U. S. Nuclear Regulatory Commission
Region I

Docket/Report: **50-277/92-19; 50-278/92-19** Licenses: **DPR-44, DPR-56**

Licensee: **Philadelphia Electric Company (PECo)**

Facility Name: **Peach Bottom Atomic Power Station (PBAPS)**

Inspection: **August 26-28, 1992**

Inspection At: **Delta and Coatesville, Pennsylvania**

Inspectors: Lenny Eckert 9/14/92
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Scope: Routine, announced emergency preparedness (EP) inspection and observation of the annual, full-participation exercise.

Results: Performance demonstrated the ability to protect public health and safety under a very challenging scenario. Strengths included attentiveness to on-site personnel safety, simulator control room command and control, Emergency Director knowledge, mitigation/restoration efforts, an excellent display capability in the emergency news center, site security performance, and the training provided by the challenging nature of the exercise. Exercise weaknesses were Emergency Operations Facility command, control and communications problems which resulted in non-recognition of the release pathway, weak Protective Action Recommendation formulation and lack of consideration of the use of potassium iodide for off-site field teams; and inaccuracy of information provided to the media.

DETAILS

1.0 Persons Contacted

The following individuals attended the exit meeting on August 28, 1992.

H. Abendroth, Atlantic Electric Company
C. Adams, Manager, Emergency Preparedness
M. Alper, Radiological Control and Chemistry
K. Bell, Communications
R. Bernhardt, Emergency Preparedness Training
W. Bradley, Operations
J. Brainerd, Maintenance Foreman
D. Chase, Chemistry
G. Daebeler, Manager, Site Support
A. Daugherty, Site Emergency Preparedness Supervisor
F. Diamond, Experience Assessment
P. DuBois, Communications
C. Dulin, Health Physics
R. Ebright, Emergency Preparedness
D. Foss, Regulatory Engineer
G. Gellrich, Shift Operation Manager
J. Gerhart, Emergency Preparedness
D. Hamilton, Emergency Preparedness
C. Hardee, Emergency Preparedness Training
S. Hess, Nuclear Maintenance
J. Jankauskas, Emergency Preparedness
J. Kernaghan, Maintenance Supervisor
J. Kinard, Supervisor, Off-site Support
R. Knieriem, Delmarva Power Company
J. Kusnersyk, Security
H. Langley, Emergency Preparedness
S. Maingi, Nuclear Engineer, PA Bureau of Radiation Protection
R. Mandik, Supervisor, Limerick Support
D. Meyers, Superintendent, Technical
M. Moore, Emergency Preparedness
D. O'Connell, Radiological Control and Chemistry
J. Purcell, Health Physics
E. Riley, Emergency Preparedness
J. Robinson, Security
R. Scholz, Manager, Radiological Control and Chemistry
M. Shuler, Emergency Preparedness
W. Shych, Emergency Preparedness
D. Smith, Senior Vice President - Nuclear
R. Smith, Senior Health Physicist
R. Speakman, Maintenance Foreman

J. Stankiewicz, Superintendent, Training
M. Utz, Chief Security Coordinator
A. Wasong, Supervisor, Experience Assessment
J. Wilson, Superintendent, Maintenance and I&C
N. Yost, Emergency Preparedness

The inspectors also interviewed and/or observed the actions of other licensee personnel.

2.0 Emergency Exercise

The Peach Bottom Atomic Power Station conducted a full-participation exercise on August 26, 1992, from 3:00 p.m. to 10:30 p.m. The Commonwealth of Pennsylvania and the State of Maryland participated. The Federal Emergency Management Agency observed off-site activities.

2.1 Pre-exercise Activities

Exercise objectives were submitted to NRC Region I on May 22, 199[illegible]e complete scenario package was submitted to the NRC on June 26, 1992. Following NRC review of the submitted scenario, Region I representatives had telephone conversations with the licensee's emergency preparedness staff to discuss the scope and content of the scenario.

Minor revisions were made to the scenario, which provided a challenging test of the major portions of the Peach Bottom Atomic Power Station Emergency Plan and its Implementing Procedures. The scenario also provided the opportunity for the licensee to demonstrate those areas previously identified by the NRC as being in need of corrective action.

