U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-346/92004(DRSS)

Docket No. 50 46 License No. NPF-3

Licensee: Toledo Edison Company
Centerior Service Company
300 Madison Avenue
Toledo, OH 43652

Facility Name: Davis-Besse Nuclear Power Station, Unit 1

Inspection At: Davis-Besse Site, Oak Harbor, Ohio

Inspection Conducted: May 7-10, 1992

Inspectors: T. Ploski
H. Simons

6/2/92
Date

for T. Ploski
T. Ploski

6/2/92
Date

Accompanying Personnel: W. Levis
G. Cicotte

Approved By: J. W. McCormick-Barger
J. W. McCormick-Barger, Chief
Emergency Preparedness Section

6/4/92
Date

Inspection Summary

Inspection on May 12-15, 1992 (Report No. 50-346/92004(DRSS))
Areas Inspected: Routine, announced inspection of the Davis-Besse Station's emergency preparedness exercise involving: review of the exercise scenario (IP 82302); observations by four NRC representatives of key functions and locations during the exercise (IP 82301); and follow-up on licensee actions on previously identified items (IP 82301).
Results: No violations or deviations were identified. The licensee demonstrated a good response to a hypothetical scenario involving equipment failures; an injured, contaminated worker; and a radiological release. Although exercise performance was generally good, one exercise weakness was identified due to the failure to completely evaluate the internal exposure hazard to personnel assigned to inplant teams. In addition, one concern was identified regarding the documentation of radiological surveys. This concern will be tracked as an inspection follow-up item.

DETAILS

1. NRC Observers and Areas Observed

H. Simons, Control Room Simulator (CRS), Technical Support Center (TSC), Emergency Control Center (ECC)
T. Ploski, TSC, ECC
G. Cicotte, OSC and inplant teams
W. Levis, CRS

2. Persons Contacted

T. Meyers, Director, Technical Services
B. DeMaison, Emergency Preparedness Manager
B. Cope, Onsite Emergency Preparedness Supervisor
A. Antrassian, Licensing Engineer
D. Gordon, Emergency Planner
T. Reeves, Radiation Analyst, Ohio Emergency Management Agency

All of the above individuals and approximately 70 others attended the NRC exit interview held on May 15, 1992.

The inspectors also contacted other licensee personnel during the course of the inspection.

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

(Closed) Open Item No. 346/91006-01: During the 1991 annual exercise, documentation of briefings, debriefings, and radiological surveys in the Operational Support Center (OSC) was incomplete.

The licensee conducted training walkthroughs in the OSC on December 11, 1991, January 29, 1992 and March 4, 1992. During the 1992 annual exercise, briefing and debriefing documentation was very good. However, documentation of radiological surveys still needs improvement. This item is closed.

A new inspection follow up item will be opened specific to the documentation of radiological surveys. This item is discussed in Section 6.c of this report.

(Closed) Open Item No. 346/91006-02: The licensee should evaluate the training of Radiological Control Technicians (RCTs) and determine if fire response and first aid training are necessary to completely perform their jobs.

The licensee evaluated the needs for first aid and fire response training for RCTs and concluded that first aid

training was not necessary. They concluded that fire response training should be given to the RCTs. The licensee developed an appropriate training module and provided this training to RCTs. This item is closed.

(Closed) Open Item No. 346/91006-03: Failure to effectively communicate among emergency response facilities (ERFs) during the 1991 exercise.

The licensee provided additional training on the importance of communications during integrated emergency response facility drills. Performance during the 1992 exercise, relating to communications among ERFs, was good. All facilities were kept well informed of the changing plant conditions and response actions. This item is closed.

(Closed) Open Item No. 346/91006-04: During the 1991 exercise, the licensee failed to declare a General Emergency in a timely manner.

The licensee conducted training for senior Emergency Response Organization (ERO) management in which this weakness was highlighted. During the 1992 exercise, the Emergency Director promptly and correctly classified a General Emergency when conditions warranted the declaration. This item is closed.

4. General

An announced, daytime exercise of the Davis-Besse Emergency Plan was conducted at the Davis-Besse site on May 13, 1992. The exercise tested the licensee's emergency response organization's capabilities to respond to a simulated accident scenario resulting in a release of radioactive effluent. Attachment 1 describes the Scope and Objectives of the exercise. Attachment 2 describes the 1992 exercise scenario.

