take samples.

At 16:00, As diesel fuel is being delivered, the delivery truck sideswipes an unoccupied parked forklift, which punctures the fuel truck's tank. After the driver and security escort evacuate the area, the fuel ignites setting off an explosion when the forklift's propane tank is engulfed by the flames **(EVENT 1)**. The Shift Manager declares an:

******* UNUSUAL EVENT *******
ERP-101-1, HAZARDS TO STATION OPERATION

Explosion within or near site boundary.

At 16:30, Offsite assistance has been requested to control the fire. Health Physics is responding to assist in decontamination operations as a result of strewn radioactive trash from the explosion. Nauseating fumes from the fire enter the reactor enclosure which is reported by an equipment operator to the control room. The Emergency Director declares an:

******* ALERT *******
ERP-101-1, HAZARDS TO STATION OPERATION

Entry of toxic, flammable gases OR chlorine into power block with subsequent habitability problem. Indicated by: Visual observation, direct measurement OR notification received by Control Room

(Note: At this point the OSC,TSC & ENC are activated; the EOF is being staffed)

At 16:40, EMTs respond to an equipment operator who has been overcome by the fumes in the reactor enclosure **(EVENT 2)**. The operator recovers after being removed from the area and given oxygen. No offsite medical assistance is needed.

At 18:00, The MSIVs isolate on a spurious signal **(EVENT 3)**. When the Reactor Protection System (RPS) automatically scrams the plant, an ATWS occurs (4 rods out) **(EVENT 4)**. As a result of the pressure transient, a stress fracture on the 1B Main Steam Line ruptures inside containment **(EVENT 5)**. Drywell pressure increases. When the reactor operator attempts rod insertions a Rod Drive Control System (RDCS) failure occurs preventing the insertion of the rods **(EVENT 6)**. I&C is dispatched to the Aux. Equipment Room to investigate.

At 18:05, When the LOCA setpoint (high drywell pressure/low reactor pressure) is met, the 1A RHR pump auto starts and trips on motor overcurrent **(EVENT 7)**. In order to lower drywell pressure, maintenance is dispatched to make rapid repairs to either the 1A RHR pump breaker or drywell spray valve HV-051-1F016B. Attempts to cross connect RHR loops via the HV-051-182A valve fail when the key breaks off in the keylock with the valve seized in the closed position.

At 18:15, An offsite iodine release is detected **(EVENT 8)**. This is a result of damage to the "A" SGTS filters due to the pressure surge occuring from the main steam line rupture before the purge valves are able to close. The control room receives indications of a radioactive release within the reactor enclosure caused by a stress fracture at the upstream weld connection to suppression pool purge exhaust valve HV-057-104.

At 18:30, The Emergency Director declares a:

******* SITE AREA EMERGENCY *******
ERP-101-6, RADIOACTIVE EFFLUENT RELEASE

Calculated offsite dose exceeds 500mR child thyroid CDE (Committed Dose Equivalent)
OR
Measured air concentration of 6.5 E-8 uCi/CC iodine

At 19:00, In the process of undergoing decontamination in the radwaste area, an upset radwaste contractor enters the reactor enclosure and begins to damage equipment and instrumentation **(EVENT 9)**. The control room receives indication of level transmitter failures, followed by security's call concerning this radwaste personnel's entry into the plant.

At 19:55, The RWCU suction header ruptures at the vessel bottom head **(EVENT 10)**. The release of fission product materials results in increasing drywell rad conditions.

At 20:00, The Emergency Director declares a:

******* GENERAL EMERGENCY *******
ERP-101-8, DAMAGE TO FUEL

D/W Rad > 1E+04 R/hr with containment intact.

The Emergency Response Manager will recommend the following PAR to the state:

PROTECTIVE ACTION RECOMMENDATION
Evacuate 2 mile radius, evacuate affected sector(s) and 2 adjacent sectors for 2-5 miles.

At 20:05, The reactor operator has successfully driven all control rods full in as a result of I&Cs repairs. Additionally, a decrease in drywell pressure was effected from Damage Repair's success in opening the 1B drywell spray valve.

The radiological release path is: 3% fuel damage occurred as a result of the pressure transient caused by the MSIV closure and the ATWS. Radiological transport occurred from the reactor vessel to the drywell via the ruptured main steam line and to the reactor enclosure via the suppression pool purge valve weld break. A substantial iodine release to the environment occurred when the "A" SGTS filters sustained pressure transient damage. Subsequent high drywell rad conditions resulted from the RWCU suction header break requiring the declaration of a General Emergency.

At 22:00, The drill is terminated.

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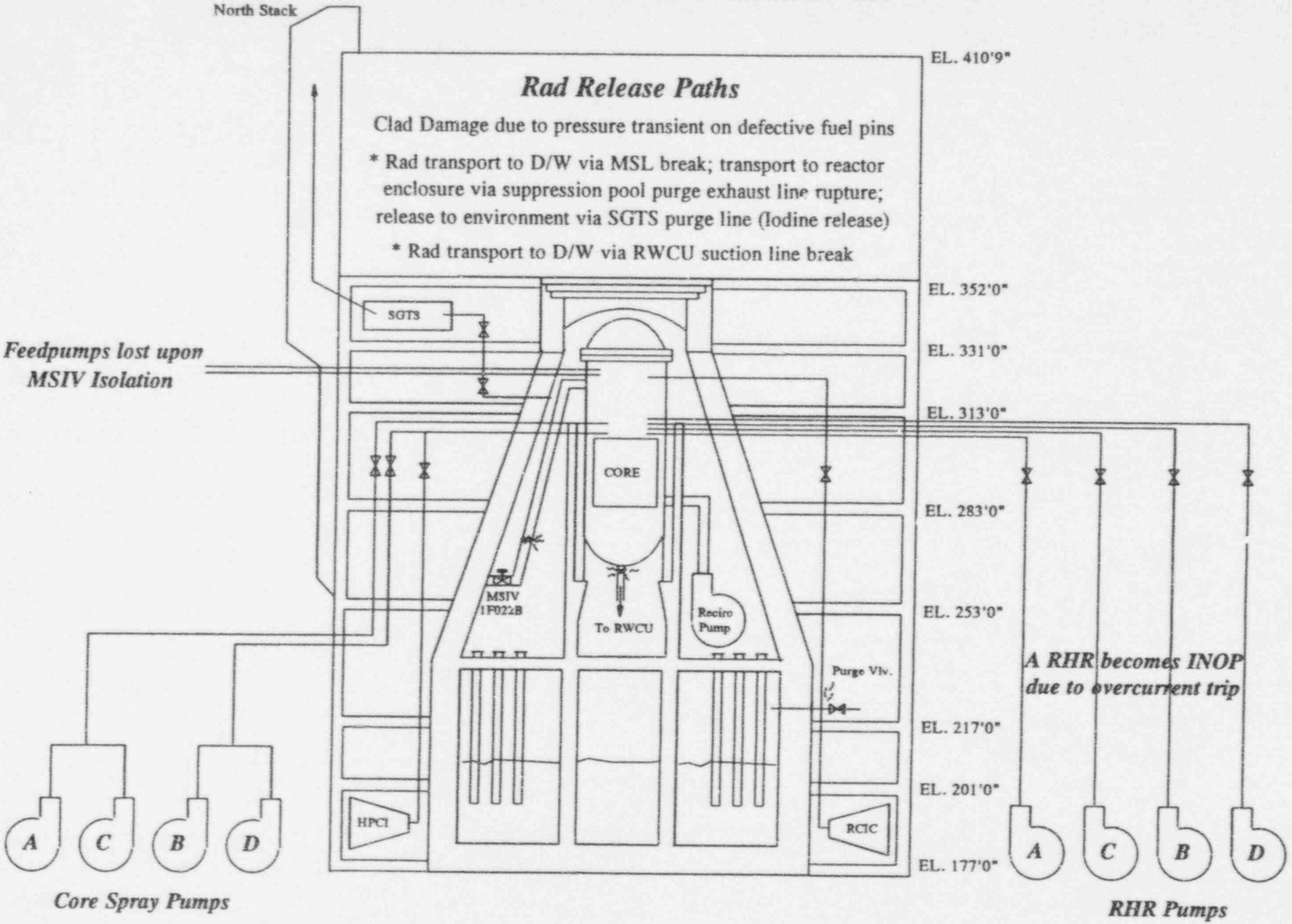