NRC observers attended an August 26, 1992 licensee briefing on the revised scenario. The licensee stated that certain emergency response activities would be simulated and that controllers would intercede in exercise activities to prevent disrupting normal plant activities.

2.2 Exercise Scenario

The scenario provided an excellent test of the PBAPS Emergency Response Organization's (ERO's) ability to analyze and mitigate a severe accident. From this viewpoint, the nature of the scenario was such that performance vulnerabilities were identified that could have escaped detection by a less challenging scenario. The scenario was particularly challenging to dose assessment staff, security, and systems engineering. Information in the scenario package was excellently presented.

The scenario included the following simulated events at Unit 2.

- A bomb threat that led to the declaration of an Unusual Event ("Credible sabotage or bomb threat").

- Control Rod Drive (CRD) Pump "B" trip.

- Bomb discovered on the RHR "A" injection line, leading to the declaration of an Alert ("Suspected bomb or sabotage device discovered").

- The Unit 2 Emergency Service Water (ESW) Outlet Block Valve was shut and disabled.

- Unit 2 Residual Core Isolation Cooling was disabled.

- [illegible] Relief Valve (SRV) "C" stuck open.

- A manual reactor scram was initiated. An Anticipated Transient Without Scram (ATWS) occurred due to a hydraulic lock on the scram discharge volume. The Standby Liquid Control (SLC) system power supply breakers failed. These events led to the declaration of a Site Area Emergency ("Scram condition, reactor not shutdown and torus temperature above 110 deg. F").

- SRV "C" shut, inhibiting operator efforts to maintain level/power control through a reduction in Reactor Pressure Vessel (RPV) water level.

- All RHR pumps were lost due to the loss of coolant flow (ESW disabled) and of the E-42 vital bus.

- A bomb explosion on the "A" feedwater line causing open-ended feedline breaks. Additionally, the feed check valves failed open. These events led to the declaration of a General Emergency ("Scram condition with reactor level < -226" on active fuel range level for 3 minutes AND containment pressure > 20 psig.").

- A filtered release from the reactor to the drywell via the feed line rupture, from the drywell to the Reactor Building via the feed line rupture outside containment, from the Reactor Building to Standby Gas Treatment, and then to the main stack.

- Recovery plan development and exercise termination.

2.3 Activities Observed

The NRC observed the activation and augmentation of the Emergency Response Facilities and actions of the Emergency Response Organization staff. The following were observed:

1. Selection and use of control room procedures.
2. Detection, classification, and assessment of scenario events.

3. Direction and coordination of emergency response.
4. Notification of licensee personnel and off-site agencies.
5. Communications/information flow, and record keeping.
6. Assessment and projection of off-site radiological doses, and protective action recommendations.
7. Provisions for in-plant radiation protection.
8. Provisions for communicating information to the public.
9. Accident analysis and mitigation.
10. Accountability of personnel.
11. Post-exercise critique by the licensee.

3.0 Exercise Finding Classifications

Emergency preparedness exercise findings were classified as follows.

Exercise Strength

A strong positive indicator of the licensee's ability to cope with abnormal plant conditions and implement the Emergency Plan.

Exercise Weakness

Less than effective Emergency Plan implementation which does not, alone, constitute overall response inadequacy.

Areas for Improvement

An aspect which did not significantly detract from the licensee's response, but which merits licensee evaluation for corrective action.

4.0 Exercise Observations

The NRC team noted that the licensee's activation and use of the Emergency Response Organization (ERO) and Emergency Facilities was generally consistent with the Emergency Plan and Emergency Plan Implementing Procedures.

4.1 Overall Observations

Attentiveness to on-site personnel safety was identified as a strength between the Technical Support Center (TSC) and the Operations Support Center (OSC), based on the following.

- The Unit 2 and 3 Turbine and Reactor Buildings were promptly evacuated following the discovery of the simulated bomb on the "A" Residual Heat Removal (RHR) injection line.
- The Unit 2 Reactor Building was promptly evacuated following the simulated Loss Of Coolant Accident (LOCA).
- It was decided not to dispatch Damage Control Teams (DCTs) or Health Physics (HP) Technicians close to the Unit 2 Reactor Building when TSC management was struggling to identify release pathways.
- Security guards were dispatched with each DCT.
- HP performed frequent habitability surveys. The plant radiological status board was well maintained. When OSC general dose rates reached 10 mR/hr, the decision was made to relocate OSC operations to the Hot Shop where the doses were less.

