U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-373/91021(DRSS); 50-374/91021(DRSS)

Docket Nos. 50-373; 50-374 License Nos. NPF-11; NPF-18

Licensee: Commonwealth Edison Company
Opus West III
1400 Opus Place
Downers Grove, IL 60515

Facility Name: LaSalle County Nuclear Generating Station, Units 1 and 2

Inspection At: LaSalle Site, Marseilles, Illinois

Inspection Conducted: November 19-22, 1991

Inspectors: H. Simons 12-12-91
H. Simons Date

J. Foster for 12/12/91
T. Ploski Date

S. Orth 12-12-91
S. Orth Date

Accompanying Inspectors: C. Phillips
G. Bethke

Approved By James E. Foster for 12/12/91
William Snell, Chief Date
Radiological Controls
Section

Inspection Summary

Inspection on November 19-22, 1991 (Reports No. 50-373/91021(DRSS); 50-374/91021(DRSS))
Areas Inspected: Routine, announced inspection of the LaSalle Station's annual emergency preparedness exercise, including a review of the exercise objectives and scenario (IP 82302) and an evaluation of exercise performance (IP 82[illegible]). The inspection also included followup on previously identified items (IP 82301).

Results: No violations, deviations or deficiencies were identified. The licensee demonstrated a very good response to a hypothetical scenario involving equipment failures and a ground level release of radioactive material. Some problems in notification of offsite officials from the Control Room were noted. The Emergency Operations Facility (EOF) was slow to activate considering the pace of the scenario at that time and the prepositioning of some EOF players in the local area.

DETAILS

1. NRC Observers and Areas Observed

H. Simons, Control Room (CR), Operational Support Center (OSC)
T. Ploski, OSC and inplant teams
S. Orth, Technical Support Center (TSC)
C. Phillips, CR
G. Bethke, Emergency Operations Facility (EOF)

2. Licensee Representatives Contacted

W. Huntington, Technical Superinter
J. Schmeltz, Production Superintend
C. Sargent, BWR Nuclear Operations
K. Klotz, Emergency Preparedness Coo
J. Houston, Emergency Preparedness Co
J. Lockwood, Regulatory Assurance Supervi
R. Carson, EP Operations and Onsite Programs Supervisor
D. Berkman, Assistant Superintendent of Work Planning
T. Carr, Nuclear Quality Programs Inspector
R. Groves, Nuclear Services Emergency Preparedness staff
K. Jackson, Nuclear Services Emergency Preparedness staff
D. Carlson, NRC Coordinator
R. Shields, Assistant Technical Staff Superintendent
L. Olson, Administrative Director

The above licensee representatives attended the NRC exit interview held on November 22, 1991. The inspectors also contacted other licensee personnel during the inspection.

3. Licensee Action on Previously Identified Item (IP 82301)

(Closed) Open Item No. 50-373/90020-01: During the 1990 routine emergency preparedness inspection, the training of the emergency repair and damage control team members was not specified in the emergency plan training program.

The licensee has revised the training matrix to include these positions. This training matrix includes both general and specific training requirements for this position. In addition, appropriate lesson plans have been developed to support these requirements. All personnel were either trained or scheduled to be trained in accordance with this new matrix and approved lesson plans. This item is closed.

4. General (IP 82301)

An announced, evening exercise of the LaSalle County Nuclear Generating Station's Emergency Plan was conducted at the LaSalle site on November 20, 1991. The exercise tested the capabilities of the licensee's emergency organization to respond to an accident scenario resulting in a simulated release of radioactive material. This was a "utility only" exercise and did not include participation of State or county officials.

5. General Observations (IP 82301 and 82302)

a. Procedures

This exercise was conducted in accordance with 10 CFR Part 50, Appendix E requirements, using the Commonwealth Edison Generating Stations Emergency Plan (GSEP), the LaSalle Annex to the GSEP, and the associated Emergency Plan Implementing Procedures (EPIPs).

b. Coordination

The licensee's response was coordinated, orderly and generally timely. If the scenario events had been real, the actions taken by the licensee would have been sufficient to allow State and local officials to implement appropriate actions to protect the health and safety of the public.

c. Observers

The licensee's controllers and evaluators monitored and critiqued this exercise, as was independently done by five NRC observers.

d. Exercise Critiques

The licensee held critiques with participants in each facility immediately following the exercise. On November 22, 1991, lead controllers summarized the licensee's preliminary exercise performance strengths and weaknesses. The inspectors summarized their preliminary inspection findings during the exit interview conducted on November 22, 1991.

6. Specific Observations (IP 82301)

a. Control Room (CR)

The exercise was conducted in the Control Room (CR) using prepared control messages and a flip chart with major plant parameters. This simulation hampered the CR staff's response to scenario events. For example, during the Anticipated Transient Without Scram (ATWS) event, the CR staff had to respond to a handful of papers which contained the different alarms they would see if the event were real. The use of a simulator would greatly improve the realism of the plant indications and response actions of the CR staff. In view of the unavailability of a CR simulator, the CR staff performed well in mitigating the postulated events.

At 18:21 hours, a report was received in the CR that a helicopter had crashed onsite. The Shift Engineer (SE) promptly dispatched an onsite grounds person to investigate the accident scene and prudently dispatched a first aid team in case of injuries. The SE quickly realized this event should be classified per the Emergency Action Levels (EALs) as an Unusual Event (UE). This declaration was made at 18:25 hours.