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Activity Diagram

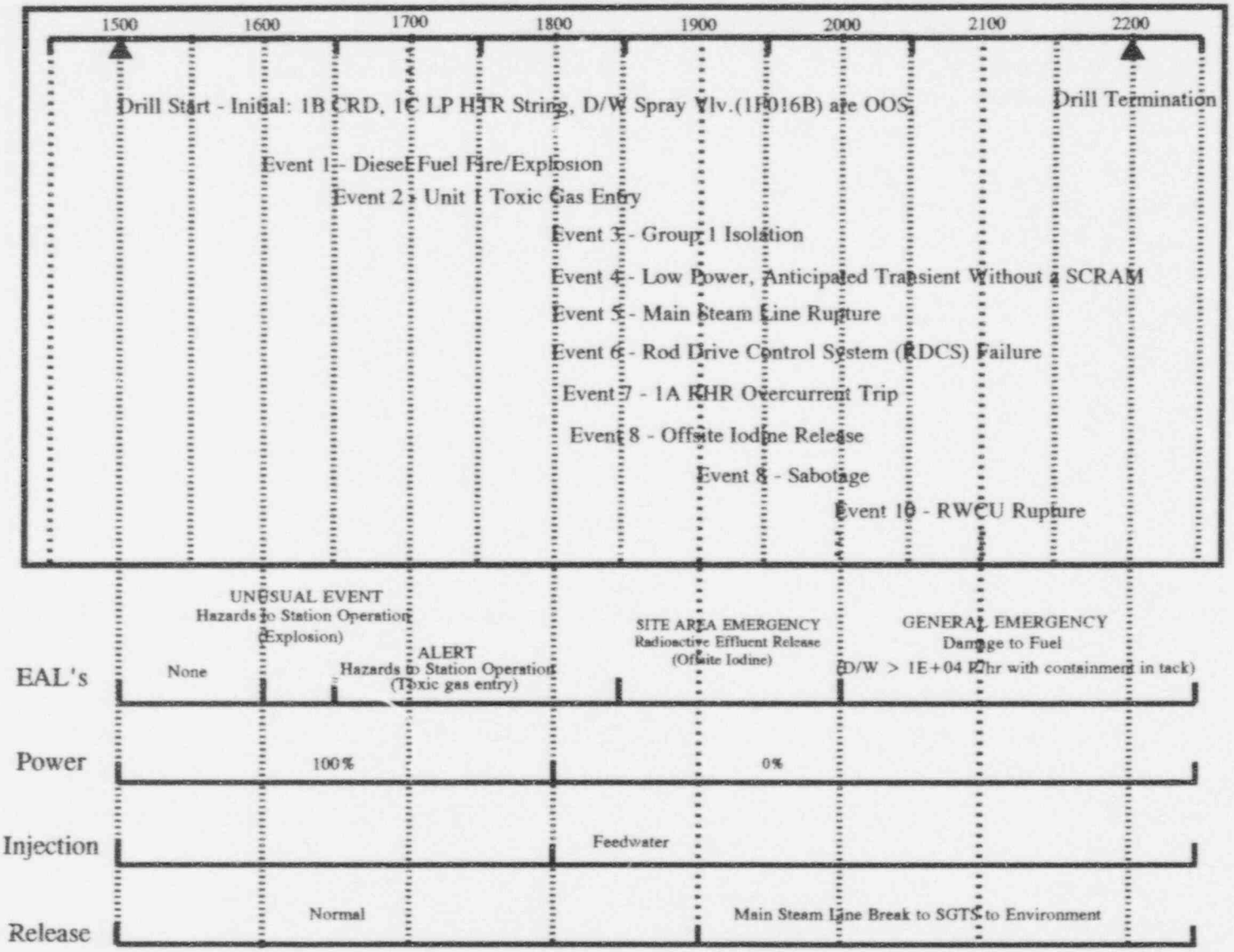


Figure 4.3-1

DETAILED TIMELINE

REAL TIME	DRILL TIME	NUM	T	MESSAGE SUMMARY	RECEIVER/LOCATION	EXPECTED ACTIONS
15:00	00:00	1		Drill commencement PA announcement	Shift Manager/Control Room	Direct the control room operator to make PA announcement
15:20	00:20	2	S	Control room receives offgas high rad alarm.	Reactor Operator/Control Room	Control room: Refer to ARC-MCR-109-G2: 1. Notify Health Physics 2. Refer to ON-102, Air Ejector Discharge or Main Steam Line High Radiation. 3. Verify compliance with ODCM 3.3.2 pertaining to gaseous effluents. 4. Refer to ERP-101, Damage to Fuel. 5. Request chemistry to obtain isotopic offgas analysis per ST-5-070-885-1 and isotopic reactor coolant analysis per ST-5-041-885-1.
15:40	00:40	3		Chemistry obtains isotopic analysis indicating fuel pin defects.	Chemistry Technician/TE EL 200 Area 07, sample pnl. 10S160	Chem Tech calls control room with results. Chem Tech will calculate new SJAE high rad alarm setpoint per ST-5-026-594-1 and reset in Aux. Equipt. Rm. (new setpt. = 6563 mR/hr.)
15:50	00:50	4		Chemistry obtains reactor isotopic analysis related to high offgas rad condition.	Chemistry Technician /RE EL 253, Area 15, sample sink #10S292	Chem Tech calls control room with results. Control room notifies reactor engineering to perform RE-C-O3O.
16:00	01:00	5		Fire/Explosion reported outside of radwaste.	Operator/Control Room	Control room: Dispatches Fire Brigade and enters SE-8 FIRE. Unusual Event declared per ERP-101.
16:05	01:05	6	S	SGTS purge valves fail to isolate.	Reactor Operator/SGTS	Control room dispatches equipment operator to investigate.
16:10	01:10	7		Fire Brigade fights the fire with HP assistance.	Fire Brigade/Health Physics Technicians/Outside Radwaste Rollup Doors	Fire Brigade: 1) Response notification from each brigade member. 2) Fire brigade leader demonstrates command and control. 3) Correct fire fighting tactics and extinguishing agents used. 4) Communications with MCR and between fire brigade maintained. 5) Brigade responds in protective clothing. 6) Pre-fire plan brought to fire. 7) Proper equipment utilized. Health Physics: 1) Survey all yard areas. 2) Pick up and bag all R/M. 3) Removal of any turnout gear should only be at HPs direction.
16:15	01:15	8		HP notices a firefighter who is unaware that he is contaminating himself.	Health Physics Technician/Outside Radwaste Rollup Doors	HP prevents firefighter from further contaminating himself and proceeds to monitor and find contaminated areas. Contaminated individual should be taken to Radwaste Decon Room for decon.
16:15	01:15	9	C	UNUSUAL EVENT contingency	Shift Manager/Control Room	Declare an UNUSUAL EVENT in accordance with ERP-101-1, HAZARDS TO

DETAILED TIMELINE

REAL TIME	DRILL TIME	NUM	T	MESSAGE SUMMARY	RECEIVER/LOCATION	EXPECTED ACTIONS
						STATION OPERATION
16:30	01:30	10	C	Offsite fire assistance contingency message.	Fire Brigade Leader/Die el Fuel Fire	Fire Brigade Leader will contact the control room with this information.
16:30	01:30	11		Toxic Gas entry into Unit 1 reactor enclosure reported.	Reactor Operator/Control Room	Contact EMT to respond to distressed operator. Declare an ALERT in accorda ith EP-101-1, Hazards to Station Operation.
16:40	01:40	12		Equipment operator overcome by toxic gas fumes is administered to by EMT.	Emergency Medical Technician/RE Area 11, EL 253	EMT administers first aid: (1) Remove the operator from th a. (2) Place in a lateral recumbent p ion. (3) Administer high concentrations of oxygen. (4) Inform control room of rescue. (5) Consider respiratory protection as necessary.
16:45	01:45	13	C	ALERT contingency message	Shift Supervisor/Control Room	Declare an ALERT in accordance with ERP-101-1, Hazards to Station Operation.
18:00	03:00	14	S	Control room receives unit 1 MSIV closure annunciations.	Reactor Operator/Control Room	SCRAM actions taken by control room crew. I&C dispatched to investigate MSIV closure.
18:01	03:01	15		I&C is performing an ST when a Group 1 isolation occurs.	I&C Technician /Aux. Equipt. Rm., 10C609 Panel	I&C troubleshoots, resets the logic, and informs control room.
18:01	03:01	16	S	Control room receives indication of rapid drywell pressure increase.	Reactor Operator/Control Room	Control Room enters OT-101 High Drywell Pressure. When D/W pressure reaches 24#, Operators will initiate a T-112 Emergency Blowdown.
18:02	03:02	17	S	Control room receives RDCS INOP annunciator.	Reactor Operator/Control room	Dispatch an equipment operator and I&C to Aux. Equipt. Rm. to reset RDCS for rod insertion.
18:03	03:03	18	S	Hi rad in the RE alarms.	Reactor Operator/Control Room	Identify to the TSC that there is Hi Rad in the RE.
18:03	03:03	19	S	High WRAM Rad Alarms.	Reactor Operator/Control Room	Notify the TSC of the Hi Rad conditions indicated by the WRAM.
18:03	03:03	20	S	High North Stack Exhaust Rad alarms.	Reactor Operator/Control Room	Control room notifies the TSC of the Hi Rad conditions in the North Stack exhaust. The control room crew will take action to place the B SBGT train in service.
18:05	03:05	21	S	The control room receives indication of 1A RHR Pump Trip.	Reactor Operator/Control room	Dispatch EO to investigate, followed by maintenance.

DETAILED TIMELINE

REAL TIME	DRILL TIME	NUM	T	MESSAGE SUMMARY	RECEIVER/LOCATION	EXPECTED ACTIONS
18:10	03:10	22		EO locates but cannot manually open the drywell spray valve HV-51-1F016B.	Equipment Operator/RE Area 16, EL 283	EO reports his findings to the control room.
18:15	03:15	23	C	SITE AREA EMERGENCY conditions have been reached.	Field Survey Group Leader/EOF	Field Survey Group Leader contacts the Dose Assessment Team Leader with calculated results.
18:15	03:15	24		1A RHR Pump breaker is damaged beyond repair from overcurrent condition.	Equipment Operator/ Maintenance /1A RHR Pump Breaker Cubicle	EO informs Control Room of overcurrent trip that cannot be reset. Maintenance attempts to find replacement breaker. Maintenance communicates findings to the OSC.
18:15	03:15	25		Attempt to cross connect 1B RHR for containment spray fails.	Equipment Operator/RE EL 240, Area 16	Equipment operator contacts the control room and explains the event.
18:15	03:15	26		RDCS fails to reset. I&C troubleshoots.	Equipment Operator/I&C Technician /Aux. Equipt. Rm., RPIS Cabinet 10C615	I&C will replace the transponder card for HCU 30-07, inspect branch junction module, RDCS and RPIS terminal cabinets and find a loose cable.
18:20	03:20	27		Maintenance work is being performed on mockup of drywell spray valve HV-051-1F016B.	Maintenance/Maintenance Shop	Inform the TSC Maintenance Team Leader that this task was successful. Control room will be able to spray the drywell.
18:45	03:45	28	C	SITE AREA EMERGENCY Contingency.	Emergency Director/TSC	Declare a Site Area Emergency in accordance with ERP-101-6, RADIOACTIVE EFFLUENT RELEASE.
18:50	03:50	29	C	Alternate Site Evacuation Message.	Shift Manager/Control Room	Deliver alternate site evacuation message over plant PA.
19:00	04:00	30		Security receives message of a radwaste contractor, exhibiting aberrant behavior, entering the reactor enclosure.	Security /Control Room	Security informs control room and then proceeds to search for and apprehend the radwaste contractor, informing the control room of his capture.
19:03	04:03	31	S	The control room receives indication of failed narrow range level indication.	Operator/Control Room	Dispatch an EO to investigate.
19:20	04:20	32		NRC response team preparation for arrival to the EOF.	AERM/EOF	Inform the ERM of the NRC expectations and coordinate with EOF personnel.

DETAILED TIMELINE

REAL TIME	DRILL TIME	NUM	T	MESSAGE SUMMARY	RECEIVER/LOCATION	EXPECTED ACTIONS
20:00	05:00	33		GENERAL EMERGENCY conditions have been met.	Controller Info./Various	Emergency Director will declare a General Emergency.
20:15	05:15	34	C	GENERAL EMERGENCY Contingency Message	Emergency Director/Technical Support Center	Declare a GENERAL EMERGENCY in accordance with ERP-101-8.
20:17	05:17	35	C	PAR contingency.	Emergency Response Manager/EOF	Make this or a more appropriate PAR based on conditions.
20:20	05:20	36		Request for supplies.	Emergency Director/EOF	ERM will place request with the Logistics Support Coordinator.
20:50	05:50	37		Identification that ERO response would continue, but play will soon be terminated due to drill activities.	ERM/EOF	The ERM should inform the governmental agencies and the ERO of the contents of this message.
21:00	06:00	38		Drill termination message	Shift Manager / Emergency Director/Control Room / Technical Support Center	1) Make drill termination message. 2) Restore facilities, equipment, and supplies to a state of readiness. 3) Conduct facility critiques.

LIMERICK GENERATING STATION
EMERGENCY PREPAREDNESS ANNUAL EXERCISE
SCENARIO L53

EVENTS

1	16:00	Diesel Fuel Fire/Explosion
2	16:30	Unit 1 Toxic Gas Entry
3	18:00	Group 1 Isolation
4	18:00	Low Power, Anticipated Transient Without a SCRAM (ATWS)
5	18:00	Main Steam Line Rupture
6	18:00	Rod Drive Control System (RDCS) Failure
7	18:05	1A RHR Pump Overcurrent Trip
8	18:15	Offsite Iodine Release
9	19:00	Sabotage
10	19:55	RWCU Rupture

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 1

ACTUAL TIME: 16:00
SCENARIO TIME: 01:00

TITLE: Diesel Fuel Fire/Explosion
LOCATION: Outside Radwaste Roll-up Doors

RELATED MESSAGES: 5, 7, 8, 9, 10
ATTACHMENTS: Fire Area Map and Personnel Contamination Form

INITIATING CONDITIONS:

As diesel fuel is being delivered, the delivery truck sideswipes an unoccupied parked forklift which punctures the fuel truck's tank. After the driver and security escort evacuate the area, the fuel ignites setting off an explosion when the forklift's propane tank is engulfed by the flames.

SYMPTOMS:

The main control room receives the call from security about the accident and fire. While identifying the fire the explosion occurs.