5. General Observations

a. Procedures

This exercise was conducted in accordance with 10 CFR Part 50, Appendix E requirements, using the Davis-Besse Emergency Plan and Emergency Plan Implementing Procedures.

b. Coordination

The licensee's response was coordinated, orderly and timely. If the scenario events had been real, the actions taken by the licensee would have been

sufficient to mitigate the accident and permit State and local authorities to take appropriate actions to protect the public's health and safety.

c. Observers

The licensee's controllers and observers monitored and critiqued this exercise along with four NRC observers. Also observing was a representative from the Ohio Emergency Management Agency.

d. Exercise Critique

The licensee's controllers and evaluators held critiques in each facility with participants immediately following the exercise. Lead controllers held a joint critique the day following the exercise to discuss observed strengths and weaknesses in each facility and the overall exercise. The NRC discussed observed strengths and weaknesses, developed independently by the NRC evaluation team, during the exit interview with the licensee which was held on May 15, 1992.

6. Specific Observations (IP 82301)

a. Control Room Simulator (CRS)

The licensee used the simulator for the first time during an annual exercise. The simulator improved the realism of the exercise and allowed for active participation of the operators.

The operators quickly identified a steam generator tube leak and estimated the leak to be about 15 gallons per minute (gpm). They initiated a plant shutdown as a Technical Specifications Limiting Condition for Operation had been exceeded. The Shift Supervisor (SS) promptly declared an Unusual Event (UE) due to primary to secondary leakage greater than 10 gpm.

At about the same time as the UE declaration, the Control Room Simulator (CRS) crew received a report of an injured worker. Communications between the accident scene and CRS were thorough. When it was reported that the injured worker was contaminated, the SS realized that the medical emergency should also be classified as an UE.

Notifications to the State of Ohio and the counties regarding the UE declaration were thorough and timely.

Information was also given regarding the status of the injured worker.

Before the communicator could notify the NRC of the UE, a reactor trip occurred and the SS upgraded the emergency classification to an Alert due to reactor coolant system (RCS) leakage greater than 50 gpm. He also felt plant conditions warranted the upgrade. The communicator notified the NRC of the UE, Alert, and injured worker within 60 minutes of the UE declaration. The State and counties were also notified of the Alert in a timely manner.

Although the CRS operators' performance was generally good, the crew never recognized that the no. 1 and no. 2 containment air coolers (CACs) were not functioning. Consequently, there was no priority placed on repairing no. 3, which was out of service as an initial condition in the scenario. The operators did not recognize that containment pressure was abnormally high given that two CACs and a containment spray pump were believed to be running.

The CRS crew could have been more aggressive in reducing RCS pressure and containment pressure given the release path which was an inaccessible valve with an unknown failure mechanism. More attention was needed to minimize the energy released to containment in order to eliminate the driving force from containment to the auxiliary building.

No violations or deviations were identified.

b. Technical Support Center (TSC)

Technical Support Center (TSC) activation began following the Alert declaration. A staff member simulated activation the Emergency Response Data System (ERDS) while the TSC was being activated.

The Emergency Plant Manager (EPM) and the Emergency Director (ED) conducted several teleconferences with the Emergency Assistant Plant Manager and the SS, who were located in the CRS, while the TSC and the Emergency Control Center (ECC) were being staffed. The EPM and the ED were well briefed on plant status prior to the ED assuming command and control of the emergency response about 30 minutes after the Alert declaration. The ED also assured that CRS personnel had informed State, county and simulated NRC officials of the Unusual event and Alert declarations; and he assured

that onsite assembly had been initiated after the Alert declaration.

The TSC was declared to be fully operational several minutes after the ED assumed command and control. TSC staffing was orderly and efficient.

The TSC staff began using status boards while facility activation was in progress. The overall use of status boards was very good throughout the exercise. Plant parameter data were updated at 10 to 15 minute intervals. A key events status board was updated as needed. Two "problem analysis" status boards were effectively used during the exercise to list information on action items assigned to TSC and OSC staffs, respectively. Status board information included the time goal for responding to each action item, rather than a numerical priority, as well as the responses to the action items.