The SE assigned a member of the operations staff to make offsite notifications. The communicator drafted a Nuclear Accident Reporting System (NARS) message and had it approved by the SE. When the communicator tried to perform the notification to the State using the NARS telephone, the State agency's communicator said that the NARS phone was not working properly and requested that he be contacted using commercial telephone lines. The communicator and other CR staff, who the communicator asked for help, were confused on which telephone numbers should be used to call the State. Although these numbers are printed at the bottom of the NARS message form, it took the communicator eight minutes to establish an alternate means of communication after the NARS phone was considered to be unavailable.

Shortly after the notifications were made to the State agencies, the SE quickly recognized conditions which warranted an Alert declaration and promptly made that declaration at 18:57 hours. The communicator again drafted a NARS form, had it approved by the SE, and transmitted it to the State agencies in a timely manner.

At 19:10 hours, the communicator had not yet notified the NRC of the UE. Since the communicator was rushing to make this notification within the one hour regulatory time limit, the message transmitted was not complete and concise. Since the Alert declaration had taken place prior to any communication with simulated NRC officials, the communicator informed the NRC of both the UE and Alert declarations during one call; however, the communicator chose to fill out separate Event Notification Worksheets for each declaration.

At 19:56 hours, the communicator performed a required hourly update notification to the State. The communicator completed the update form as he made the notification. As he was performing this notification, he found it necessary to ask the State communicator to wait while he gathered additional information. This same behavior was observed during the NRC notification of the Site Area Emergency (SAE) at 20:28 hours. The communicator kept the NRC communicator waiting as he gathered information as to what time the control rods were inserted, incorrectly thinking that all the rods had been inserted. After the SE informed him that not all the rods had been inserted, the communicator inquired as to how many rods had not inserted, and what time the ATWS occurred. All relevant information should have been gathered by the communicator and approved per procedure before the State and NRC notifications were initiated. The quality and clarity of offsite agency notifications by Control Room personnel is an Open Item (No. 50-373/91021-01).

The ATWS occurred at 20:00 hours. The SE correctly recognized this event as a SAE and promptly declared the SAE at 20:05 hours. He directed the Shift Supervisor (SS) to implement the Emergency Operating Procedures for an ATWS event so that he could continue to perform the duties of Acting Station Director (SD) until the SD in the Technical Support Center (TSC) was ready to assume command and control.

Soon after the SAE declaration, the SE conferred with the SD. The SE agreed to complete initial offsite notifications regarding the SAE using the CR communicator; however, this communicator was very busy and these notifications could have been more efficiently completed by TSC staff. Offsite agency notifications were accomplished in a timely manner.

Overall, the SE demonstrated good command and control over the emergency response effort. The internal briefings by the SE to the CR staff were very good; however, they became infrequent after the ATWS. Log keeping in the CR was adequate to reconstruct the simulated events; however, the SE was the only individual who kept a detailed log. In contrast, the SS kept less detailed notes on scratch paper.

No violations or deviations were identified.

b. Technical Support Center (TSC)

The Technical Support Center (TSC) was activated following the Alert declaration. Station procedure LZP-1320-1, "Augmentation of Plant Staffing", indicates that the TSC should be fully operational within 60 minutes of a decision to activate the facility; however, the TSC was not operational until 75 minutes after the Alert declaration.

Incoming TSC staff immediately signed in and began to initiate the proper steps for activation of their respective positions. The Maintenance Director, in particular, arrived approximately five minutes after the Alert declaration and immediately began tracking and monitoring ongoing repair activities.

Status boards were generally well maintained with accurate information. The environs status board and the prioritized OSC team tracking board were excellently maintained with very clear and complete information. The latter board was effectively used to establish and revise repair priorities during the exercise. The plant status board contained information which was not as current as the other boards. The delay in updating this board was primarily due to slow transfer of data over the telephone from the CR.

Communications between the TSC and other facilities were generally good. Upon arrival, TSC staff made contact with the CR and the Operational Support Center (OSC). However, there was some difficulty in obtaining current values of critical plant parameters from the CR. TSC staff often had to wait for information and at times they had to resume communications after a delay. The TSC staff were persistent in obtaining the needed data and answers to questions. The Health Physics Network (HPN) communicator appeared to be in constant communications with simulated NRC officials and would immediately obtain answers to questions.

When activating the facility, the SD did not appear to recognize that minimum staffing had been attained in the TSC by 19:45 hours. The TSC staff was fully staffed at 20:15 hours. The SD was briefed by the SE three times between 19:48 and 20:20 hours. After these briefings, the SD briefed the entire TSC staff and made them cognizant of current plant conditions. Command and control was not transferred from the CR to the TSC until about 35 minutes after minimum TSC staffing was achieved. After 20:00 hours, the CR crew focused on the ATWS, making turnover of command and control difficult at best. The TSC's SD should have striven to assume overall command and control shortly after the TSC's minimum staffing level had been achieved. During this scenario, if command and control would have been transferred prior to the ATWS, the CR would have benefitted by being able to concentrate more completely on changing plant conditions and less on reclassification decisionmaking and completing associated offsite notifications.

Command and control was eventually transferred from the CR to the TSC in a very organized manner. The SD followed the appropriate checklists and held briefings with the SE before the turnover. Since the plant was currently upgrading the event classification from an Alert to a SAE, the SD was very specific as to what tasks the TSC would perform. The SD took responsibility for verifying the EAL used as a basis for declaring a SAE and left offsite notifications for the CR to complete. Since the CR had begun preparing the State notification message, it was appropriate for them to complete this initial notification. However, the TSC should have taken over the responsibility of initially notifying the NRC of the SAE. The SD only later verified that all SAE notifications had been made by the CR staff.