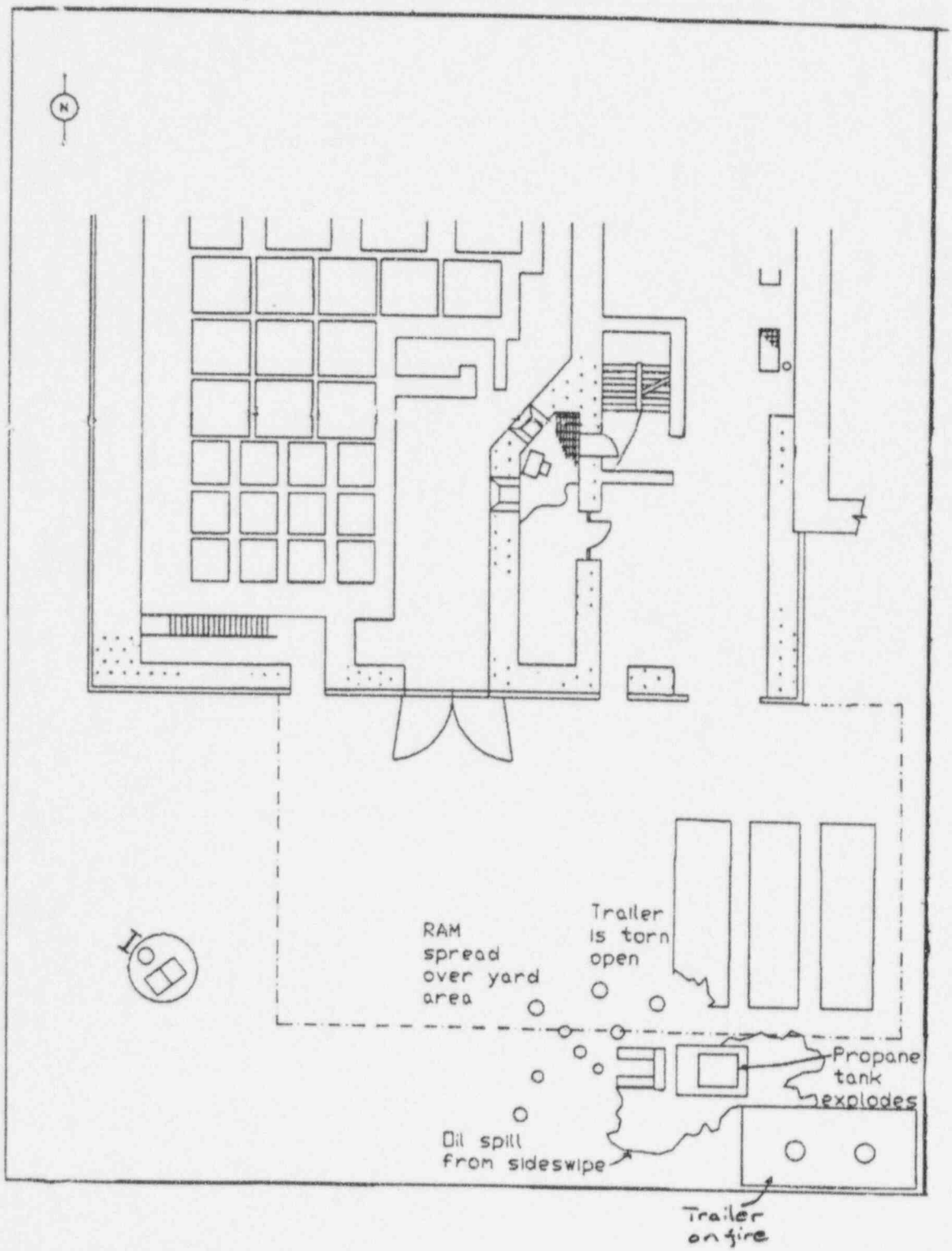
RESTORATION:

The control room enters SE-8. The fire brigade responds, but determines shortly after arrival on the scene that offsite response is needed to contain the spread of the blaze. Linfield Fire company responds. The explosion has strewn radioactive radwaste trash which involves deconning personnel and the area.

SCENARIO CONCERNS:

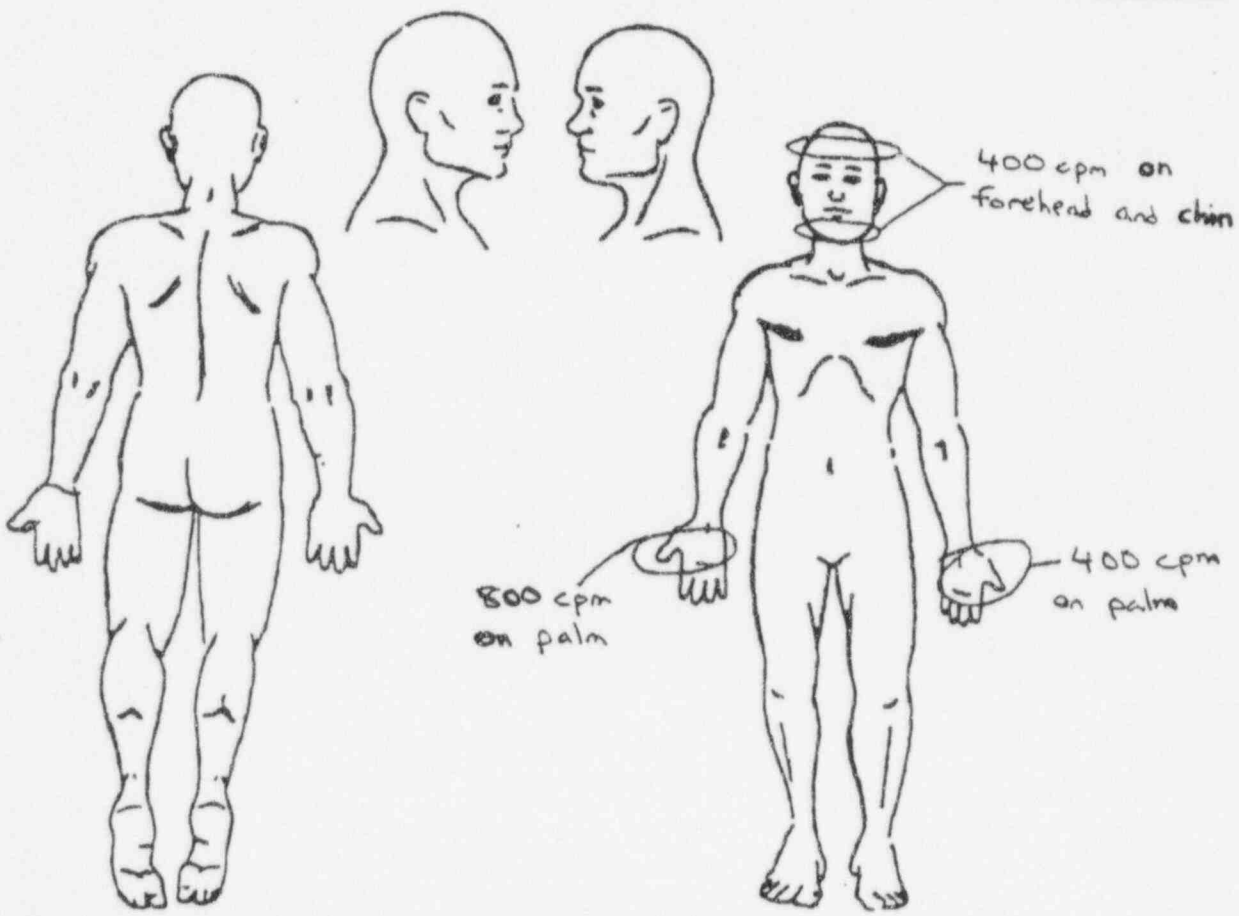
Coordination between security, on site fire brigade, health physics, and incoming fire truck personnel.
This event leads to the declaration of an Unusual Event.

FIRE AREA MAP



PERSONNEL CONTAMINATION FORM

Patient Name	Date/Time
Survey Number	Surveyed By:
Survey Instrument Used	Serial Number



Contaminated Body Area - (Describe or Outline on Body)

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 2

ACTUAL TIME: 16:30
SCENARIO TIME: 01:30

TITLE: Unit 1 Toxic Gas Entry
LOCATION: RE EL 253 Area 15

RELATED MESSAGES: 11, 12, 13
ATTACHMENTS: None

INITIATING CONDITIONS:

The fire has ignited some materials that are releasing carbon monoxide fumes and this is entering unit 1 through the south side RE supply fans.

SYMPTOMS:

An EO making rounds pages the control room to inform them of fumes he has encountered in the reactor enclosure, which have given him a headache and dizziness. He explains that the fumes appear to be coming from the diesel fire and then he passes out.

RESTORATION:

The EO fully recovers when administered oxygen by the EMT dispatched to find him. No offsite medical assistance is needed. There is heavy black smoke in the area at the time the EMT arrives on the scene creating a habitability problem. An hour later the area is habitable once again due to the fire being extinguished and fresh air replacement via HVAC.

SCENARIO CONCERNS:

Fumes do NOT enter the control room which has HVAC supply intakes on the opposite side of the power block. This event leads to the declaration of an ALERT.

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 3

ACTUAL TIME: 18:00
SCENARIO TIME: 03:00

TITLE: Group 1 Isolation
LOCATION: Aux. Equipt. Room., Panel 10C609

RELATED MESSAGES: 14, 15
ATTACHMENTS: None

INITIATING CONDITIONS:

I&C is performing ST-2-042-657-1 testing reactor level 1&2 logic. Following a TRIP signal given per procedure to LS-42-1N684 and prior to the isolation signal being reset, a spurious signal is received via PIS-01-1N675B in panel 10C611 for low condenser vacuum, resulting in a Group 1 isolation. The spurious signal was caused by the TRIP unit not being completely seated in the card file.

SYMPTOMS:

The control room receives the following annunciatons on panel 114 ISOL: DIV 1,2,3,4 NSSSS MSIV INITIATED. All MSIVs indicate closed position on the 10C601 panel. Reactor pressure spikes above the SCRAM setpoint.

RESTORATION:

I&C Technicians are able to use ST-2 to return the "A" logic to normal condition. Reseating the TRIP unit enables the "B" logic to be reset. Repairs can be completed at any time.

SCENARIO CONCERNS:

The pressure transient caused by the isolation breaks existing defected fuel pins which becomes the source for the high iodine release and subsequent high drywell rad condition when the RWCU line breaks.

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 4

ACTUAL TIME: 18:00
SCENARIO TIME: 03:00

TITLE: Low Power, Anticipated Transient Without a SCRAM
LOCATION: Control Room

RELATED MESSAGES:
ATTACHMENTS: None

INITIATING CONDITIONS:

When the MSIVs isolate, the reactor high pressure setpoint signal for a SCRAM is met, however not all rods go in as a result of a bad transponder card and loose cable.

SYMPTOMS:

When the SCRAM is initiated all but four control rods go full in. The four rods (30-07, 16-34, 39-06, 10-38).

RESTORATION:

An equipment operator is dispatched to the Aux. Equipt. Rm. to reset the Rod Drive Control System (RDCS). When RDCS fails to reset, I&C troubleshoots and eventually discovers a defective transponder card and loose cable. The reactor operator will successfully drive the rods to full in position after I&C completes repairs.

SCENARIO CONCERNS:

None - Although the control room will be seeking action to insert the rods, reactor power will be below 4%, a condition that will not require immediate mitigating action.

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 5

ACTUAL TIME: 18:00
SCENARIO TIME: 03:00

TITLE: Main Steam Line Rupture
LOCATION: Drywell

RELATED MESSAGES: 16
ATTACHMENTS: None

INITIATING CONDITIONS:

Rupture of Main Steam Line "B" upstream of inboard MSIV HV-1FO22B occurs as a result of existing erosion/corrosion and pressure transient from the MSIV isolation.

SYMPTOMS:

Increasing drywell pressure leading to eventual LOCA signal. Suppression pool temperature increases.

RESTORATION:

The break is unisolable.
The control room enters OT-101 High Drywell Pressure.

SCENARIO CONCERNS:

An offsite Iodine release occurs as a result of this event from excessive steam pressure damaging the SGTS filters with the purge valves open.