The following indicator of the licensee's strong commitment to EP was identified.

- The Senior Vice President, Nuclear, observed the TSC during the height of activities and was extensively involved in post-exercise discussions. His knowledge of the team players, the EP implementing procedures, and the exercise details was thorough. These factors demonstrated strong senior management involvement in EP.

The following area for improved exercise control was identified. (Other problems were noted by the licensee during their critique.)

- The scenario/controllers did not provide enough information about the simulated bomb on the "A" feedwater line. If the Emergency Director had realized that a bomb had caused the LOCA, the TSC staff would not have had to deal with determining the cause of the LOCA and could have devoted more attention to accident mitigation.

4.2 Simulator Control Room (SCR)

Event recognition, classifications, and notifications (Unusual Event and Alert) were prompt and accurate. Although only one formal crew brief was noted, the Shift Supervisor (SS) kept the crew informed of changing plant conditions. The crew response was generally aggressive as to corrective actions and anticipated long term follow-up. For example, the crew alertly responded to a battery charger loss by removing unnecessary loads to minimize the battery drain. However, the crew did not pursue a common-cause for all Residual Heat Removal (RHR) pumps tripping on over-current (early identification of the disabled ESW block valve would have delayed the loss of RHR Pump "D" until the later loss of Vital Bus E-42). Briefings of TSC personnel were accurate and concise. Good communication from the SS to the NRC Resident Inspectors was observed.

The control room entered and executed the correct procedures. While performing T-245-2, "HPSW Injection into the RPV," the Control Operator (CO) missed Step 4.8.1, which resulted in a trip of the High Pressure Service Water (HPSW) pumps following start. The SS noted the

problem and determined that the "HPSW Mode 10A-S19A" keylock switch was out of position. Subsequently, the switch was repositioned and the pump started. This was an example of the strong SS command and control noted during the exercise.

The crew improperly diagnosed the position of the Standby Liquid Control (SLC) squib valves following the initial attempt to start SLC. Although the squib valves had fired, the crew concluded that the valves had not fired because the continuity lights remained lit. That is an expected condition when the switch is in either the "A" or "B" position, regardless of whether the valves had fired. The consequence was that the TSC discounted a breaker problem and incorrectly pursued a switch problem. That delayed the restoration of SLC.

The SS implemented T-117 incorrectly by establishing a Reactor Pressure Vessel (RPV) level band of -150" to -200" based on the determination that RPV level had been intentionally lowered. At no time during the exercise were conditions met for intentionally lowering RPV level below a level band of -150" to -172". Despite the RPV level band that was established, RPV level was recovered appropriately (as based on T-117 Note #4 and the limited injection capability). The improper level band identified a potential procedural deviation, but was of no safety consequence in this case since level recovery was not impeded and level was not intentionally lowered below -172" (the top of active fuel).

The following exercise strength was identified.

- Overall Shift Supervisor command and control.

No exercise weaknesses were identified.

No areas for improvement were identified.

4.3 Technical Support Center (TSC)

The Emergency Director (ED) and TSC staff tracked and analyzed plant conditions, followed trends, and anticipated plant conditions. Event recognition, classifications, and notifications were prompt and accurate. An intercom was used by the ED to simultaneously brief the TSC and OSC staffs. The briefings were detailed and sufficiently frequent.

System restoration priorities were effective as demonstrated by the quick preparation to inject water from the HPSW system into the core (this was initially intended to be a scenario success pathway; however, the controllers intervened to allow demonstration of off-site objectives). Another example concerned the downgrade in priority of the repair of the "A" and "C" RHR pumps and the "B" CRD pump as repair times were projected to be several hours. Additionally, the E-42 bus was appropriately given the highest priority because this bus powered the "D" RHR pump.