During the exercise, information flow among key TSC staff remained very good. In addition to timely updating of status boards, the EPM or the TSC Engineering Manager conducted good periodic briefings during which each manager was expected to update all TSC staff on the progress of his group on current assignments. Current priorities were highlighted. The status of higher priority tasks assigned to the Operational Support Center (OSC) was reviewed. Comments from TSC staff were encouraged during these briefings. Following the General Emergency (GE) declaration, the Emergency Offsite Manager (EOM) from the Emergency Control Center (ECC) contributed to several of these periodic briefings by informing the TSC staff of the current protective action recommendations (PARs) and the protective actions being implemented by county officials.

The TSC Engineering Manager effectively managed groups of operations and systems engineers. As scenario events progressed, he assigned action items to the supervisor of either group as was appropriate. He insured that the groups shared information on action items.

An individual within the operations group closely monitored the Emergency Action Levels (EALs) throughout the exercise. Potentially relevant EALs for each emergency class were posted on a status board in the operations group's work area. The EPM also independently monitored the EALs.

The operations engineers made very good use of a computerized display to closely monitor the status of containment integrity. Large, laminated drawings were used to display detailed information on the status of each containment penetration and the path, which was eventually created, to the environment.

Key TSC staff closely monitored the status of each fission product barrier as scenario events progressed. They quickly recognized that the main steam line break within containment was associated with the steam generator which had a primary to secondary leak rate of about 80 gpm.

As containment radiation levels began increasing, the EPM, TSC Engineering Manager and the Radiological Controls (RC) Manager quickly assessed changing plant conditions and correctly recommended that the ED declare a Site Area Emergency (SAE). The ED promptly made this declaration.

Key TSC staff recognized that the steam line break and increasing containment radiation levels represented a loss of two of three fission product barriers. Increased attention was given to a detailed monitoring of containment integrity. Containment pressure, radiation levels and vent stack readings were closely monitored. Meanwhile, an engineer provided the good estimate that containment radiation levels equated to a gap release of up to 50 percent.

The Security Manager kept the EPM and ED adequately informed of the following: the status of the contaminated, injured worker being transported to a local hospital; the status of the personnel assembly within the protected area; and, after the Site Area Emergency declaration, the status of accountability for all persons within the protected area. All personnel were accounted for within about 30 minutes of the SAE declaration.

The ED, EPM, EOM and the TSC Engineering Manager demonstrated proper concern for degrading plant conditions by discussing the potential for a GE declaration based on plant conditions, even though these conditions included no indications of an abnormal release and or were not near the specific criteria found in several GE EALs.

System engineers evaluated the desirability of initiating containment spray prior to reaching the

Safety Features Actuation System (SFAS) setpoint value. A call to the appropriate vendor was simulated as part of this evolution. The engineering group soon advised the EPM that it was acceptable to initiate containment spray prior to reaching the setpoint value.

A separate assessment resulted in a conservative decision to start the two emergency diesel generators and let them run unloaded until sufficient assurance was obtained that there was no likelihood that offsite power supplies to the plant would be disrupted. The diesels were then shutdown.

A post accident reactor coolant sample was requested. The RC Manager correctly questioned the validity of a report that a contact dose rate reading on the sample vial was 35 mR/hr. He recognized that this value was very inconsistent with containment radiation level measurements during the period when the sample was collected. His concerns were reported to the EPM. The RC Manager requested verification of the report and eventually learned that the contact dose rate reading was about 1700 mR/hr, which was considered reasonable in view of the amount of gap activity estimated to have been released into containment.

The no. 1 containment spray pump was aligned and started by 11:00 am. The slow decrease in containment pressure was closely monitored. While the TSC staff noted that this pressure decrease was less than anticipated, it was not recognized that two CACs were not operating properly until about 1:30 pm. The operability of these air coolers should have been evaluated earlier by the TSC and CRS personnel.

At about 11:50 am, key staff in the ECC and the TSC quickly identified an abnormal release through the station vent stack which rapidly increased in magnitude. Operations engineers promptly identified which containment vacuum breaker valve had failed in the open position. This valve failure caused activity within containment to enter the annulus, where it was filtered before being released through the vent stack.

The ED, in consultation with the EPM, EOM and several other key staff, promptly and correctly declared a GE at 11:58 am due to the loss of all three fission product barriers.