In addition, the upstream weld connection to Suppression Pool Purge Exhaust Valve HV-057-104 breaks releasing rad into the reactor enclosure, area 12, el. 217.

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 6

ACTUAL TIME: 18:00
SCENARIO TIME: 03:00

TITLE: Rod Drive Control System (RDCS) Failure
LOCATION: CE EL. 289, Aux. Equipt. Rm.

RELATED MESSAGES: 17, 26
ATTACHMENTS: RDCS Fault Map

INITIATING CONDITIONS:

A faulty transponder card for Hydraulic Control Unit 30-07 and loose cable in Rod Position Indication System (RPIS) exist, but does not become an evident problem until an ATWS occurs and the reactor operator attempts to insert the affected rods.

SYMPTOMS:

RDCS INOP is annunciated in the control room and four rods will not insert.

RESTORATION:

Red LED is illuminated for rod position 30-07 on RPIS Cabinet 10C615 in the Aux. Euipt. Rm.
Initial action taken to replace the defective HCU transponder card does NOT result in an RDCS reset.
Corrective action is then taken to inspect the cables for the associated Branch Junction Module, inside the RDCS Cabinet and RPIS Terminal Cabinet where a loose cable is discovered.

SCENARIO CONCERNS:

Restoration can occur at any time. A simulator controller must be contacted when the transponder card and loose cable problems are resolved in order to simulate a reset and imminent insertion of control rods.

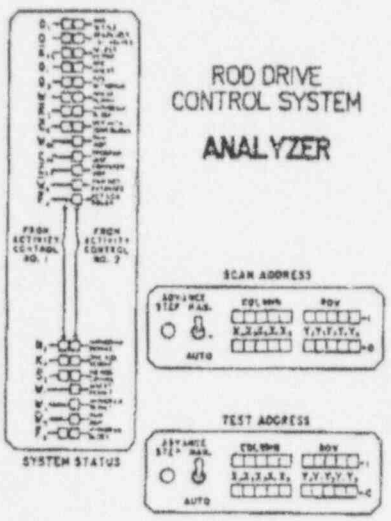
ATTACHMENT 1
Page 1 of 1

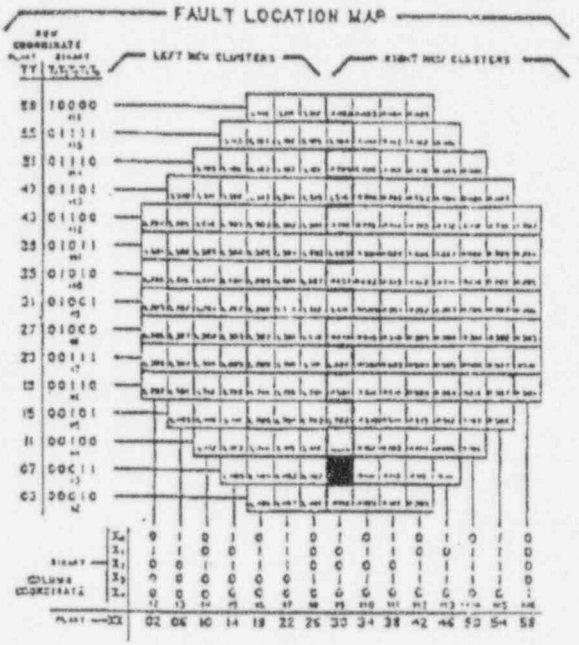
UNIT: 1 2 (circle one)

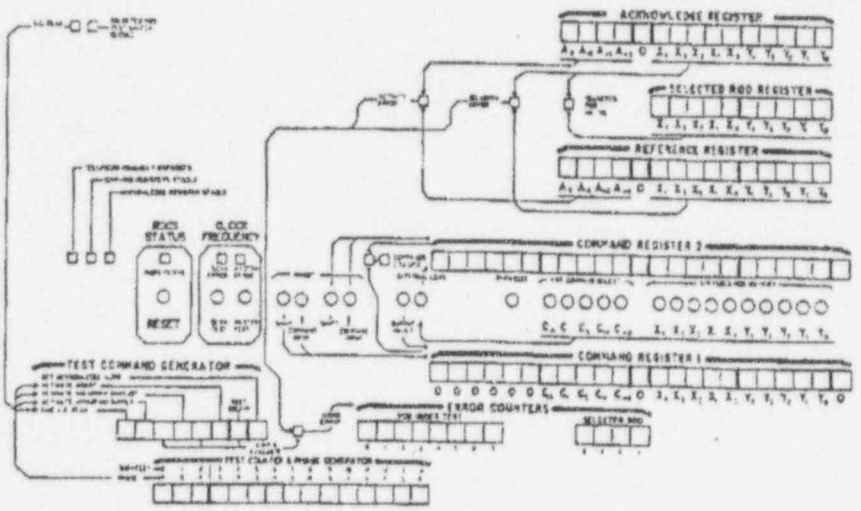
RCDS INOPERABLE AT _____/_____ Time/Date

RCDS RESET AT _____/_____ Time/Date

COMMENTS:







Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 7

ACTUAL TIME: 18:05
SCENARIO TIME: 03:05

TITLE: 1A RHR Pump Overcurrent Trip
LOCATION: RE EL 177

RELATED MESSAGES: 21, 22, 24, 25, 27
ATTACHMENTS: Breaker Panel # D11-04

INITIATING CONDITIONS:

Circuit breaker # D11-04 trips as a result of an overcurrent condition. The breaker contacts melt into the cubicle.

SYMPTOMS:

The 1A RHR pump does not auto start on a LOCA signal. Control room annunciator 1A RHR PUMP MOTOR OVERCURRENT/ TRIP on panel 113 COOL is in alarm.

RESTORATION:

Maintenance will not be able to repair/replace the breaker since the contacts have melted into the cubicle compartment preventing a rack-out.

SCENARIO CONCERNS:

The intent of this failure is to have maintenance make repairs to a mockup of OOS Drywell Spray Valve HV-057-1F016B located in the maintenance shop, which must be opened ASAP to reduce drywell pressure.

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 8

ACTUAL TIME: 18:15
SCENARIO TIME: 03:15

TITLE: Offsite Iodine Release
LOCATION: Offsite

RELATED MESSAGES: 2, 3, 4, 6, 23, 28, 29
ATTACHMENTS: Clearance for the "B" SGTS Train

INITIATING CONDITIONS:

The damaged SGTS filters releases an excessive concentration of iodine via the north stack to the environment.

SYMPTOMS:

Field survey identifies measured air concentration of 6.2E-3 uCi/cc Iodine OR dose assessment team performs dose run indicating > 5000 mR child thyroid CDE.

RESTORATION:

The "B" train of SGTS will be placed in service in order to filter any additional reactor enclosure rad.

SCENARIO CONCERNS:

This event provides the conditions for dose assessment to determine a SITE AREA EMERGENCY.
The field survey data identifies the radiological release.
A contingency might have to be supplied if the field survey teams are not in the vicinity of the high levels driving the scenario to the SITE AREA EMERGENCY.

APPRVD

PECO ENERGY COMPANY
LIMERICK GENERATING STATION

CLEARANCE

CLEARANCE NO: 95000042
DATE UPDATED: 08/07/95 CER1
PRE APPRVD :
PAGE : 01 OF 04

UNIT: LG 0 SYSTEM: 076

SECTION I

COMPONENT ID: LG 0 076 E S HS-076-0138
COMPONENT DESCR: 'B' SGTS CARB. FLTR. ISOLATION VLV. H.S. (CARBON
CLEARANCE DESCRIPTION:
ADMIN TAGOUT FOR DRILL USE ON "1B" STANDBY GAS TREATMENT FILTER

S57.1.A **DRILL USE ONLY**

PREPARED BY RICH., CARL E APPROVED BY: RICH., CARL E

SECTION II

TECH SPEC EQUIP: Y
TECH SPEC NO. : 3.6.5.3

NUMBER OF TAGS: 003
DANGER: 003
SCT : 000
INFO : 000

SECTION III

1) LOCK VALVE CHANGE REQD : Y
2) LD RELEASE REQD : N
3) INDEPENDENT VERIFICATION: Y BY:
4) INSTRUMENT REQD : N

5) EQP DRAIN REQD: N BY: N/A
6) EQP PURGE REQD: N BY: N/A
7) EQP FLUSH REQD: N BY: N/A
8) HP SYSTEM OF CONCERN: N

INSTRUMENT / DATE USED : N/A N/A
N/A N/A

APP DUR: APP MHRS:
RES DUR: RES MHRS:

REFERENCES M-076

INSTRUCTIONS ***DRILL USE ONLY***
THIS CLEARANCE NOT TO BE APPLIED FOR ANY NOT DRILL APPLICATION

	PRINTED NAME/INITIALS	DATE	TIME
TAGGING AUTHORIZED BY:		/	
		/	
APPLICATION REVIEW BY:		/	
RESTORATION/SEQ. BY:		/	
RESTORATION/AUTH. BY:		/	
REMOVAL REVIEWED BY:		/	
	N/A	/	

PECO ENERGY COMPANY
LIMERICK GENERATING STATION

CLEARANCE

CLEARANCE NO.: 95000042
LAST UPDATED : 08/07/95 CER1

COMMENTS	DATE/INITIALS

INITIAL AND DATE ALL HAND WRITTEN ENTRIES

PECO ENERGY COMPANY
LIMERICK GENERATING STATION

CLEARANCE

CLEARANCE NO: 95000042
LAST UPDATED: 08/07/95 CER1

SECTION IV					SECTION V			
TAG # TYPE	CLEARANCE POINT(S) --COMPONENT NUMBER-- ---APPLIED POSITION DESCRIPTION-	TAG USED	AS APPLD POS.	TAGGED POSITION AND INITIALS	VERIFIED POSITION AND INITIALS	INSERVICE POSITION SEQUENCE	REMOVED POSITION AND INITIALS	VERIFIED POSITION AND INITIALS
001	HS-076-013B CLOSED	DGR	CLO					
	'B' SGTS CARB. FLTR. ISOLATION VLV. H.S. (CARBON FILTER ISOL B)							
	008:269:							
002	SGD-015-2 CLOSED	DGR	CLO					
	SLIDE GATE DAMPER							
003	SGD-015-4 CLOSED	DGR	CLO					
	SLIDE GATE DAMPER							

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 9

ACTUAL TIME: 19:00
SCENARIO TIME: 04:00

TITLE: Sabotage
LOCATION: RE Areas 15 & 16, EL 253

RELATED MESSAGES: 30, 31
ATTACHMENTS: None

INITIATING CONDITIONS:

An upset radwaste contractor enters the reactor enclosure from the radwaste area through the acess door at Area 11, EL 217 with a pipe wrench. After running up the steps to EL 253, he proceeds to damage various equipt./components (i.e.HCU headers, sample sink lines & valves, instrument gas lines, rosemount transmitters).

SYMPTOMS:

The control room receives indications of reactor level pegging full upscale with associated annunciators, followed by security's call concerning a radwaste contractor exhibiting aberrant behavior entering the reactor enclosure.

RESTORATION:

The contractor is quickly apprehended on EL 253 in the reactor enclosure by security.

SCENARIO CONCERNS:

None - At this point in the scenario, the damage will not have any adverse affects on plant operations or prevent mitigating actions that are in progress.

Event Summary

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

EVENT NUMBER: 10

ACTUAL TIME: 19:55
SCENARIO TIME: 04:55

TITLE: RWCU Rupture
LOCATION: Inside the Drywell, EL 253

RELATED MESSAGES: 18, 19, 20, 33, 34, 35
ATTACHMENTS: None

INITIATING CONDITIONS:

A rupture as a result of errosion develops in the RWCU suction piping near the reactor vessel bottomhead.

SYMPTOMS:

Rapidly increasing drywell rad levels.