At 20:23 hours, a Public Address (PA) announcement called for the assembly of all onsite personnel. Within the TSC, this announcement was barely audible and the assembly siren could not be heard; however, multiple, repeated announcements over the PA system were effective in alerting TSC staff of the need to be accounted for. Accountability of all onsite personnel was achieved well within the 30 minute time limit.

The SD held timely and complete staff briefings. He made the staff aware of the current plant conditions, current priorities and goals. In general, these briefings were spaced at 20 to 30 minute time intervals. The SD involved the other TSC directors by having them inform all TSC staff of information they had gained, their concerns, and their specific priorities and goals. More frequent briefings may have been warranted when the SD took command and control of the response efforts. At this time it may have been beneficial to more closely organize the numerous activities taking place. This may have also helped to lower the noise level in the facility.

Overall, the TSC staff provided a well organized effort to mitigate the events of the exercise. Excellent discussions occurred between the functional groups. The various mechanical failures and system losses were properly addressed by the TSC staff. The TSC developed insightful methods of eliminating an unmonitored release path through the broken instrument line at a containment penetration. They postulated using the Standby Gas Treatment System (SBGT) and using the negative pressure in the turbine building to create a monitored pathway if any release was to occur. Also, they devised alternate methods of repairing the leak in the sheared instrument line via crimping and plugging the line. These solutions demonstrated good teamwork and use of resources.

Although the Operations Director received help in performing his duties, he appeared somewhat overburdened in completing all of his tasks. He was responsible for establishing job priorities, maintaining communications with the OSC, assigning jobs, obtaining updates of team progress from the OSC and obtaining job requests. His assistant updated a status board. Consideration should be given to delegating his communications with the OSC to an assistant and providing status boards which better organize information on teams' status and accomplishments.

At 23:15 hours, a 24 hour scenario time jump was introduced so that initial recovery planning capabilities could be demonstrated. Onsite recovery was very completely discussed in the TSC. The SD checked the criteria necessary for recovery with his staff. Areas of concern and plant equipment in need of maintenance were outlined and discussed with the EOF.

No violations or deviations were identified.

c. Operational Support Center (OSC)

Prior to the Alert declaration, a master mechanic and a master electrician effectively managed the activities of two inplant teams, which the scenario postulated as already working on routine repair tasks at the beginning of the exercise. They ensured that the senior technician overseeing both teams understood each task's priority and deadline. They obtained periodic updates on the status of completing each task.

The master mechanic and master electrician were adequately informed of the Unusual Event and Alert declarations through the use of radios and telephone calls to their office area. PA announcements on both declarations were clearly audible in the adjacent maintenance shop. Upon hearing the Alert declaration announcement, maintenance technicians left the shop and proceeded to the OSC, while the master mechanic went to the TSC to assume responsibilities as the Maintenance Director.

The OSC was activated in an orderly and timely manner following the Alert declaration. The OSC Director and Supervisor utilized activation checklists to aid them in making the facility operational. The facility was staffed and functional within 16 minutes of the Alert declaration.

The OSC Director efficiently utilized his resources in delegating tasks within the OSC. The OSC Director immediately assigned an operations person to maintain the status board and to function as a communicator. The OSC Supervisor quickly assigned Radiation Technicians (RTs) to zero dosimeters, obtain personnel dose histories and perform habitability surveys.

Staff briefings were frequent and complete. The OSC Director initially briefed available staff and discussed the need to dispatch the first team. Team briefings were delegated to a RT, who thoroughly reviewed radiation survey maps, low dose areas, and dosimetry and equipment needs. The OSC Supervisor appropriately became involved in these discussions when dose extensions were necessary.

The OSC was run in an organized and effective manner. OSC personnel remained well informed of ongoing events and changing plant conditions. This was evident by the quality of information on the Abnormal Plant Conditions status board. RTs performed and documented habitability surveys.

The OSC maintained very good lines of communication with the TSC and inplant teams. Priorities set in the TSC were clearly communicated to the OSC. Inplant teams were paged if additional information needed to be relayed to them or if updates were necessary. On one occasion, a request came from the licensee's corporate office to attempt to use a broom handle to plug the broken instrument line. The team was promptly paged and given these additional instructions.

The Team Tasks status board was adequately utilized. Teams were identified by the tasks which they were to perform. Identifying teams by their assigned tasks could become confusing if multiple teams are sent out to complete the same task. Under such conditions, it is conceivable that two teams could be identified identically. Consideration should be given to tracking the teams by number or letter to prevent any confusion in team identification.

Three inplant teams were accompanied following their dispatch from the OSC. Overall, each team's members demonstrated a very good understanding of their assigned tasks. Appropriate procedures and systems drawings were obtained and properly utilized. A RT, equipped with a calibrated and operable survey instrument, accompanied each team and provided effective support to minimize simulated exposures. All team members demonstrated the proper use of appropriate protective clothing and exhibited a knowledge of good radiation protection practices.

A team consisting of two Mechanical Maintenance (MM) technicians and a RT were dispatched from the OSC to assess damage to a Unit 1 containment penetration line. Team members obtained Self-Contained Breathing Apparatus (SCBAs) and several tools, which they hoped would be useful in making temporary repairs to the broken line. The attempts to assess the line's damage were interrupted by the simulated Unit 1 trip, which was postulated to cause liquid to spray from the damaged line and contaminate one MM technician. The RT quickly ordered the technicians to withdraw to a safe location and reported the leak and the personnel contamination event to OSC supervision.