Nearly concurrent Protective Action Recommendations (PARs) were communicated to the States from the TSC and the EOF. Paragraph 1.3 of Emergency Response Procedure (ERP) 200, "Emergency Director," required the ED to "issue a PAR to off-site agencies within 15 minutes following declaration of a General Emergency until the Emergency Recovery Manager (ERM) assumes control of the emergency event." Paragraph 3.4 had a similar requirement. Attachment 2 (Step 5) required the ED to provide a PAR whenever the event was classified as a General Emergency (GE). Additionally, ERP-C 1200, "Emergency Recovery Manager," required the Emergency Recovery Manager (ERM) in the EOF to issue PARs to off-site authorities as a "non-delegable" responsibility. During this exercise, the ERM issued at least one PAR recommending evacuation to 10 miles while the ED Communicator was still notifying the Commonwealth of Pennsylvania representatives of the ED's PAR to evacuate to 5 miles. By that time, the ERM was in charge of the overall licensee response. In this case, it was decided between the ERM and the ED that the ED would communicate the PAR (the initial PAR described in Detail 4.5.1). Subsequently, the ERM issued a different PAR before the ED had finished communicating the earlier (and lesser) PAR. Licensee controls that prevent nearly simultaneous issuance of different PARs by different response managers need to be implemented to prevent recurrence of this problem.

ERP-200 (Paragraph 3.7) directed the ED to confer with the Dose Assessment Team Leader (DATL) to determine PARs and protective measures recommendations "until the EOF is activated." It also appeared that the TSC Dose Assessment Team (DAT), and perhaps some TSC managers, concluded that the TSC had no role in the assessment of off-site consequences once the EOF dose assessment staff had taken the lead. In this case, the TSC DAT was not aware of PAR status and did not utilize their expertise to help the TSC and EOF resolve discrepancies concerning the release pathway and projected doses. Comments by TSC DAT members indicated that they did not consider it proper for them to evaluate or "second guess" the reports and decisions from the EOF and the status of dose projections. After the exercise, the inspection team confirmed that the TSC dose assessment staff had been discouraged from working on confirmatory calculations. This was a conscious decision by the licensee's EP staff due to previous differences in projected doses between the TSC and EOF dose assessment staff during drills. NRC review concluded that the licensee had not addressed, in this case, instances of faulty dose projections, but had instead disabled a dose assessment function. In this exercise, that appeared to unnecessarily inhibit identification of the correct release pathway to the ERM.

The following exercise strength was identified.

- The ED displayed an excellent understanding of the plant, the abnormal conditions and the emergency procedures, and assured effective prioritization of restoration efforts.

- Timely recognition of the HPSW scenario success path, earlier than expected by the scenario development team. That necessitated controller intervention (i.e., the introduction of a HPSW Pump failure) for the demonstration of off-site objectives.

No exercise weaknesses were identified.

The following areas for improvement were identified.

- Eliminating concurrent or nearly concurrent issuance of different PARs by different response managers.

- Consideration of a change/clarification in the responsibilities of the TSC dose assessment staff in regard to concurrent calculation of off-site doses.

4.4 Operations Support Center (OSC)

The OSC was activated and staffed in a timely manner, i.e. 20 minutes after the Alert declaration. Command and control were good. Prioritization was good. Personnel were briefed, tracked, and de-briefed well.

Good Damage Control Team (DCT) initiative was demonstrated when they checked other 4 KV buses for damage (the DCT was sent to find the cause of 4 KV bus E-42 failure).

Maintenance Group Leaders performed well in analyzing the most effective means of returning out-of-service equipment/systems to service as demonstrated by the following:

- Discussions on the RHR Pump "A" bearing failure.
- Discussions on repairing Control Rod Drive Pump "B."

An intercom was used by the ED to simultaneously brief the TSC and OSC staffs. The briefings were detailed and sufficiently frequent. Status boards were well maintained. However, OSC management activities could have been better communicated to the OSC staff through additional staff briefs within the OSC.

Security Officers were dispatched with DCTs. Stationing a Security Group Leader in the OSC could have expedited team dispatch and enhanced communications with the Security Team Leader in the TSC.

No exercise strengths were identified.

No exercise weaknesses were identified.

The following areas for improvement were identified.

- Provision of more frequent OSC staff briefings.

- Consideration of stationing a Security Group Leader in the OSC for security-related events.