RESTORATION:

None, since the break has occured in the drywell and is unisolable.

SCENARIO CONCERNS:

This event leads to the declaration of a General Emergency.
A negligable radioactive release from the plant will occur since there is minimal driving pressure.

LIMERICK GENERATING STATION
ANNUAL EXERCISE

SCENARIO L53
UNIT 1 REV 0

OPERATIONAL DATA - PARAMETERS

DRILL TIME HR:MN	CLOCK TIME HR:MN	REACTOR WTR LVL inches	REACTOR PRESSURE psig	REACTOR POWER %	CORE FLOW Mlb/hr	STEAM FLOW Mlb/hr	FEEDWATR FLOW Mlb/hr	CONDENSR VACUUM in Hg	HOTWELL LEVEL inches	CST LEVEL feet	DRYWELL H2 %	DRYWELL O2 %	DRYWELL PRESSURE psig	DRYWELL TEMP °F
00:00	15:00	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	3.8	.3	126.
00:15	15:15	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	3.5	.3	126.
00:30	15:30	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	3.4	.3	126.
00:45	15:45	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	3.2	.3	126.
01:00	16:00	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.8	.3	126.
01:15	16:15	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.6	.3	126.
01:30	16:30	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.5	.3	126.
01:45	16:45	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.4	.3	126.
02:00	17:00	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.4	.3	126.
02:15	17:15	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.3	.3	126.
02:30	17:30	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.2	.3	126.
02:45	17:45	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.1	.3	126.
03:00	18:00	35.	1000.	100.0	1.0E+8	1.4E+7	1.4E+7	28.	46.0	35.0	.0	2.0	.3	126.
03:15	18:15	20.	275.	10.0	0.0E+0	0.0E+0	0.0E+0	12.	40.0	35.0	.2	1.0	32.0	210.
03:30	18:30	30.	10.	.0	0.0E+0	0.0E+0	0.0E+0	7.	40.0	35.0	.4	.9	26.3	237.
03:45	18:45	30.	9.	.0	0.0E+0	0.0E+0	0.0E+0	2.	40.0	35.0	.7	.9	23.2	233.
04:00	19:00	30.	7.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.9	22.1	230.
04:15	19:15	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.8	.9	15.0	175.
04:30	19:30	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.9	11.0	130.
04:45	19:45	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.9	7.0	99.
05:00	20:00	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.7	4.0	95.
05:15	20:15	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.6	3.0	95.
05:30	20:30	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.6	2.0	95.
05:45	20:45	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.8	.6	1.5	95.
06:00	21:00	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	35.0	.9	.6	1.0	95.
06:15	21:15	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	.0	.9	.6	.9	93.
06:30	21:30	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	.0	.9	.6	.8	93.
06:45	21:45	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	.0	.9	.6	.7	93.
07:00	22:00	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	.0	.9	.6	.6	92.
07:30	22:30	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	.0	.9	.6	.6	92.
08:00	23:00	30.	5.	.0	0.0E+0	0.0E+0	0.0E+0	0.	40.0	.0	.8	.6	.6	92.

OPERATIONAL DATA - PARAMETERS

DRILL TIME HR:MN	CLOCK TIME HR:MN	S/POOL TEMP °F	S/POOL LEVEL feet	S/POOL PRESS psig	SGTS FLO scfm	M/S RAD mR/hr	DRYWELL RAD R/hr	NORTH STACK µCi/cc	NORTH STACK µCi/sec
00:00	15:00	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
00:15	15:15	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
00:30	15:30	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
00:45	15:45	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
01:00	16:00	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
01:15	16:15	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
01:30	16:30	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
01:45	16:45	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
02:00	17:00	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
02:15	17:15	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
02:30	17:30	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
02:45	17:45	85.	22.4	.1	1.	5.5E+2	2.8E+0	2.2E-7	57
03:00	18:00	85.	22.4	.1	2532.	5.5E+2	2.8E+0	2.2E-7	57
03:15	18:15	95.	22.5	30.2	2499.	8.9E+1	7.6E+1	2.2E-7	57
03:30	18:30	94.	22.5	26.7	2499.	5.1E+0	1.5E+2	3.6E-7	68
03:45	18:45	92.	22.5	23.6	2499.	1.4E+0	1.9E+2	2.2E-7	57
04:00	19:00	94.	22.5	22.5	2499.	OSH	2.2E+2	2.2E-7	57
04:15	19:15	89.	22.5	15.1	2499.	OSH	2.4E+2	2.2E-7	57
04:30	19:30	85.	22.5	11.3	2499.	OSH	2.5E+2	2.2E-7	57
04:45	19:45	85.	22.5	7.2	2499.	OSH	2.6E+2	2.2E-7	57
05:00	20:00	85.	22.5	3.8	2499.	OSH	1.3E+4	2.2E-7	57
05:15	20:15	85.	22.5	3.1	2499.	OSH	1.6E+4	2.2E-7	57
05:30	20:30	85.	22.5	2.3	2499.	OSH	1.3E+4	3.0E-6	580
05:45	20:45	85.	22.5	1.5	2499.	OSH	1.2E+4	3.0E-6	580
06:00	21:00	85.	22.5	1.0	2499.	OSH	1.1E+4	5.4E-6	1000
06:15	21:15	84.	22.5	.9	2499.	OSH	1.0E+4	5.4E-6	1000
06:30	21:30	84.	22.5	.8	2499.	OSH	9.7E+3	7.4E-6	1400
06:45	21:45	84.	22.5	.7	2499.	OSH	9.2E+3	7.4E-6	1400
07:00	22:00	83.	22.5	.6	2499.	OSH	8.7E+3	9.0E-6	1700
07:30	22:30	83.	22.5	.6	2499.	OSH	8.0E+3	9.0E-6	1700
08:00	23:00	85.	22.5	.6	2499.	OSH	7.3E+3	1.2E-5	2300

TABLE 4.6a

METEOROLOGICAL DATA SUMMARY

T-TIME	WS 305'	WD 305'	T305- 30	WS 30'	WD 30'	T175- 30	TEMP	RAIN	σΘ 305'	σΘ 30'
00:00	6.6	95	-2.10	11.2	115	-1.60	50.8	.00	8.0	7.0
00:15	5.7	96	-2.10	10.1	109	-1.50	50.9	.00	12.0	13.0
00:30	6.5	84	-1.80	10.9	103	-1.30	52.5	.00	11.0	10.0
00:45	7.9	86	-1.90	11.7	115	-1.40	52.4	.00	11.0	8.0
01:00	7.5	82	-1.80	11.3	109	-1.30	52.9	.00	11.0	10.0
01:15	9.2	89	-1.70	12.8	103	-1.20	53.6	.00	9.0	7.0
01:30	10.8	93	-1.60	13.8	103	-1.10	54.1	.00	7.0	6.0
01:45	9.8	93	-1.50	12.8	97	-1.00	54.4	.00	7.0	7.0
02:00	10.9	91	-1.30	13.5	106	-.90	54.7	.00	6.0	6.0
02:15	7.6	98	-1.30	11.0	113	-.90	55.3	.00	7.0	7.0
02:30	8.8	106	-1.40	11.9	112	-.90	55.1	.00	7.0	6.0
02:45	5.2	97	-1.40	11.5	115	-.90	56.4	.00	7.0	6.0
03:00	5.4	96	-1.40	11.5	120	-.90	56.6	.00	7.0	6.0
03:15	5.5	95	-1.30	12.9	116	-.90	57.8	.00	10.0	6.0
03:30	5.7	96	-1.40	11.8	119	-.90	58.6	.00	10.0	6.0
03:45	5.9	96	-1.30	12.3	117	-.90	58.2	.00	6.0	6.0
04:00	6.0	95	-1.20	11.3	110	-.80	58.4	.00	6.0	8.0
04:15	6.1	96	-1.10	10.3	93	-.70	60.7	.00	7.0	8.0
04:30	6.2	97	-.90	9.1	94	-.60	61.8	.00	6.0	6.0
04:45	7.2	94	-1.00	10.5	94	-.70	62.1	.00	8.0	6.0
05:00	7.4	96	-1.10	10.5	94	-.70	62.4	.00	7.0	6.0
05:15	7.6	93	-1.30	11.4	96	-.80	62.9	.00	7.0	6.0
05:30	7.5	94	-1.10	9.0	97	-.70	63.9	.00	10.0	9.0
05:45	5.3	95	-.90	8.4	99	-.60	64.6	.00	8.0	6.0
06:00	5.7	93	-.70	7.1	95	-.50	64.8	.00	7.0	7.0
06:15	5.4	95	-.70	7.5	95	-.40	64.2	.00	6.0	9.0
06:30	5.5	92	-.70	6.7	99	-.40	63.4	.00	9.0	7.0
06:45	5.7	93	-.70	7.2	97	-.50	64.0	.00	8.0	6.0
07:00	5.5	94	-.80	8.0	95	-.60	64.3	.00	9.0	8.0
07:15	5.3	96	-.90	8.3	93	-.70	64.6	.00	8.0	7.0
07:30	5.7	93	-.70	7.9	96	-.60	65.0	.00	7.0	6.0
07:45	5.6	94	-.90	8.2	95	-.50	65.1	.00	7.0	6.0
08:00	5.1	96	-.80	8.0	94	-.60	65.3	.00	6.0	7.0

Continued on Next Page

NOTE: These are the Meteorological Conditions Affecting the Plume at the Times Indicated Above.

The 15-minute Averages Provided to the Players Are 15 Minutes Behind the Above Values Due to the Averaging Delay of the Met Instruments

TABLE 4.6b

METEOROLOGICAL DATA SUMMARY

T-TIME	WS 305'	WD 305'	T305-30	WS 30'	WD 30'	T175-30	TEMP	RAIN	σθ 305'	σθ 30'

NOTE: These are the Meteorological Conditions Affecting the Plume at the Times Indicated Above.

The 15-minute Averages Provided to the Players Are 15 Minutes Behind the Above Values Due to the Averaging Delay of the Met Instruments

LIMERICK GENERATING STATION
EMERGENCY RESPONSE ANNUAL EXERCISE
SCENARIO L53

EMERGENCY RESPONSE PROCEDURES INDEX

Attached is the Limerick Generating Station Emergency Response Procedure Index and PECO Energy's Emergency Response Procedures - Common Index.