Upon the sounding of the very audible assembly siren and in accordance with procedures, the team members removed their outer gloves and booties and promptly proceeded to the nearest onsite assembly area. At the assembly area, the RT ensured that the MM technicians remained segregated from other persons in the area until the entire team's contamination status could be further assessed. The RT used a nearby telephone to request that a second RT report to this assembly area in order to survey each team member.

The second RT reached the team in several minutes; however, he wore no gloves or booties while he walked among the three team members and used a survey instrument to initially assess their contamination status. He correctly determined that only one MM technician was contaminated. He utilized the same telephone which the team's RT had used to summon him in order to report his findings to OSC supervision. The second RT should have donned booties and gloves as a precautionary measure before approaching this inplant team to reduce the potential for becoming contaminated and possibly further spreading contamination. After the initial survey, the second RT briefly left the area. He returned wearing gloves and shoe covers. He then performed more detailed contamination surveys of the team and the area. The RT adequately demonstrated how the contaminated area would have been posted and roped off. The RT adequately demonstrated proper contamination control techniques with respect to his use of gloves and booties and the temporary storage of team members' protective clothing.

A team consisting of an Electrical Maintenance (EM) foreman, two EM technicians and a RT went to assess an operability problem with the Standby Gas Treatment System (SBGT). A mockup of the inoperable component was available for greater realism. The team adequately described how they would check the system's electrical components. System drawings brought by the foreman to the job site were referenced as needed. The foreman periodically reported his team's findings and assessments to his OSC supervision. Once the defective component was identified, the team members adequately described how they would manually open the damper, which had failed in the closed position, and ensure it would remain open.

A team consisting of two operators and a RT were dispatched from the OSC in order to simulate the venting of seven Hydraulic Control Units (HCUs) so that the associated control rods would fully insert into the Unit 1 reactor. Prior to leaving the OSC, the RT ensured that the operators understood that they were authorized to receive a simulated exposure in excess of normal limits while working in a simulated high radiation field.

The team efficiently obtained and correctly donned double sets of protective clothing. SCBAs were obtained; however, their use was simulated. The RT provided good support to the operators as they approached the job site and also at the site, so that their simulated exposures would remain within authorized limits.

The operators thoroughly described how they would implement the appropriate steps of the venting procedure and demonstrated good knowledge of the equipment needed to perform the venting task. Both operators demonstrated how they would concur that the proper vent valve had been located prior to simulating the venting of the associated HCU. The lead operator maintained very frequent communications with the CR personnel before and after each vent valve would have been opened so that fluid flow would be known in the CR and so that the team would know whether their efforts resulted in full control rod insertion.

No violations or deviations were identified.

d. Emergency Operations Facility (EOF)

The Emergency Operations Facility (EOF) took a very long time to activate, in view of the relatively slow moving operational scenario and the prestaging of some EOF participants at a local motel. The first announcement of an attempt to transfer command and control to the EOF's Manager of Emergency Operations (MEO) occurred approximately one hour after the Site Area Emergency declaration was made. The MEO did not assume command and control for an additional 45 minutes, after the facility's minimum staffing requirements had been met. The untimely transfer of command and control from the TSC to the EOF is an Open Item (No. 50-373/91021-02).

The EOF staff remained well aware of the priorities for corrective action throughout the exercise. Lists of priority tasks were conspicuously posted at all major EOF working group areas and were effectively used as a management tool. However, there was some minor confusion in the EOF with respect to the priorities for corrective action established by the TSC. After about 21:20 hours, the EOF misunderstood the priority of establishing "Containment Control" (per the Emergency Operating Procedures) as "Contamination Control". Since both topics were appropriate priorities for the scenario conditions, and since the TSC was closely tracking the operational aspects of Containment Control, this miscommunication did not present a problem.

Discussions between the MEO in the EOF and the SD in the TSC at about 23:27 hours indicated that neither the SD nor MEO were aware of emergency plan procedures for assessing core damage. These procedures, which use drywell radiation level and coolant sample data, are contained in the emergency plan implementing procedures and were accomplished by the TSC technical staff. As late as 21:45 hours, it appeared that neither the TSC nor EOF staff knew the status of injection of boron to the reactor vessel using the Standby Liquid Control System.

Notifications were appropriately made in the EOF. All offsite notification forms were completed and transmitted in a timely fashion from the EOF.

Following the time at which the breach in containment was secured, drywell pressure continued to trend downward, while drywell temperature went up. Reactor pressure was steady and drywell radiation was going down. No one in the EOF or TSC questioned whether this combination of trends could be indicative of a continuing breach of containment, considering the containment would have been at, or near, saturated conditions. Neither the TSC or EOF staff recognized that the data were inconsistent with a sealed drywell, or questioned the integrity of either the containment or the data obtained.

The recovery phase discussions and planning efforts, particularly those set forth by the TSC, were very comprehensive and detailed. All major aspects of repair actions, logistics arrangements, financial arrangements, staffing plans, requests for outside assistance and other necessary plans were discussed.

No violations or deviations were identified.

e. Offsite Monitoring Teams

Offsite monitoring teams were not directly observed during this exercise.

No violations or deviations were identified.