At about 12:30 pm, the No. 1 containment spray pump became inoperable. The EPM, TSC Engineering Manager

and the OSC Manager conferred and assigned the highest priorities to restoring this containment spray pump and closing the motor operated containment vacuum breaker valve. By 12:30 am, they were notified that the pump's shaft had sheared. While efforts were initiated to replace the No.1 containment spray pump's shaft, greater attention was given to closing the containment vacuum breaker isolation valve.

The EPM, RC Manager and OSC Manager had several good discussions about having an inplant team open the valve's circuit breaker. They also decided to begin preparations to send a team into the annulus to manually close the valve if it could not be closed electrically.

The RC Manager recommended a 10 Rem dose limit for each volunteer entering the annulus. It was also decided that these individuals would be given KI. The EPM authorized this emergency worker dose limit and the use of KI.

The decision to send the team into the annulus was correctly changed when it was recognized that the dose rates within the annulus were 200 to 300 R/hr. The team could not have entered the annulus, reached the valve and the exited the annulus without each person's dose exceeding 25 R. The OSC Manager was directed to have the team approach the annulus to check for indications of steam coming from it.

Engineering staff, who had been closely monitoring containment pressure, predicted that pressure would decrease to atmospheric in about six hours. This would have essentially terminated the release if all attempts to close the open valve would fail.

While efforts were in progress to close the open containment vent valve, the EPM had the OSC Manager dispatch a team into the Auxiliary Building to search for the sources of suspected steam leakage. For example, when radiation levels in an ECCS pump room rose to about 10 R/hr, leakage from the nearby PASS panel room or the makeup pump room was suspected.

Shortly before 1:30 pm, the RC Manager announced that the vent stack release rate had returned to approximately normal. A report was received that an inplant team saw no steam coming from the annulus.

Key TSC staff concluded that the open vent valve must have shut, thereby terminating the release to the

environment. It was determined that the valve had closed before an inplant team had opened the associated circuit breaker. It was decided to open the circuit breaker to prevent further unplanned movement of this valve.

At 1:30 pm, exercise controllers issued a cue card to have participants initiate recovery discussions. Operations engineers reviewed all relevant EALs and recommended that the emergency classification could be downgraded to a SAE based on plant conditions. The EPM accepted this recommendation and forwarded it to the ED. Since offsite protective actions had been recommended and implemented, the ED and EOM followed procedural guidance and requested concurrence from State and county officials before reclassifying the emergency.

With the exception of a preliminary discussion of recovery action items by key participates from the CRS, TSC, ECC, and OSC, exercise activities were halted. Exercise termination was somewhat premature since insufficient time was allowed for participants to weigh the merits of downgrading to a SAE versus the desirability of recommending cancellation of offsite protective actions. The licensee should reevaluate emergency classification downgrading guidance in procedure HS-EP-01500. A decision to downgrade from a GE should be linked to the decision of whether or not to cancel offsite protective action recommendations.

No violations or deviations were identified.

c. Operational Support Center (OSC)

Prior to the activation of the Operational Support Center (OSC), a worker was injured. The first aid team quickly responded to the accident scene. They were well equipped with medical kits which were in good condition and well stocked. A good medical evaluation was done by the first aid team. Radiological Controls Technicians (RCTs) also quickly arrived on the scene and conducted preliminary surveys. A contaminated boundary area was established and the victim was properly monitored for contamination.

The OSC was activated and maintained in an orderly manner. Teams were formed immediately and assigned priorities. The OSC Manager provided informative briefings to the OSC staff. Communications with the teams were very good.

During the exercise, approximately 40 teams were dispatched from the OSC. Teams briefings and debriefings were very well done, as were the associated forms. All teams were dispatched in a timely manner and appropriately tracked on the relevant status board.

External exposure control was excellent; however, radiation protection personnel failed to completely evaluate the internal exposure hazard to inplant teams. Numerous inplant repair teams were sent into areas which contained airborne radioactivity without respiratory protection and without any air samples to make an informed decision on the necessity of respirators. Although the decision was made to issue potassium iodide to an inplant team, it did not appear that this decision was based on a reasonable estimation of the potential thyroid dose at the leaking valve.