ROCEDURE INDEX REPORT: ERP

PROCEDURE NUMBER	CURR REV NBR	TITLE	LVL NBR	EFFECTIVE DATE
ERP-101	0006	CLASSIFICATION OF EMERGENCIES	I	06/15/95
ERP-106	0002	WRITTEN SUMMARY NOTIFICATION	II	06/17/94
ERP-110	0015	EMERGENCY NOTIFICATION	I	07/18/95
ERP-120	0005	STATION EVACUATIONS	II	03/29/95
ERP-140	0006	STAFFING AUGMENTATION	I	11/10/94
ERP-200	0007	EMERGENCY DIRECTOR (ED) RESPONSE	II	03/29/95
ERP-200-1 APP	0007	EMERGENCY NOTIFICATION MESSAGE FORM	I	03/29/95
ERP-230	0005	OPERATIONS SUPPORT CENTER (OSC) DIRECTOR	II	08/09/95
ERP-300	0016	TSC/MCR DOSE ASSESSMENT TEAM	I	03/29/95
ERP-340	0006	FIELD SURVEY GROUP	II	03/29/95
ERP-360	0002	ADJUSTMENT OF WIDE RANGE GAS MONITOR CONVERSION FACTORS	I	11/14/94
ERP-400	0009	CHEMISTRY SAMPLING AND ANALYSIS TEAM	II	04/07/95
ERP-410	0001	SAMPLE PREPARATION AND HANDLING OF HIGHLY RADIOACTIVE LIQUID SAMPLES	II	11/12/92
ERP-420	0001	SAMPLE PREPARATION AND HANDLING OF HIGHLY RADIOACTIVE PARTICULATE FILTERS AND IODINE CARTRIDGES	II	11/12/92
ERP-430	0001	SAMPLE PREPARATION AND HANDLING OF HIGHLY RADIOACTIVE GAS SAMPLES	II	11/12/92
ERP-440	0002	OFF-SITE ANALYSIS OF HIGH ACTIVITY SAMPLES	III	03/29/95
ERP-500	0012	SECURITY TEAM	II	06/28/95
ERP-600	0010	HEALTH PHYSICS TEAM	II	06/28/95
ERP-630	0003	VEHICLE AND EVACUEE CONTROL GROUP	II	03/29/95
ERP-640	0006	EMERGENCY RESPONSE FACILITY HABITABILITY	II	03/29/95
ERP-650	0007	ENTRY FOR EMERGENCY REPAIR AND OPERATIONS	II	06/28/95

ROCEDURE INDEX REPORT: ERP

PROCEDURE NUMBER	CURR REV NBR	TITLE	LVL NBR	EFFECTIVE DATE
ERP-660	0004	DISTRIBUTION OF THYROID BLOCKING TABLETS	II	03/29/95
ERP-700	0011	TECHNICAL SUPPORT TEAM	II	07/18/95
ERP-800	0013	MAINTENANCE TEAM	II	06/28/95

********* END OF REPORT *********

PEACH BOTTOM ATOMIC POWER STATION

PROCEDURE INDEX REPORT: ERP-C

PROCEDURE NUMBER	CURR REV NBR	TITLE	LVL NBR	EFFECTIVE DATE
ERP-C-1000	0002	EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION/DECACTIVATION		08/19/94
ERP-C-1000-1	0001	EOF ACTIVATION CHECKLIST		08/19/94
ERP-C-1000-2	0001	EOF DEACTIVATION CHECKLIST		08/19/94
ERP-C-1200	0004	EMERGENCY REPSONSE MANAGER	II	09/14/94
ERP-C-1200-1	0000	EMERGENCY RESPONSE MANAGER TURNOVER/BRIEFING FORM	II	09/14/94
ERP-C-1200-2	0000	PROTECTIVE ACTION RECOMMENDATION WORKSHEET	II	09/14/94
ERP-C-1210	0002	ASSISTANT EMERGENCY RESPONSE MANAGER (AERM)	II	09/14/94
ERP-C-1250	0001	EMERGENCY PREPAREDNESS COORDINATOR/EOF	II	09/14/94
ERP-C-1250-1	0000	EMERGENCY POWER INSTRUCITONS	II	09/14/94
ERP-C-1250-2	0000	EMERGENCY PREPAREDNESS COORDINATOR INSTRUCTIONS FOR ASPEN B BACKUP NOTIFICATION SYSTEM	II	09/14/94
ERP-C-1250-3	0000	EMERGENCY PREPAREDNESS COORDINATOR INSTRUCTIONS TO STOP STAFFING	II	09/14/94
ERP-C-1250-4	0000	EMERGENCY PREPAREDNESS COORDINATOR INSTRUCTIONS FOR SYSTEM RESET	II	09/14/94
ERP-C-1300	0004	EMERGENCY OPERATIONS FACILITY (EOF) DOSE ASSESSMENT TEAM LEADER	II	09/23/94
ERP-C-1300-1	0000	DOSE ASSESSMENT TEAM LEADER INITIAL ACTIONS	II	09/23/94
ERP-C-1300-2	0000	DOSE ASSESSMENT TURNOVER LIST	II	09/23/94
ERP-C-1300-3	0000	DOSE ASSESSMENT PROTECTIVE ACTION WORKSHEET	II	09/23/94
ERP-C-1300-4	0000	OFFSITE SAMPLE ANALYSIS REQUESTS	II	09/23/94
ERP-C-1300-5	0000	DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARS)	II	09/23/94
ERP-C-1310	0003	EMERGENCY OPERATIONS FACILITY (EOF)	II	09/23/94

PROCEDURE NUMBER	CURR REV NBR	TITLE	LVL NBR	EFFECTIVE DATE
ERP-C-1310	0003	DOSE ASSESSMENT GROUP	II	09/23/94
ERP-C-1310-1	0000	DOSE ASSESSMENT GROUP LEADER INITIAL ACTIONS	II	09/23/94
ERP-C-1310-2	0000	OBTAINING MET DATA FROM NATIONAL WEATHER SERVICE	II	09/23/94
ERP-C-1310-3	0000	OBTAINING EPDS MET/RAD DATA	II	09/23/94
ERP-C-1310-4	0000	USE OF MODE A/MODE B OF CDM		09/23/94
ERP-C-1320	0003	EMERGENCY OPERATIONS FACILITY (EOF) FIELD SURVEY GROUP LEADER	II	09/23/94
ERP-C-1320-1	0000	FIELD SURVEY GROUP LEADER INITIAL ACTIONS	II	09/23/94
ERP-C-1320-2	0000	FIELD SURVEY GROUP LEADER TURNOVER SHEET	II	09/23/94
ERP-C-1320-3	0000	FIELD SURVEY GROUP LEADER DATA SHEET	II	09/23/94
ERP-C-1400	0001	ENGINEERING SUPPORT TEAM	II	09/23/94
ERP-C-1400-1	0000	ENGINEERING SUPPORT TEAM CHECKLIST	II	09/23/94
ERP-C-1410	0001	CORE DAMAGE ASSESSMENT	II	09/14/94
ERP-C-1410-1	0000	RADIOLOGICAL DATA	II	09/14/94
ERP-C-1410-2	0000	HYDROGEN CONCENTRATION DATA	II	09/14/94
ERP-C-1410-3	0000	CONTAINMENT RADIATION MONITOR DATA	II	09/14/94
ERP-C-1410-4	0000	METAL WATER REACTION	II	09/14/94
ERP-C-1410-5	0000	PERCENT OF FUEL INVENTORY AIRBORNE IN THE CONTAINMENT VS. APPROX IMATE SOURCE AND DAMAGE ESTIMATE	II	09/14/94
ERP-C-1410-6	0000	PROCECDURES FOR ESTIMATING FUEL DAMAGE BASED ON MEASURED I-131 AND XE-133 CONCENTRATIONS	II	09/14/94
ERP-C-1500	0002	LOGISTICS SUPPORT TEAM	II	09/14/94
ERP-C-1500-1	0000	MESSAGE AND INFORMATION INSTRUCTIONS	II	09/14/94
ERP-C-1500-2	0000	HELICOPTER LANDING INFORMATION	II	09/14/94

PROCEDURE INDEX REPORT: ERP-C

PROCEDURE NUMBER	CURR REV NBR	TITLE	LVL NBR	EFFECTIVE DATE
ERP-C-1900	0001	RECOVERY PHASE IMPLEMENTATION		06/28/93
ERP-C-1900-1	0000	RECOVERY PHASE IMPLEMENTATION FLOW CHART		06/28/93
ERP-C-1900-2	0000	PEACH BOTTOM ATOMIC POWER STATION RECOVERY ACCEPTANCE CHECKLIST		06/28/93
ERP-C-1900-3	0000	LIMERICK GENERATING STATION RECOVERY ACCEPTANCE CHECKLIST		06/28/93
ERP-C-1900-4	0000	RECOVERY PLAN OUTLINE		06/28/93
ERP-C-1900-5	0000	ASSESSMENT CONSIDERATIONS		06/28/93
IM-UG-3-8	0000	PROCUREMENT CHECKLIST #2 HARDWARE PROCUREMENT	III	04/07/95

********* END OF REPORT *********

LIMERICK GENERATING STATION
EMERGENCY RESPONSE ANNUAL EXERCISE
SCENARIO L53

REFERENCE DOCUMENTS

I. PECO Energy Nuclear Emergency Plan

II. Limerick Generating Station, Emergency Response Procedures

III. Emergency Response Procedures

IV. Limerick Generating Station, Final Safety Analysis Report

V. Title 10, Code of Federal Regulations, Part 50, Appendix E

VI. NUREG-0654/FEMA-REP-1, Revision 1

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 1

Actual Time: 15:00
Scenario Time: 00:00 0

Message For: **Shift Manager**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

Have a control room operator make the following page announcement:

" Attention all personnel: The 1995 Limerick Generating Station Emergency Preparedness Annual Exercise is now commencing. All announcements prefaced by `This is a drill' are intended for designated drill participants only. If an actual incident occurs, an announcement will be made directing response to the emergency situation."

.....REPEAT ANNOUNCEMENT.....

CONTROLLER INFORMATION:

None

EXPECTED ACTIONS:

Direct the control room operator to make PA announcement

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *SIMULATOR MESSAGE* ***

Message Number: 2

Actual Time: 15:20
Scenario Time: 00:20 0

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following annunciator alarms on panel 109 RAD, G-2: 1 AIR EJECTOR OFFGAS DISCHARGE HI RADIATION

CONTROLLER INFORMATION:

Provide this message only if the simulator fails

Note; Main Steam Line Radiation is NOT in alarm. Hi alarm setpoint for SJAE discharge is 4000 mR/hr. (SJAE discharge radiation level has increased from 3465mR/hr. to 4375 mR/hr. and is NOT increasing.

EXPECTED ACTIONS:

Control room:
Refer to ARC-MCR-109-G2:
1. Notify Health Physics
2. Enter ON-102, Air Ejector Discharge or Main Steam Line High Radiation.
3. Verify compliance with ODCM 3.3.2 pertaining to gaseous effluents.
4. Refer to ERP-101, Damage to Fuel.
5. Request chemistry to obtain isotopic offgas analysis per ST-5-070-885-1 and isotopic reactor coolant analysis per ST-5-041-885-1.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 3

Actual Time: 15:40
Scenario Time: 00:40

Message For: **Chemistry Technician**
Location: **TE EL 200 Area 07, sample pnl. 10S160**
Message From: **Chemistry Controller**

MESSAGE:

The isotopic data of the six from ST-5-070-885-1 are:
Xe-138 = 87,900 uCi/sec.
Kr-87 = 16,700 uCi/sec.
Kr-88 = 18,600 uCi/sec.
Kr-85M = 5,800 uCi/sec.
Xe-135 = 26,700 uCi/sec.

CONTROLLER INFORMATION:

Provide this message when earned.

SJAE Discharge: Hi alarm setpoint is 4000 mR/hr. HI-HI alarm setpoint is 11500 mR/hr.

Provide this message as it is earned.

The sum of the six isotopes from ST-5-041-885-1 is 164,000 uCi/sec. (initial was 130,000 uCi/sec.)

EXPECTED ACTIONS:

Chem Tech calls control room with results.
Chem Tech will calculate new SJAE high rad alarm setpoint per ST-5-026-594-1 and reset in Aux. Equipt. Rm. (new setpt. = 6563 mR/hr.)

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 4

Actual Time: 15:50
Scenario Time: 00:50

Message For: **Chemistry Technician**
Location: **RE EL 253, Area 15, sample sink #10S292**
Message From: **Chemistry Controller**

MESSAGE:

The Iodine Dose Equivalent is 1.21 E-4 uCi/gram (the result from 08:00 was 1.10 E-4 uCi/gram and .21 uCi/gram at 02:00)

CONTROLLER INFORMATION:

Provide this message when earned.

EXPECTED ACTIONS:

Chem Tech calls control room with results.
Control room notifies reactor engineering to perform RE-C-030.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 5

Actual Time: 16:00
Scenario Time: 01:00 0

Message For: **Operator**
Location: **Control Room**
Message From: **Fire Controller**

MESSAGE:

This is _____, site security. We've got a fire outside between the diesel storage area and radwaste rollup doors. The delivery truck backed into a parked forklift which must have caused the leak. Nobody's hurt. I don't know what ignited the fuel , but , hold on..... something just EXPLODED from the fire!