7. Exercise Scenario, Controller Performance and Critiques (IP 82301 and 82302)

The licensee submitted the exercise scope and objectives and a draft scenario package for review by the NRC within the established timeframes. No major flaws or problems were noted in the scenario. Some very minor inconsistencies in radiological data were noted; however, these inconsistencies had no impact on exercise performance.

Overall control of the exercise was adequate. One major error was made by a controller in giving radiological data. At 21:15 hours, a controller in the turbine building trackway area, which is also an onsite assembly area, apparently misread scenario data and provided data indicating airborne radiation levels of .35 maximum permissible concentration. The conditions were intended to be "As Read". This caused confusion for both the players and controllers, who believed this value to be an actual concentration instead of simulated data. A minor error was made by another controller accompanying an inplant team. This controller told the team that their assigned task would not be successful for about 20 minutes in order to maintain the scenario time line. This error was quickly corrected by second onscene controller. The timing information was not prematurely reported to the OSC by the team.

The licensee's controllers and evaluators held critiques with the participants in each facility immediately following the exercise. Lead controllers met the following day to discuss observed strengths and weaknesses for each facility and the overall exercise. The licensee presented their preliminary finding to the NRC team. The licensee's findings were in good overall agreement with the findings developed independently by the inspectors.

No violations or deviations were identified.

8. Exit Interview

The inspectors held an exit interview on November 22, 1991, with the licensee representatives denoted in Section 2. The inspectors discussed the scope and findings of the inspection. The inspectors indicated that overall exercise performance was very good. Some problems in notification of offsite officials from the Control Room were noted. In addition, the Emergency Operations Facility (EOF) was slow to activate considering the pace of the scenario at that time and the prepositioning of some EOF players in the local area.

The licensee was also asked if any of the topics discussed during the exit interview were proprietary. The licensee responded that none of the matters discussed were proprietary.

Attachments:
1. Exercise Scope and Objectives
2. Exercise Scenario Narrative Summary

LASALLE COUNTY NUCLEAR POWER STATION
1991 GSEP EXERCISE
SCOPE OF PARTICIPATION

DATE: November 20, 1991

TYPE: CECo Only, Off-Hours

OFFSITE AGENCY PARTICIPATION:

None

PURPOSE:

Test the capability of the basic elements within the Commonwealth Edison Company GSEP. The Exercise will include mobilization of CECo personnel and resources adequate to verify their capability to respond to a simulated emergency.

CECo FACILITIES ACTIVATED:

- Control Room
- TSC
- OSC
- EOF

CECo FACILITIES NOT ACTIVATED:

- JPIC
- CEOF

The "Exercise" Nuclear Duty Person will be notified of simulated events as appropriate on a real-time basis. The "Exercise" Nuclear Duty Person and the balance of the Corporate Emergency Response Organization will be prepositioned close to the Mazon EOF to permit use of personnel from distant locations.

Commonwealth Edison will demonstrate the capability to make contact with contractors whose assistance would be required by the simulated accident situation, but will not actually incur the expense of using contractor services to simulate emergency response except as prearranged specifically for the Exercise.

Commonwealth Edison will arrange to provide actual transportation and communication support in accordance with existing agreements to the extent specifically prearranged for the Exercise. Commonwealth Edison will provide unforeseen actual assistance only to the extent that the resources are available and do not hinder normal operation of the Company.

LASALLE NUCLEAR POWER STATION
1991 GSEP EXERCISE
NOVEMBER 20, 1991

OBJECTIVES LIST

STANDARD OBJECTIVES FOR ANNUAL GSEP EXERCISES AND DRILLS

1. Assessment and Classification

Objectives

a. Demonstrate the ability to assess, within fifteen (15) minutes, conditions which warrant initiating a GSEP classification. (CR, TSC EOF)

b. Demonstrate the ability to determine applicable Emergency Action Levels (EALs) within fifteen (15) minutes of initiating classification. (CR, TSC, EOF)

2. Notification and Communication

Objectives

a. Demonstrate the ability to correctly fill out a NARS form. (CR, TSC, EOF)

b. Demonstrate the ability to notify appropriate State and local organizations within fifteen (15) minutes of an Emergency classification or significant change in NARS information.

c. Demonstrate the ability to correctly fill out NRC Event Worksheets. (CR, TSC, EOF)

d. Demonstrate the ability to notify the NRC immediately following State notification and within one (1) hour after making an Emergency classification. (CR, TSC, EOF)

e. Demonstrate the ability to provide hourly information updates to the States and within thirty (30) minutes of changes in latest reported conditions on the State Agency Update Checklist. (CR, TSC, EOF)

f. Demonstrate the ability to contact appropriate support organizations that would be available to assist in an actual emergency within one (1) hour of conditions warranting their assistance. (e.g. M+T, Teledyne) (CR, TSC, EOF)

g. Demonstrate the ability to maintain an open-line of communication with the NRC on ENS upon request. (CR, TSC, EOF)

h. Demonstrate the ability to maintain an open-line of communication with the NRC on HPN upon request. (TSC, EOF)

i. Demonstrate the ability to provide hourly information updates to the NRC and within thirty (30) minutes of changes in reportable conditions when an open-line of communication is not maintained. (ENS and HPN) (CR, TSC, EOF)

j. Demonstrate the ability to provide adequate informational announcement (e.g. assembly instructions, changes in plant conditions) over the plant public address system. (CR)