4.5 Emergency Operations Facility (EOF)

The EOF was activated in a timely manner. An intercom was used by the ERM to simultaneously brief the licensee, NRC, and State staffs in the EOF and Media Room. The ED plant status briefs were patched into the EOF and Media Room.

4.5.1 Protective Action Recommendations (PARs)

At 2009, due to the "A" feedwater line rupture, a General Emergency was declared per Table 1 of ERP-101, "Classification of Emergencies." The first PAR was to evacuate 2 miles around the plant and 5 miles downwind. This PAR was appropriate and consistent with federal guidance. Due to the exercise scenario, a second PAR would become necessary as plant conditions degraded.

At 2026, discussions between the ERM and Dose Assessment Team Leader (DATL) concluded that projected doses downwind of the plant would be similar at both 5 miles and 10 miles as Chi/Q, a dispersion factor, was calculated to be roughly the same at 5 and 10 miles downwind. No dose projection was made, no considerations of factors other than Chi/Q were evident, and plant data did not yet warrant a PAR change. The similar dispersion factors were characterized as "dose projection" by the ERM and were the basis for issuing a second PAR for evacuation two miles in all directions and 10 miles downwind. This was not in accordance with ERP-101 and raised questions by the States as to the licensee's projected doses. NRC review concluded that the basis for this PAR was inappropriate: considerations such as decay time and introduction of compounding Chi/Q errors make use of Chi/Q comparisons alone an insufficient basis for PARs (Chi/Q at 5 miles has an associated error. Chi/Q at 10 miles has an associated, and usually larger, error. Even when the ratio of the dispersion factor values is 1:1, the associated compounded uncertainty makes use of Chi/Q comparisons alone insufficient for PAR development).

At 2045, with main stack readings increasing, the ERM discussed updating the PAR with the Assistant ERM (AERM). Drywell radiation had exceeded 300,000 Rads/Hr and fuel damage was calculated to be 10%. A wind change of 30 degrees was indicated by the scenario data for the 320 foot meteorological tower. No further wind change was projected. Under these conditions, ERP-101 specified a PAR of 5 miles in all directions and 10 miles downwind, with the downwind area being radially expanded by two additional sectors. The ERM concluded, however, that conditions were deteriorating rapidly and that the multiple PARs during a short period (this was to be the third PAR in 35 minutes) could be counterproductive. He therefore chose to recommend evacuation of the entire 10 mile EPZ. NRC review concluded that the basis for this PAR was not appropriately included with the PAR transmittal. Specific inclusion of the inconsistency with dose projections (and the procedures which implement federal PAR guidance) and of the over-riding considerations would have provided the States with a PAR which specified that it recommended evacuation beyond that indicated by dose projections, and why. With such information, the States would have a better basis for weighing the comparative

risks of the radiation hazard, of the evacuation which federal guidance prescribed, and of the spontaneous evacuation hazard.

The licensee developed an ingestion pathway PAR. Specifically, the 2126 AERM log entry stated: "Based on iodine release, recommend place animals on stored feed and confiscate crops for 50 miles in sectors E to SW (inclusive)." The recommendation of crop confiscation without confirmatory radiation measurements, rather than for quarantine of crops until the potential radiation hazard could be assessed, could result in confiscation of crops which have not been contaminated. This PAR was in contrast with the 2120 EOF DATL log entry indicating a lesser recommendation of isolation of foodstuffs with subsequent analysis. Federal guidance in this regard (Federal Register Volume 47, No. 205, 10/22/82, Page 47083) indicates that the dose reduction from a protective action should be considered to offset the undesired health, economic, and social factors involved. Since confiscation without quarantine and assessment could be counter to that guidance, this PAR's validity was identified as an NRC observation for further licensee consideration. It was not reviewed by the NRC as part of exercise performance because there were no licensee ingestion pathway objectives for this exercise.

4.5.2 Command and Control and Communications

The ERM erroneously concluded that an unfiltered release pathway existed through the reactor building vent. The ERM and the EOF staff did not obtain the isolated status of that vent pathway from the TSC, which had this information, or use information available in the EOF (Group III isolation) to determine reactor building vent status. At least one individual (the Chemistry Team Leader) correctly concluded at the TSC that there was no release through the reactor building vent. However, that was not communicated to the ERM or EOF DAT.