CONTROLLER INFORMATION:

You the controller are the site security, contact the control room and state the message.
Note: The fire is NOT near the Diesel Bldg.

EXPECTED ACTIONS:

Control room: Dispatches Fire Brigade and enters SE-8 FIRE. Unusual Event declared per ERP-101.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** SIMULATOR MESSAGE ***

Message Number: 6

Actual Time: 16:05
Scenario Time: 01:05 0

Message For: **Reactor Operator**
Location: **SGTS**
Message From: **Simulator Controller**

MESSAGE:

SGTS purge valves (HV-057-114 & 115) open indication remains - red light on, green light off at pump start switch on 10C601.

CONTROLLER INFORMATION:

Provide this message ONLY if manual isolation is attempted.
Control room may decide to stop nitrogen purge due to close proximity of fire to liquid nitrogen skid.
ANY attempt to isolate the purge line path will fail if attempted before the Group 1.

EXPECTED ACTIONS:

Control room dispatches equipment operator to investigate.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 7

Actual Time: 16:10
Scenario Time: 01:10 0

Message For: **Fire Brigade/Health Physics Technicians**
Location: **Outside Radwaste Rollup Doors**
Message From: **Fire Controller/ HP Controller**

MESSAGE:

The delivery truck is engulfed in flames, the forklift has it's propane tank blown off the back, a radwaste trailer is blown open with RAM from inside the trailer spread over the ground. Two sections of fence and part of the gate are blown down. Dense smoke and contamination make fighting the blaze difficult.

CONTROLLER INFORMATION:

Free play - supply fire/HP information as fire brigade/HP Techs respond. Your description will lead fire brigade personnel to contact the control room for offsite assistance by 4:20 pm.

EXPECTED ACTIONS:

Fire Brigade:
1) Response notification from each brigade member.
2) Fire brigade leader demonstrates command and control
3) Correct fire fighting tactics and extinguishing agents used
4) Communications with MCR and between fire brigade maintained
5) Brigade responds in protective clothing
6) Pre-fire plan brought to fire
7) Proper equipment utilized

Health Physics:
1) Survey all yard areas
2) Pick up and bag all RAM
3) Removal of any turnout gear should only be at HPs direction.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 8

Actual Time: 16:15
Scenario Time: 01:15

Message For: **Health Physics Technician**
Location: **Outside Radwaste Rollup Doors**
Message From: **HP Controller**

MESSAGE:

You notice a firefighter with his boots and gloves off, wiping his face with his hand and removing his turnout gear. This individual was not monitored. He is sitting next to RAM (half burned radwaste trash laying on the ground).

CONTROLLER INFORMATION:

Free play - supply contamination readings when earned for area rad levels (per area decontamination map) and when deconning personnel (per personnel contamination form).

EXPECTED ACTIONS:

HP prevents firefighter from further contaminating himself and proceeds to monitor and find contaminated areas. Contaminated individual should be taken to Radwaste Decon Room for decon.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** CONTINGENCY MESSAGE ***

Message Number: 9

Actual Time: 16:15
Scenario Time: 01:15 0

Message For: **Shift Manager**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

Declare an UNUSUAL EVENT in accordance with ERP-101-1, HAZARDS TO STATION OPERATION, "Explosion within or near site boundary"

CONTROLLER INFORMATION:

Deliver this message if an UNUSUAL EVENT has not yet been declared and there is no discussion in progress which would logically lead to the declaration of an UNUSUAL EVENT.

EXPECTED ACTIONS:

Declare an UNUSUAL EVENT in accordance with ERP-101-1, HAZARDS TO STATION OPERATION

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *CONTINGENCY MESSAGE* ***

Message Number: 10

Actual Time: 16:30
Scenario Time: 01:30 0

Message For: **Fire Brigade Leader**
Location: **Diesel Fuel Fire**
Message From: **Fire Controller**

MESSAGE:

This fire requires offsite assistance.

CONTROLLER INFORMATION:

Provide this information if the Fire Brigade has not made proper assessment of conditions requiring offsite support.

EXPECTED ACTIONS:

Fire Brigade Leader will contact the control room with this information.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 11

Actual Time: 16:30
Scenario Time: 01:30 0

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Equipment Operator**

MESSAGE:

This is _____ equipment operator, while performing my EO rounds on Unit 1, I noticed some heavy black smoke from the diesel fire in the reactor enclosure. The fumes are making me feel nauseous and dizzy. I think I need to go to medical, I'm really not feeling too.....

CONTROLLER INFORMATION:

After providing the message, inform the player to wait for an EMT to locate him (RE Area 11, EL 253) since he has passed out from carbon monoxide fumes.

EXPECTED ACTIONS:

Contact EMT to respond to distressed operator.
Declare an ALERT in accordance with EP-101-1, Hazards to Station Operation.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 12

Actual Time: 16:40
Scenario Time: 01:40

Message For: **Emergency Medical Technician**
Location: **RE Area 11, EL 253**
Message From: **Ops Controller**

MESSAGE:

You notice dense smoke in the area.

The equipment operator exhibits the following symptoms:

Complexion: gray-blue color to lips, tongue, and ears.
Erratic breathing.

Nauseous and dizzy - (supply this info. only if EMT questions the stricken operator).

CONTROLLER INFORMATION:

Have player lying on floor and provide this message to EMTupon arrival at the scene.
(Note: No offsite medical assistance is required - the operator will recover upon being administered oxygen.)

EXPECTED ACTIONS:

EMT administers first aid:
(1) Remove the operator from the area.
(2) Place in a lateral recumbent position.
(3) Administer high concentrations of oxygen.
(4) Inform control room of rescue.
(5) Consider respiratory protection as necessary.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** CONTINGENCY MESSAGE ***

Message Number: 13

Actual Time: 16:45
Scenario Time: 01:45 0

Message For: **Shift Supervisor**
Location: **Control Room**
Message From: **Simulator Operator**

MESSAGE:

Declare an ALERT in accordance with ERP-101-1," Hazards to Station Operation" Entry of toxic, flammable gases OR chlorine into power block with subsequent habitability problem. Indicated by: Visual observation, direct measurement OR notification received by control room.

CONTROLLER INFORMATION:

Deliver this message if an ALERT has not yet been declared and there is no discussion in progress which would logically lead to the declaration of an ALERT.

EXPECTED ACTIONS:

Declare an ALERT in accordance with ERP-101-1, Hazards to Station Operation.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *SIMULATOR MESSAGE* ***

Message Number: 14

Actual Time: 18:00
Scenario Time: 03:00

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following Control Room annunciators are in alarm:

Panel 114 ISOL;

(A,B,C,D-1) DIV 1(2,3,4) NSSSS MSIV INITIATED

CONTROLLER INFORMATION:

Provide this message only if the simulator fails.
Instrumentation failure caused an isolation signal.

EXPECTED ACTIONS:

SCRAM actions taken by control room crew.
I&C dispatched to investigate MSIV closure.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 15

Actual Time: 18:01
Scenario Time: 03:01

Message For: **I&C Technician**
Location: **Aux. Equipt. Rm., 10C609 Panel**
Message From: **I&C Controller**

MESSAGE:

You are performing ST-02-042-657-1, testing reactor level 1&2 Logic. Following the TRIP signal given to LS-42-1N684 and prior to the isolation signal being reset, indications of a Group 1 isolation occur.

CONTROLLER INFORMATION:

The spurious signal was caused by the trip unit not being completely seated in the card file. Provide info. from Event Summary when earned.

EXPECTED ACTIONS:

I&C troubleshoots, resets the logic, and informs control room.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *SIMULATOR MESSAGE* ***

Message Number: 16

Actual Time: 18:01
Scenario Time: 03:01 0

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following control room annunciator is in alarm:

Panel 107 REACTOR;

(F-2) DRYWELL HI/LO PRESSURE

CONTROLLER INFORMATION:

Provide this message only if the simulator fails.
Provide steadily increasing increments in pressure up to 32# in 6 minutes.

EXPECTED ACTIONS:

Control Room enters OT-101 High Drywell Pressure.
When D/W pressure reaches 24#, Operators will initiate a T-112 Emergency Blowdown.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

**** SIMULATOR MESSAGE ****

Message Number: 17

Actual Time: 18:02
Scenario Time: 03:02

Message For: **Reactor Operator**
Location: **Control room**
Message From: **Simulator Controller**

MESSAGE:

The following control room annunciator is in alarm:

Panel 108 Reactor:

(E-4) RDCS INOPERATIVE

CONTROLLER INFORMATION:

Provide this message only if simulator fails.

EXPECTED ACTIONS:

Dispatch an equipment operator and I&C to Aux. Equipt. Rm. to reset RDCS for rod insertion.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *SIMULATOR MESSAGE* ***

Message Number: 18

Actual Time: 18:03
Scenario Time: 03:03 1

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following control room annunciators are in alarm:

Panel 109 RAD; (B-4) RE AREA HI RAD

Panel 004 VENT; (E-1) A REAC ENCL ISOLATION SIGNAL INITIATED
(F-1) B REAC ENCL ISOLATION SIGNAL INITIATED

SGTS initiates.

CONTROLLER INFORMATION:

Provide this message only if simulator fails.
Hi rad is result of a break at the upstream weld connection to suppression pool purge valve HV-57-104.

EXPECTED ACTIONS:

Identify to the TSC that there is Hi Rad in the RE.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *SIMULATOR MESSAGE* ***

Message Number: 19

Actual Time: 18:03
Scenario Time: 03:03 0

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following Control Room Annunciators are in alarm:

Panel 003 RAD

(C-5) WIDE RANGE ACCIDENT MONITOR HI RADIATION

(B-5) WIDE RANGE ACCIDENT MONITOR HI-HI RADIATION

CONTROLLER INFORMATION:

Provide this message only if the simulator fails. (The SGTS filters were damaged resulting in a high concentration of iodine being released to the environment.)

EXPECTED ACTIONS:

Notify the TSC of the Hi Rad conditions indicated by the WRAM.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *SIMULATOR MESSAGE* ***

Message Number: 20

Actual Time: 18:03
Scenario Time: 03:03 3

Message For: **Reactor Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following control room annunciators are in alarm:

Panel 003 RAD

(E-1) NORTH STACK HI-HI RADIATION

(E-2) NORTH STACK HI RADIATION

CONTROLLER INFORMATION:

Provide this message only if the simulator fails.

EXPECTED ACTIONS:

Control room notifies the TSC of the Hi Rad conditions in the North Stack exhaust.
The control room crew will take action to place the B SBGT train in service.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

**** SIMULATOR MESSAGE ****

Message Number: 21

Actual Time: 18:05
Scenario Time: 03:05

Message For: **Reactor Operator**
Location: **Control room**
Message From: **Simulator Controller**

MESSAGE:

The following control room annunciators are in alarm:

Panel 113 COOL A;

(F-2) IA RHR PUMP MOTOR OVERCURRENT/TRIP

CONTROLLER INFORMATION:

Provide this message only if the simulator fails.
This annunciation is concurrent with the LOCA signal.

EXPECTED ACTIONS:

Dispatch EO to investigate, followed by maintenance.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 22

Actual Time: 18:10
Scenario Time: 03:10

Message For: **Equipment Operator**
Location: **RE Area 16, EL 283**
Message From: **Ops Controller**

MESSAGE:

The handwheel for drywell spray valve HV-051-1F016B is missing and the shaft is sheared off.

CONTROLLER INFORMATION:

Provide this message when the EO locates the valve.
The valve can only be opened via maintenance repairs.