In most cases, air samples were not taken. The following are examples of teams which were dispatched where it would be reasonable for an air sample to be taken:

- Team 1, sent to investigate the auxiliary feedwater lines while a release was in progress;

- Team 15, sent to start the hydrogen analyzer pumps;

- Team 16, sent to the roof to investigate the CACs failure;

- Team 30, sent to shut the make up pump room door; and

- Team 34, sent to check the annulus leak.

The failure to completely evaluate the internal radiation exposure hazards to some inplant teams is an exercise weakness (No. 346/92004-01).

Radiation surveys were not fully documented. Out of the 40 teams that were dispatched from the OSC, approximately 16 would have been expected to perform radiological surveys; however, only 8 of these teams documented surveys which were performed. Summary results were reported to the OSC. The incomplete documentation of radiological surveys will be tracked as an inspector follow-up item (No. 346/92004-02).

No violations or deviations were identified; however, one weakness and one inspector follow-up item were identfiod.

d. Emergency Control Center (ECC)

The Emergency Control Center (ECC) was activated following the Alert declaration and was fully operational within about 30 minutes. The ECC staff prepared to assume their duties in an organized, efficient manner.

Communications within the ECC were good. Briefings were held frequently and were enhanced by having the EPM from the TSC give a plant status update at these briefings. Communications among facilities was also good. Each facility was aware of the other facilities' priorities and major tasks.

Interface between the licensee and the State and county liaisons was very good. The ED and EOM discussed major changes in classification and protective action recommendations (PARs) prior to making the formal declarations or recommendations.

Event classification from the ECC was conservative and timely. The PAR issued with the GE declaration was appropriate and was revised when necessary. The official periodic update form transmitting the revised PAR was a bit slow. However, the ED had fully discussed the revised PAR with both the State and counties prior to formally issuing it.

Status board maintenance was adequate. At times, the radiological status board was only partially updated and the time on the board was changed. This could lead one to believe some of the data on the board wa more current than it actually was. The plant status board did not have a time posted on it at one point during the exercise.

Dose assessment and direction of the field teams were well done. The dose assessment staff quickly recognized the increased release rate and promptly performed dose projections.

Recovery discussions occurred following the exercise. These discussions were thorough. A well detailed action plan was developed.

No violations or deviations were identified.

7. Exercise Objectives and Scenario Review (IP 82302)

The exercise scope and objectives and the exercise scenario were submitted to NRC within the proper timeframes. The licensee adequately responded to the NRC inspector's questions pertaining to the scenario.

The scenario was adequately challenging and included multiple equipment failures, an injured, contaminated worker, and assembly and accountability. The licensee used the CRS to drive this scenario and all the safety parameter display systems in the TSC and ECC. The simulator's performance was good.

No violations or deviations were identified.

8. Exercise Control

Exercise control was good. There were adequate controllers to control the exercise. No instances of controller prompting were observed.

No violations or deviations were identified.

9. Exit Interview

The inspectors held an exit interview on May 15, 1992, with the representatives denoted in Section 2. The NRC Team Leader discussed the preliminary findings of the inspection team.

The licensee demonstrated a good response to a hypothetical scenario involving equipment failures; an injured, contaminated worker; and a radiological release. Although exercise performance was generally good, one exercise weakness was identified due to the failure to completely evaluate the internal exposure hazard to personnel assigned to some inplant teams. In addition, one concern was identified regarding the documentation of radiological surveys. This concern will be tracked as an inspection follow-up item.

The licensee was asked if any of the information discussed during the exit interview was proprietary. The licensee responded that none of the information was proprietary.

Attachments:
1. Davis-Besse 1992 Exercise Scope and Objectives
2. Davis-Besse 1992 Exercise Scenario Outline

1.0 SCOPE AND OBJECTIVES

1.1 SCOPE

The 1992 Davis-Besse Emergency Preparedness "Evaluated Exercise", to be conducted on May 13, 1992, will test and provide the opportunity to evaluate the Onsite Davis-Besse Emergency Plan and Emergency Plan Procedures. It will also test the emergency response organization's ability to assess and respond to emergency conditions and take adequate actions to protect the health and safety of the public and station personnel. The Exercise will demonstrate the utilization of the Station's Emergency Response Organization. The Exercise will involve activation and operation of select local emergency response organizations.