ERP-C-1200, "Emergency Response Manager," Revision 0, 4/3/92, Step 3.11 directed the ERM to conduct briefings every 30-60 minutes for EOF personnel. The ERM did not use his team leaders for these briefings of EOF personnel, State representatives, and NRC site team members and thereby appeared to not use his staff's knowledge effectively. ERP-C-1200 step 2.3 directed the ERM to contact the ED to obtain a briefing using attachment title "ERM Turnover/Briefing form." The ERM did not utilize this attachment for the turnover and subsequent briefings. This was a potential factor in the failure to communicate the true release path to the EOF DAT (the TSC Chemistry Team Leader discovered the true release pathway.)

Protective actions were not aggressively pursued by the DATL/ERM for emergency workers in the plume. Potassium iodide was not directed to be taken with dose projections exceeding Environmental Protection Agency Protective Action Guidelines (projected thyroid doses were 100 rem/hour). (That the dose projections were inaccurate does not alter the fact that the information at hand indicated that potassium iodide administration to field teams was appropriate.)

In summary, command, control and communications problems led to the erroneous conclusion that a release path existed through the reactor building roof vent and compounded the discrepancies at the EOF in the area of protective actions.

4.5.3 Field Teams and Air Sampling

One licensee air sample was taken during the exercise. The licensee field team provided an erroneous radioiodine concentration calculation which confirmed the erroneous dose projections. The sample was taken late in the exercise and did not contribute to the belief that the reactor building vent was the release pathway. However, this erroneous calculation warrants further licensee attention.

Lack of multiple measurements for radioiodine contributed to the failure to identify the release path for dose projections Sharing field team data with the State responders could maximize State and licensee resources.

No exercise strengths were identified.

The following exercise weakness was identified.

- EOF command, control and communications problems which resulted in non-recognition of the release pathway, in PAR formulation flaws, and in absence of consideration of potassium iodide for use by field teams (IFI 50-277/92-12-01).

The following areas for improvement were identified.

- Assuring accurate calculation of radioiodine concentrations in air samples by field team members.

- Post-exercise licensee evaluation of increased Licensee and State exchange of field team measurement data.

4 6 Emergency News Center (ENC)

The ENC was manned about 80 minutes after the activation of the ERO pagers at the Alert declaration, and was declared activated 18 minutes after the Site Area Emergency (SAE) declaration.

This was the first time that this facility was used for an NRC-observed exercise. The facility was very well laid out for media briefings, for displaying graphics, and for TV camera hook-ups for the media. There also was a satellite system for viewing and actively participating in the Commonwealth of Pennsylvania news briefs in Harrisburg.

News Release Number 3 stated that the SAE was declared because there was a problem with a safety valve. The SAE was actually declared due to the Anticipated Transient Without Scram (ATWS) and torus temperature ≥ 110 degrees F. News Release Number 5 contained the same error as News Release Number 3.

News Release Number 8 stated, in the first paragraph, that "the reactor fuel sustained some damage. However, the reactor core was re-covered after less than 15 minutes, and the situation was stabilizing." Two paragraphs later it stated that there was "100 percent damage to the fuel cladding and that about eight percent of the fuel was melted." The first paragraph under-played the significance of eight percent fuel damage. Additionally, this news release stated that backup cooling systems responded appropriately despite the loss of the Residual Core Isolation Cooling System (RCIC) and the loss of the Low Pressure Coolant Injection (LPCI) System with the plant depressurized by a large LOCA.

No information was provided to the media concerning the LPCI and RCIC failures, the failure of HPSW to provide makeup to the core at about 2040 hours, or the restoration of Vital Bus E-42 at about 2045 (permitting high flow makeup through initiation of LPCI Pump "D").

The above examples indicate a need for more accurate news releases. Also, it did not appear that news releases were approved by a knowledgeable ERO manager prior to their release.