3. Radiological Assessment and Protective Actions

Objectives

a. Demonstrate the ability to collect and document radiological surveys taken for conditions presented in the scenario. (TSC, EOF, OSC)

b. Demonstrate the ability to trend radiological information for conditions presented in the scenario. (TSC, EOF, OSC)

c. Demonstrate the ability to take appropriate protective actions for onsite personnel in accordance with Station procedures. (e.g. respiratory protection, protective clothing, KI) (OSC, TSC)

d. Demonstrate the ability to adequately prepare and brief personnel for entry into High Radiation Areas in accordance with Station procedures and policies.

e. Demonstrate the ability to issue and administratively control dosimetry issued to teams dispatched from the OSC in accordance with Station procedures. (OSC)

f. Demonstrate the ability to establish radiological control in accordance with Health Physics procedures. (TSC, OSC, EOF)

g. Demonstrate the ability to monitor, track and document radiation exposure for inplant operations and maintenance teams in accordance with plant procedures. (TSC, OSC)

h. Demonstrate the ability to perform decontamination of radioactively contaminated individuals and equipment in accordance with Station procedures. (OSC)

i. Demonstrate the ability to identify appropriate Protective Action Recommendations (PARs) within fifteen (15) minutes of obtaining an Offsite Dose Projection or using a Protective Action Flowchart. (TSC, EOF)

j. Demonstrate the ability to calculate Offsite Dose Projection in accordance with appropriate procedures. (TSC, EOF)

k. Demonstrate the ability to perform contamination control onsite in accordance with plant procedures. (e.g. area access control, drinking, water, food supplies, return to normal use criteria) (TSC, OSC)

l. Demonstrate the ability to collect RCS and Containment Atmosphere samples using Post Accident Sample System (PASS) equipment in accordance with PASS procedures and proper Health Physics controls. (CT, OSC)

m. Demonstrate the ability to perform Core Damage Assessments in accordance with the EPIPs. (TSC, EOF)

4 Emergency Facilities

Objectives

a. Demonstrate the ability to establish minimum staffing in the TSC and OSC within sixty (60) minutes of an Alert or higher Classification during an offhours event in accordance with procedures. (TSC, OSC)

b. Demonstrate the ability to transfer Command and Control authority from the Control Room to the TSC. (CR, TSC)

c. Demonstrate the ability to transfer Command and Control authority from the TSC to the EOF. (TSC, EOF)

d. Demonstrate the ability to establish minimum staffing in the Emergency Operations Facility within approximately one (1) hour of the Site Emergency classification in accordance with EOF procedures. (EOF)

e. Using information supplied by the Exercise scenario, demonstrate the ability to record, track, and update information on the Status Boards at lease every thirty (30) minutes. (CR, TSC, OSC, EOF)

f. Demonstrate the ability to document Operations and Maintenance Team activities in logs and on appropriate Status Boards. (OSC)

g. Demonstrate the ability to track in-plant job status in logs and on appropriate Status Boards. (CR, TSC, OSC, EOF)

h. Demonstrate the ability to exchange counterpart activity information between the ERFs at least every sixty (60) minutes. (CR, TSC, EOF, OSC)

i. Demonstrate the ability to update and disseminate information from the Electronic Status Board. (TSC, EOF)

5 Emergency Direction and Control

Objectives

a. Demonstrate the ability of the Directors and Managers to exert command and control in their respective area of responsibility as specified in procedures. (CR, OSC, TSC, EOF)

b. Demonstrate the ability to coordinate and expedite Operations and Maintenance activities during abnormal and emergency situations. (TSC, OSC, EOF)

c. Demonstrate the ability to prioritize resources for Operations and Maintenance activities during abnormal and emergency situation. (TSC, EOF, OSC)

d. Demonstrate the ability to acquire and transport emergency equipment and supplies necessary to mitigate or control unsafe or abnormal plant conditions. (TSC, EOF, OSC)

e. Demonstrate the ability of the Shift Engineer, Station Director, OSC Director and MEO to provide briefings and update concerning plant status, event classification, and activities in progress at least every sixty (60) minutes. (CR, TSC, OSC, EOF)

f. Demonstrate the ability to provide access for the NRC Site Team in accordance with Access Control procedures. (TSC, EOF)

g. Demonstrate the ability to interface the NRC Site Team. (TSC, EOF)

h. Demonstrate the ability to identify and designate non-essential personnel within thirty (30) minutes after deciding to evacuate the site. (TSC, EOF)

i. Demonstrate the ability of individual in the Emergency Response Organization to perform their assigned duties and responsibilities as specified in Generic GSEP. (CR, TSC, OSC, EOF)

6. Public Information

Objectives

None.

7. Recovery

Objectives

a. Demonstrate the ability to determine long-term recovery staffing requirements. (TSC, EOF)

OBJECTIVES TO BE DEMONSTRATED EVERY FIVE YEARS

8. Miscellaneous

Objectives

a. Demonstrate the ability to determine the magnitude of the source term of a release. (TSC, EOF)

b. Demonstrate the ability to determine the magnitude of a release based on plant system parameters and effluent monitors. (TSC, EOF)

c. Demonstrate the ability to calculate release rate/projected doses if the primary instrumentation used for assessment is offscale, or inoperable, or if the release is unmonitored. (TSC, EOF)

d. Demonstrate the ability to assemble and account for On-site personnel within 30 minutes of a Site Emergency declaration. (CR, TSC)

e. Demonstrate the ability to explain the evacuation route, brief personnel and arrange for traffic control within one (1) hour of starting site evacuation. (TSC, EOF)

f. Demonstrate the ability to collect and count field samples in accordance with Environmental Sampling procedures. (Field Teams, TSC, EOF)

g. Demonstrate the ability to perform dose rate measurements in the environment for conditions presented in the scenario. (Field Teams)

h. Demonstrate the ability to dispatch the Environs Teams within forty-five (45) minutes of determination of the need for field samples. (TSC, OSC)

i. Demonstrate the ability to control/coordinate Environs Teams activities in accordance with CEPIP (ED and EG) procedures. (TSC, EOF, Field Teams)

j. Demonstrate the ability to transfer control/coordination of Environs Teams activities from the TSC to the EOF in accordance with Station and EOF procedures.