Whenever practical, the Exercise incorporates provisions for "free play" on the part of the participants. Selected "real time" activities will be conducted to allow the repair teams the opportunity to provide service and repairs to station equipment during the course of the Exercise. These "repairs" will allow the response organization to have an increased impact upon the direction that the Exercise proceeds as well as impacting the completion of the Exercise activities. In addition, the Control Room Simulator will be used to permit a degree of "free play" on the part of the Operations staff. The extent of this "free play" may be partially restricted by Controllers as necessary to keep the sequence of events on track.

The scenario will simulate a sequence of events resulting in a radiological release to the environment. This release will be of sufficient magnitude to permit tracking of the plume by Field Monitoring Teams.

The scenario will also incorporate a Medical Drill and a Post Accident Sampling System (PASS) Drill.

In the development of an accident sequence which is severe enough to adequately test the emergency response capabilities of participating organizations, it is necessary to postulate extremely unrealistic situations and multiple failures of redundant reactor protection functions and systems. This package has been designed to challenge the emergency response personnel with a severely off-normal plant situation. No matter how remote the possibility of these events to occur, Players are reminded that they are to respond appropriately.

This is considered a "utility only" Exercise and as such, much of the federal, State and local response will be limited to initial communications only. Follow-up interface will be performed via a Control Cell.

1.2 DAVIS-BESSE NUCLEAR POWER STATION OBJECTIVES

REF. #	FACILITIES	OBJECTIVE
A.1	Administrative	CONDUCT AN EXERCISE OF THE DAVIS-BESSE NUCLEAR POWER STATION (DBNPS) EMERGENCY PLAN, ANNUALLY.
A.2	Administrative	PROVIDE AN OPPORTUNITY FOR THE STATE OF OHIO, OTTAWA COUNTY, AND LUCAS COUNTY TO PARTICIPATE IN AN EXERCISE, ANNUALLY (FULL VS PARTIAL PARTICIPATION).
A.3	Administrative	PREPARE AN EXERCISE INFORMATION PACKAGE TO MEET MINIMUM STANDARDS.
A.4	Administrative	CONDUCT A CRITIQUE OF THE EXERCISE.
A.5	Administrative	ESTABLISH MEANS TO ENSURE COMPLETION OF CORRECTIVE ACTIONS.
B.1	All	DEMONSTRATE THE DIRECTION OF THE EMERGENCY ORGANIZATION AND IMPLEMENTATION OF THE EMERGENCY PLAN AND EMERGENCY PLAN PROCEDURES.
B.2	Control Room, ECC	DEMONSTRATE THE TRANSFER OF THE EMERGENCY COORDINATOR DUTIES.
B.3	All	DEMONSTRATE THE ABILITY FOR TIMELY ACTIVATION AND STAFFING OF THE EMERGENCY FACILITIES.
B.4	All	DEMONSTRATE THE ABILITY TO CONTROL ACCESS TO EMERGENCY FACILITIES.
B.10	All	DEMONSTRATE THE CAPABILITY FOR CONTINUOUS (24 HOUR) OPERATIONS FOR A PROTRACTED PERIOD FOR EACH PRINCIPAL ORGANIZATION.
B.11	All	DEMONSTRATE THE ABILITY FOR 24 HOUR PER DAY MANNING OF COMMUNICATION LINKS.
C.1	Control Room, TSC	DEMONSTRATE THE ABILITY TO ASSESS THE INCIDENT CONDITIONS.
C.2	Control Room, ECC, TSC	DEMONSTRATE THE ABILITY TO RECOGNIZE EMERGENCY ACTION LEVELS (EAL'S) AND PROPERLY CLASSIFY THE INCIDENT.
D.1	Control Room, ECC	DEMONSTRATE THE ABILITY TO NOTIFY KEY OFFICIALS IN THE EMERGENCY ORGANIZATIONS (STATION, CORPORATE, STATE OF OHIO, OTTAWA COUNTY, AND LUCAS COUNTY) VIA THE NOTIFICATION SYSTEM/PROCEDURES WITHIN 15 MINUTES OF CLASSIFICATION.
D.2	Control Room, ECC	DEMONSTRATE THE ABILITY TO NOTIFY THE NRC OF ANY EMERGENCY CLASSIFICATION WITHIN ONE HOUR OF THE OCCURRENCE.