There were additional discrepancies in the dissemination of information provided at the media briefings. For example, the licensee indicated that one bomb and a dummy explosive device had been found. The Commonwealth of Pennsylvania stated that two bombs had been found in addition to the dummy explosive device. In another example, the licensee stated that the saboteur was a Philadelphia Electric Company employee while the Commonwealth of Pennsylvania stated that the saboteur was a contractor. These discrepancies showed that better information control and dissemination by the licensee could be beneficial to public perception of the nature of events.

The following exercise strength was observed.

- The capability to display pictures, graphs, graphic art displays on a screen for the media to see for explanation was excellent.

The following exercise weakness was identified.

- Accuracy of information disseminated (IFI 50-277/92-19-02).

The following area for improvement was identified.

- Approval of news releases by a knowledgeable ERO manager.

4.7 Security Activities

Overall, the security organization was able to handle its functions and responsibilities in an effective manner. After the announcement of evacuation of the Unit-2 and Unit-3 Reactor and Turbine Buildings, Security conducted accountability of all station personnel. Accountability was completed in 20 minutes, well within the 30-minute accountability goal. Communications were promptly established with the licensee's Security Team Leader, Safeguards/Security Coordinator, and the NRC regional counterpart. NRC requests for information were handled expeditiously. The NRC was promptly informed of new information as it was gathered. The professionalism displayed by the Security Officers assigned to the search teams demonstrated effectiveness of the security training.

Three security bomb search teams were dispatched. Teams consisted of a Security Officer and a Nuclear Plant Operator (NPO). The technical knowledge of the NPOs greatly enhanced the ability of the search teams to report their findings in great detail.

When a simulated explosive device was found on the Unit 2 "A" RHR injection line there was a minor delay in reporting this to the Command Post (CP) Coordinator (the command post was in the fire brigade equipment room). This occurred because only one phone line was available to the CP Coordinator and that was in use at the time.

The following exercise strength was identified.

- The security organization quickly, efficiently, and correctly responded to the security events provided by the exercise scenario.

No exercise weaknesses were identified.

The following area for improvement was identified.

- Consideration of adding additional communications for the fire brigade equipment room.

5.0 Licensee Action on Previously Identified Items

(CLOSED) (IFI 50-277/91-25-01) Break-down in data entry, distribution and tracking (communications); failure to provide a PAR; dose projection discrepancies; and failure to resolve differences with the Commonwealth's representative in the Emergency Operations Facility.

The 1991 exercise weakness was identified for a breakdown in data entry, distribution and tracking. A consequence was failure to issue a PAR. Data entry, distribution and tracking were acceptable during the 1992 exercise and there was no failure to issue a PAR. Since the 1991 exercise weaknesses appears to have been corrected it is hereby closed.

The following areas for improvement identified during the previous annual emergency exercise (Inspection Report Nos. 50-277/91-25 and 50-278/91-25) were acceptably demonstrated and not repeated:

Technical Support Center
- ED announcements concerning declarations and plant status.
- Communications with the Simulator Control Room.

Operations Support Center
- Provision of additional space.
- OSC Public Address System audibility.
- Procedural guidance concerning dose tracking.
- System to maintain accountability.
- Procedural guidance concerning DCT briefing forms.
- Provision of a computer terminal to access personnel records.

Emergency Operations Facility
- Record keeping.
- Emergency equipment operability.
- Maintenance of information on status boards.

6.0 Licensee Critique and Exit Meeting

The NRC team attended the licensee's exercise critique on August 28, 1992. Licensee lead controllers discussed their observations. The licensee's critique was constructive and provided a good self-examination. In general, items in need of corrective action were identified. The inspectors noted that the licensee critique identified the most of the concerns noted by the NRC inspection team. However, the licensee critique did not characterize the importance of the identified items. Such characterization is not a requirement and it is often not practicable to establish a detailed item priority listing right after an exercise. However, a general preliminary characterization (e.g., very important, important, minor) could aid licensee management and the NRC in their preliminary assessment of exercise performance.

Following the licensee critique, the inspectors met with the licensee personnel denoted in Detail 1 to discuss the inspection scope and findings. The exercise weaknesses were identified. The inspectors also discussed areas for improvement. The licensee acknowledged the findings and stated their intention to correct the discrepancies. During a subsequent telephone discussion with the licensee, licensee management proposed a meeting to discuss their corrective action plan.