k. Demonstrate the ability to exercise the GSEP between 6:00 p.m. and midnight. (CR, TSC, EOF)

l. Demonstrate the ability of the Security force to respond to an emergency situation in accordance with procedures. (Security)

m. Demonstrate the ability of the Security force to coordinate actions and interact with the Emergency Response Organization. (Security)

9. Public Information

Objectives

None.

10. Recovery

Objectives

a. Demonstrate the ability to identify the criteria to enter a Recovery classification in accordance with procedures. (TSC, EOF)

b. Demonstrate the ability to generate a Recovery Plan which will return the plant to normal operations in accordance with CECo policies and procedures. (TSC, EOF)

c. Demonstrate the ability to coordinate recovery actions with the State. (TSC, EOF)

LASALLE COUNTRY NUCLEAR POWER STATION
1991 GSEP EXERCISE
NOVEMBER 20, 1991

LIST OF EVENT SUMMARIES

Event 1 (1800 hrs.)	C RHR minimum flow valve 1E12-64C torque switch installation beginning.
Event 2 (1820 hrs.)	**(UNUSUAL EVENT)** Single engine plane impacts into the waste water treatment facility.
Event 3 (1840 hrs.)	**(ALERT)** Collapsed scaffolding severs drywell pressure sensing line 1NB27A.
Event 4 (2000 hrs.)	**(SITE AREA EMERGENCY)** Spurious Group 1 isolation --> ATWS (Auto fails/manual works) but 19 rods mechanically bind --> pressure/power spike damages fuel and causes a small steam leak inside the drywell.
Event 5 (2001 hrs.)	A mechanic working near the severed drywell penetration becomes internally and externally contaminated as fission gasses leak through the open penetration.
Event 6 (2006 hrs.)	Unit 1 standby gas treatment damper 1 VG 002Y fails closed.
Event 7 (2015 hrs.)	Unmonitored ground level releases occur as Reactor Building D/P is lost due to no Reactor Building ventilation and no standby gas treatment fans in operation.
Event 8 (2020 hrs.)	Possible - if tried - U1 and U2 VQ fans will trip due to a to common mode failure ("Factory Bad Breakers" were able to withstand starting current only once and tripped on 2nd start and will not reset).
Event 9 (2045-2300)	Venting of overpiston area in HCU's will be required to insert many of the mechanically bound rods (11 rods will drive in, 4 rods will vent in). Mechanical Maintenance will be required to assist operations on the last 4 rods. (Note: Radiological concerns will hamper operations in the HCU area).

A site assembly should be conducted, and an evaluation done to determine if nonessential personnel should be evacuated. Environs Field teams should be dispatched to monitor the environment and assess the release. (Note: Station Policy is to dispatch field teams at an Alert to avoid being delayed due to assembly.)

Maintenance crews should be dispatched to repair the SBGT flow control damper. Unit 1 SBGT should be repaired by approximately 2200 hours. Once SBGT restores Reactor Bulding D/P the ground level release will be terminated.

At 2300 hrs, all rods will be inserted and the site emergency due to EAL 3.K. will no longer be in effect, however multiple alerts will continue to exist and the Site Emergency should be continued.

RECOVERY
2400-0100

At 2330 hours, a 24 hour time jump will be interjected. Unit 1 will be in cold shutdown, and the severed drywell penetration line will be repaired. Determination if conditions warrant recovery, and planning for the recovery phase should take place.

Clean up of the contaminated areas and equipment, as well as permanent repairs to effected equipment should be addressed.

LASALLE NUCLEAR POWER STATION
1991 GSEP EXERCISE
NOVEMBER 20, 1991

ALERT
1840-2000

The Mechanical Maintenance Department reports that a scaffolding platform with lead shielding has collapsed damaging an instrument line.

EXPECTED ACTIONS

The Shift Engineer should dispatch an Operator to assess the damage to the instrument line. The Operator will report back that it is the instrument line at containment penetration I-13 and it has been severed approximately 1 inch from the containment wall. There will not be any water or steam coming out of the pipe. A Rad Protection Tech should be dispatched to survey the area.

A GSEP Alert should be declared per EAL 2.G. (unisolable breach of the containment). A review of appropriate reference material should be done to determine the impact on plant operation. As a result of the review Tech Spec 3.0.3 should be entered.

The Mechanical Maintenance Department should evaluate the different possibilities to make a temporary repair to the instrument line to restore containment integrity. LES-EQ-112 will be completed along with associated post maintenance testing allowing "C" RHR to be declared operable.