EXPECTED ACTIONS:

EO reports his findings to the control room.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *CONTINGENCY MESSAGE* ***

Message Number: 23

Actual Time: 18:15
Scenario Time: 03:15

Message For: **Field Survey Group Leader**
Location: **EOF**
Message From: **EOF Dose Assessment Controller**

MESSAGE:

(Provide offsite data from TABLE 7.10f at 0.5 miles centerline from the site.)

CONTROLLER INFORMATION:

Provide this information if there are no field teams in the area.
Calculations made from this data per ERP-340 constitute a Site Area Emergency.

EXPECTED ACTIONS:

Field Survey Group Leader contacts the Dose Assessment Team Leader with calculated results.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 24

Actual Time: 18:15
Scenario Time: 03:15

Message For: **Equipment Operator/ Maintenance**
Location: **1A RHR Pump Breaker Cubicle**
Message From: **Maintenance Controller**

MESSAGE:

The overcurrent flag is indicating. The smell of an electrical burn is evident. Circuit breaker # D11-04 contacts have melted onto the cubicle from the overcurrent condition preventing the breaker from being racked out.

CONTROLLER INFORMATION:

No replacement breaker is available.
(The success path will occur via repairs made to the 1B drywell spray valve.)

EXPECTED ACTIONS:

EO informs Control Room of overcurrent trip that cannot be reset.
Maintenance attempts to find replacement breaker. Maintenance communicates findings to the OSC.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 25

Actual Time: 18:15
Scenario Time: 03:15 0

Message For: **Equipment Operator**
Location: **RE EL 240, Area 16**
Message From: **Ops Controller**

MESSAGE:

The key breaks off in the keylock for RHR crosstie valve HV-51-182A.

CONTROLLER INFORMATION:

Any attempt to unlock the valve will NOT be successful.

EXPECTED ACTIONS:

Equipment operator contacts the control room and explains the event.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 26

Actual Time: 18:15
Scenario Time: 03:15 0

Message For: **Equipment Operator/I&C Technician**
Location: **Aux. Equipt. Rm., RPIS Cabinet 10C615**
Message From: **Ops and I&C Controller**

MESSAGE:

The Rod Drive Control System resets momentarily and then returns to previous indications. (supply attached fault map - note: rod position 30-07 is illuminated on fault map).

CONTROLLER INFORMATION:

The successful insertion of control rods will not be performed until 7:30 pm as a result of I&C troubleshooting and repairs.

I&C Controller: Free-play with troubleshooting (ref. Event Summary). Provide information as it is earned.

EXPECTED ACTIONS:

I&C will replace the transponder card for HCU 30-07, inspect branch junction module, RDCS and RPIS terminal cabinets and find a loose cable.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 27

Actual Time: 18:20
Scenario Time: 03:20 0

Message For: **Maintenance**
Location: **Maintenance Shop**
Message From: **Maintenance Controller**

MESSAGE:

This valve is a duplicate of drywell spray valve HV-051-1F016B. Consider this valve to be located in the plant and make appropriate repairs.

CONTROLLER INFORMATION:

Provide players with the work package (motor will be determed and laying beside the limitorque).
Provide work package.

Contact a simulator controller when this task is completed in order for the malfunction to be removed.
The control room needs this valve to be opened in order to lower drywell pressure.

EXPECTED ACTIONS:

inform the TSC Maintenance Team Leader that this task was successful.
Control room will be able to spray the drywell.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *CONTINGENCY MESSAGE* ***

Message Number: 28

Actual Time: 18:45
Scenario Time: 03:45 0

Message For: **Emergency Director**
Location: **TSC**
Message From: **TSC Lead Controller**

MESSAGE:

Declare a Site Area Emergency in accordance with ERP-101-6 RADIOACTIVE EFFLUENT RELEASE Calculated offsite dose exceeds 500 mR child thyroid CDE (Committed Dose Equivalent) OR Measured air concentration of 6.6 E8 uCi/CC.

CONTROLLER INFORMATION:

Deliver this message if a Site Area Emergency has not yet been declared and there is no discussion in progress which would lead to this classification.

EXPECTED ACTIONS:

Declare a Site Area Emergency in accordance with ERP-101-6, RADIOACTIVE EFFLUENT RELEASE.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *CONTINGENCY MESSAGE* ***

Message Number: 29

Actual Time: 18:50
Scenario Time: 03:50 3

Message For: **Shift Manager**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

Make the following announcement in lieu of the Site Evacuation Statement.

"Attention all personnel. This is a Drill. This is a Drill. A site evacuation has been ordered by the Emergency Director. No actual evacuation is to occur. Designated emergency response personnel report to assigned assembly area or facility. All other personnel remain at your normal work station. This is a Drill. This is a Drill.

REPEAT ANNOUNCEMENT

CONTROLLER INFORMATION:

Deliver this message when the ED classifies a SITE AREA EMERGENCY

EXPECTED ACTIONS:

Deliver alternate site evacuation message over plant PA.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 30

Actual Time: 19:00
Scenario Time: 04:00

Message For: **Security**
Location: **Control Room**
Message From: **Security Controller**

MESSAGE:

You have just received a report from radwaste that a radwaste contractor exhibiting aberrant behavior has entered the reactor enclosure through an access door into area 11.

CONTROLLER INFORMATION:

This individual will be found in the reactor enclosure on EL 253 damaging plant equipment with a wrench.
Free-play.

EXPECTED ACTIONS:

Security informs control room and then proceeds to search for and apprehend the radwaste contractor, informing the control room of his capture.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 31

Actual Time: 19:03
Scenario Time: 04:03 0

Message For: **Operator**
Location: **Control Room**
Message From: **Simulator Controller**

MESSAGE:

The following control room reactor level indicators are pegged high:
Panel 10C603: LI-1R604 &LI C32-1R606A

The following control room annunciators are in alarm:
Panel 107 REACTOR;
(D-1) REACTOR HIGH LEVEL/ TURBINE RFPT TRIP

CONTROLLER INFORMATION:

Provide this message only if the simulator fails,
These indications are the result of damage performed by a distraught radwaste contractor.

EXPECTED ACTIONS:

Dispatch an EO to investigate.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 32

Actual Time: 19:20
Scenario Time: 04:20 0

Message For: **AERM**
Location: **EOF**
Message From: **EOF Controller**

MESSAGE:

This is the NRC duty officer from NRR, an Incident Response Team will be arriving at the EOF by 1:30pm. Please provide a summary of the following and provide to the Team Lead (lead controller) upon arrival.

- a detailed briefing of the event
- an assessment of the plant conditions vs design basis
- identification of Tech Specs violated
- access training and clearance of the arriving onsite team
- arrangements for lodging and meals for the team
- floor plan of the EOF, identifying the equipment for the team
- discussion for recovery from this event
- core geometry assessment
- status of personnel injured, contaminated, and personnel exposure (along with any dose extensions that were required)
- calculated time for SGTS to remove the reactor building airborne rad
- status on the security event
- summary & impact of all equipment lost
- when will information become available via the Nuclear Network?

CONTROLLER INFORMATION:

Controllers should simulate being the team and receive the requested information during a briefing with the ERM. The following are the names of the team:
John Johnson, SSN 099-50-9876, Team Lead
Mary Henderson SSN 839-46-2131
Lawrence Henley, SSN 324-56-4323
Bob Martin, SSN 171-47-5671

EXPECTED ACTIONS:

After informing the ERM of the NRC expectations, provide the requests to Logistics. Logistics will discuss the requests with the Licensing Liason who distributes/coordinates with appropriate EOF groups to resolve. ERM will request Group Leads to attend a briefing with the response team.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 33

Actual Time: 20:00
Scenario Time: 05:00

Message For: **Controller Info.**
Location: **Various**
Message From: **Controller Info.**

MESSAGE:

As a result of the RWCU suction header rupturing at the vessel bottom head five minutes ago, the Drywell Post LOCA Rad Monitors indicate rad levels in excess of 1E+4R/hr. This is a General Emergency condition.

CONTROLLER INFORMATION:

This message is for controller information ONLY.

EXPECTED ACTIONS:

Emergency Director will declare a General Emergency.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *CONTINGENCY MESSAGE* ***

Message Number: 34

Actual Time: 20:15
Scenario Time: 05:15 1

Message For: **Emergency Director**
Location: **Technical Support Center**
Message From: **TSC Lead Controller**

MESSAGE:

Declare a GENERAL EMERGENCY in accordance with ERP-101-8, DAMAGE TO FUEL, D/W Rad > 1E+04 R/hr with containment intact.

CONTROLLER INFORMATION:

Deliver this message if a GENERAL EMERGENCY has not yet been declared and there is no discussion in progress which would logically lead to the classification of a GENERAL EMERGENCY.

EXPECTED ACTIONS:

Declare a GENERAL EMERGENCY in accordance with ERP-101-8.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

*** *CONTINGENCY MESSAGE* ***

Message Number: 35

Actual Time: 20:17
Scenario Time: 05:17 2

Message For: **Emergency Response Manager**
Location: **EOF**
Message From: **EOF Lead Controller**

MESSAGE:

Make the following PAR: Evacuate 2 mile radius, evacuate affected sector(s) and 2 adjacent sectors for 2-5 miles.

CONTROLLER INFORMATION:

Provide this message to the ERM if the PAR has not yet been discussed or made.

EXPECTED ACTIONS:

Make this or a more appropriate PAR based on conditions.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 36

Actual Time: 20:20
Scenario Time: 05:20 0

Message For: **Emergency Director**
Location: **EOF**
Message From: **TSC Lead Controller**

MESSAGE:

The Damage Repair Team Leader requested the following items:

1. Portable shielding, 1000ft3 of lead sheets, 2000 ft3 of lead blocks.
2. Portable HEPA filter units, and replacement filters.
3. Two (2) additional SCBA charging compressors.
4. A portable Chemical Decon facility.
5. 2000 sets of PC's in various sizes.
6. 1000 plastic suits.

CONTROLLER INFORMATION:

Controller will provide this message as the ED.

EXPECTED ACTIONS:

ERM will place request with the Logistics Support Coordinator.

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 37

Actual Time: 20:50
Scenario Time: 05:50 0

Message For: **ERM**
Location: **EOF**
Message From: **EOF Lead Controller**

MESSAGE:

ERM: Announce this to the ERO:
"In the circumstances that this exercise were in fact an actual radiological event, the response would not be terminated until the release was confirmed to have been stopped and the environmental measures of maximum air concentration were evaluated and determined to be safe. A recovery organization would have been initiated and would continue to exist for an extended time."

CONTROLLER INFORMATION:

Present this message to the ERM shortly before termination of the drill.

EXPECTED ACTIONS:

The ERM should inform the governmental agencies and the ERO of the contents of this message.

Limerick Generating Station
Annual Exercise

Drill: L53
Unit: 1 Rev: 0

Controller Message Form

THIS IS A DRILL! Do NOT Initiate Actions Affecting Normal Plant Operations!

Message Number: 38

Actual Time: 21:00
Scenario Time: 06:00 0

Message For: **Shift Manager / Emergency Director**
Location: **Control Room / Technical Support Center**
Message From: **Lead Drill Controller**

MESSAGE:

The drill can be terminated at your discretion. Make the following page announcement:

"Attention all personnel, attention all personnel: The 1995 Limerick Generating Station Emergency Preparedness Annual Exercise is Terminated."

.....REPEAT THE MESSAGE.....

Also notify the state and county agencies that the drill has been terminated.

CONTROLLER INFORMATION:

Deliver this message after conferring with the lead exercise controller and the determination is made that all exercise objectives have been met. This message is not to be distributed until the Lead Drill Controller is satisfied that all objectives were able to be demonstrated.

EXPECTED ACTIONS:

1) Make drill termination message.
2) Restore facilities, equipment, and supplies to a state of readiness.
3) Conduct facility critiques.