SITE EMERGENCY
2000-2400

A spurious group 1 isolation will occur on a loss of condenser vacuum instrumentation failure. The Reactor Protection System (RPS) will fail to detect the MSIV closure but the manual scram will be successful. Following the scram, 19 rods will be mechanical bound at positions beyond notch 02 and as a result of the pressure/power transient, some fuel damage will occur and a small steam leak will develop in the drywell. As a result, drywell parameters; gross gamma, temperature, and pressure will increase, and fission products will escape the drywell into the Reactor Building via the severed instrument line. Once 1.69 psig in the drywell is reached, an incomplete group isolation II, IV, VII, IX, and X will occur due to the broken instrument line. The SBGT system will attempt to automatically start on high Reactor Building rad but the flow control damper will fail to reposition. Once the Reactor Building d/p decreases an unmonitored ground level release will occur.

EXPECTED ACTIONS

The TSC should declare a GSEP Site Emergency based on EAL 3.K, (failure of RPS auto and manual scram). The appropriate LGAs and LOAs should be followed by the shift operators. LOP-NB-09 should be followed to insert the control rods that failed to insert on the reactor scram. The shift operators should attempt to minimize the ground level release by performing LGA-09.

LASALLE NUCLEAR POWER STATION
1991 GSEP EXERCISE
NOVEMBER 20. 1991

NARRATIVE SUMMARY

INITIAL CONDITIONS

UNIT 1

Unit 1 is in Operational Condition 1 at 100% power. Reactor coolant activity has been trending up slowly for the last 4 days. Tech Staff and Chemistry are working on identification of the problem. LES-EQ-112 is in progress on 1E12-F064C, C RHR Minimum Flow valve. 1E12-F064C's torque switch was tripping and installation of a new torque switch is beginning. A second Electrical Maintenance crew is investigating the trip of the "C" VP Chiller on low freon. LIS-MS-106 Low Condenser Vacuum Isolation Calibration is in progress.

UNIT 2

Unit 2 is presently in a forced outage for repair of the Main Turbine Master Trip Solenoid. Unit 2 entered Operational Condition 3 approximately 36 hours ago for replacement of the master trip solenoid. Replacement of the charcoal on the B Train of SBGT is required due to inadvertent wetting of the charcoal. The work on SBGT, which started 24 hours ago, is reported to be progressing on schedule. The Tech Spec seven day timeclock, TS 3.6.5.3 action A, will expire on 11/26/91 at 1800.

UNIT COMMON

The Load Dispatcher reports the Mid-American Interconnection Network (MAIN) is experiencing frequency and voltage problems. LaSalle has been instructed to hold present megawatts and megavars loading to maintain area distribution voltage. The station has been informed that the National Guard will be conducting training exercises involving ground and air equipment that started on Monday and will be completed on Sunday.

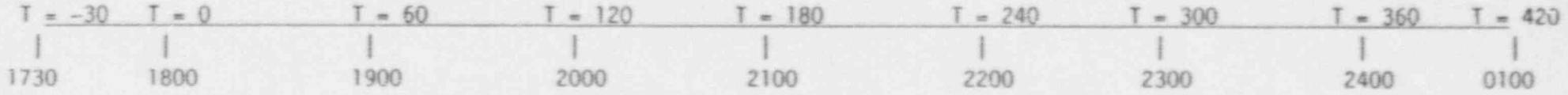
UNUSUAL EVENT
1820-1840

The Shift Engineer receives a call from Security that a plane has crashed north of the plant near the Wastewater Treatment Building.

EXPECTED ACTIONS

The Shift Engineer should dispatch an operator to investigate damage from the plane crash and a Rad Protection individual to administer first aid. Initial reports will be that there is structural damage to the building but no damage to equipment inside the building, and no fire. The pilot will have minor injuries and require medical attention but that will be handled by the National Guard personnel on the scene. The surveillances being conducted by the EM and IM Departments are expected to continue. The Shift Engineer is expected to classify this as an Unusual Event per EAL 6.H, (Aircraft impacted on site) and make the appropriate actions initiating the GSEP Unusual Event.

LASALLE 1991 EXERCISE
NOVEMBER 20, 1991
TIMELINE



1730 INITIAL CONDITIONS/TURNOVER

1800 ASSUME SHIFT/1E12-64C VALVE TORQUE SWITCH REPAIRS ONGOING

[UE] 1820 AIRCRAFT IMPACTS NEAR WASTEWATER TREATMENT FACILITY

[ALERT] 1840 COLLAPSED SCAFFOLDING SEVERS DRYWELL PENETRATION (MM INVESTIGATE)

1930 ELECTRICAL MAINTENANCE RETURNS 1E12-64C TO SERVICE

[SITE EMERGENCY] 2000 SPURIOUS GROUP 1/ATWS (FUEL DAMAGE AND A SMALL MSL LEAK IN THE D/W OCCURS)

2001 MECHANIC NEAR THE SEVERED D/W PENETRATION IS CONTAMINATED

2006 SBGT DAMPER FAILS (U1 AND U2 VQ FANS TRIP IF STARTED)

2015 REACTOR BLDG D/P IS LOST (RELEASE BEGINS)

2025 SOME RODS DRIVEN IN

2045 VENTING OF OVERPISTONS TO INSERT RODS BEGINS

2130 MM'S ASSIST IN VENTING OVER PISTONS

2200 SBGT OPERATIONAL (RELEASE TERMINATED)

2300 ALL RODS INSERTED

2305 COOLDOWN EXPECTED TO BEGIN (UNLESS AUTHORIZED BY ONE EARLIER)

2330 24 HR TIME JUMP

2400 ENTER RECOVERY

* RELEASE MEANS DETECTABLE RELEASE AND DOES NOT MEAN A RELEASE GREATER THAN THE UNUSUAL EVENT LEVEL.

ZLASALLE/12/1