REF. #	FACILITIES	OBJECTIVE
D.3	All	DEMONSTRATE THE CAPABILITY TO NOTIFY AND/OR ACTIVATE EMERGENCY PERSONNEL IN EACH RESPONSE ORGANIZATION.
D.4	Control Room, ECC	DEMONSTRATE THE ABILITY TO DEVELOP AND SEND AN INITIAL EMERGENCY MESSAGE FOR OFFSITE NOTIFICATION.
D.5	Control Room, ECC	DEMONSTRATE THE ABILITY TO DEVELOP AND SEND FOLLOW-UP MESSAGES FOR INFORMATION FOR OFFSITE AUTHORITIES.
D.6	Control Room, TSC, ECC	DEMONSTRATE THE COMMUNICATIONS CAPABILITY AMONG THE CONTROL ROOM, TSC AND ECC, AND AMONG DBNPS, THE STATE OF OHIO, OTTAWA COUNTY, AND LUCAS COUNTY EMERGENCY OPERATIONS CENTERS AND THE FIELD ASSESSMENT TEAMS, TO INCLUDE EVALUATION OF THE ABILITY TO UNDERSTAND MESSAGE CONTENT (COMMUNICATIONS DRILL REQUIREMENT).
D.12	OSC, SEC	DEMONSTRATE THE COMMUNICATIONS CAPABILITY WITH FIXED AND MOBILE MEDICAL SUPPORT FACILITIES (MEDICAL DRILL REQUIREMENT).
E.1	ECC	DEMONSTRATE THE METHODS AND TECHNIQUES FOR DETERMINING THE SOURCE TERM OF RELEASES OR POTENTIAL RELEASES OF RADIOACTIVE MATERIAL WITHIN PLANT SYSTEMS.
E.2	ECC	DEMONSTRATE THE METHODS AND TECHNIQUES FOR DETERMINING THE MAGNITUDE OF THE RELEASES OF RADIOACTIVE MATERIALS BASED ON PLANT SYSTEM PARAMETERS AND EFFLUENT MONITORS.
E.3	ECC	DEMONSTRATE THE ABILITY TO ESTIMATE INTEGRATED DOSE FROM PROJECTED AND ACTUAL DOSE RATES AND TO COMPARE THESE ESTIMATES WITH THE PAG'S.
E.4	OSC, ECC	DEMONSTRATE THE ABILITY TO IMPLEMENT EXPOSURE GUIDELINES.
E.5	OSC, ECC	DEMONSTRATE THE ABILITY TO CONTINUOUSLY MONITOR AND CONTROL EMERGENCY WORKER EXPOSURE.
E.9	RTL, RMT	DEMONSTRATE THE CAPABILITY FOR RADIOLOGICAL MONITORING OF PERSONNEL EVACUATED FROM THE SITE.
E.10	RTL, RMT	DEMONSTRATE THE CAPABILITY FOR DECONTAMINATION OF EVACUATED NON-ESSENTIAL PERSONNEL.
E.14	RTL, RMT	DEMONSTRATE THE ABILITY TO DECONTAMINATE RELOCATED ONSITE PERSONNEL.
E.15	OSC, SEC	DEMONSTRATE THE CAPABILITY FOR TRANSPORTATION OF A RADIOLOGICAL ACCIDENT VICTIM (MEDICAL DRILL REQUIREMENT).
E.17	OSC	DEMONSTRATE THE RESPONSE TO, AND ANALYSIS OF, SIMULATED ELEVATED AIRBORNE AND LIQUID SAMPLES AND DIRECT RADIATION MEASUREMENTS IN THE ENVIRONMENT.

REF. #	FACILITIES	OBJECTIVE
E.18	OSC	DEMONSTRATE THE CAPABILITY TO ANALYZE AN ACTUAL SAMPLE OBTAINED FROM A PLANT SYSTEM INCLUDING USE OF THE POST-ACCIDENT SAMPLING SYSTEM WITHIN 3 HOURS.
F.1	ECC	DEMONSTRATE THE ABILITY TO RECOMMEND PROTECTIVE ACTIONS TO APPROPRIATE OFFSITE AUTHORITIES; BASES OF RECOMMENDATIONS TO INCLUDE CONSIDERATION OF PROTECTION AFFORDED BY SHELTERING, AS WELL AS EVACUATION TIME ESTIMATES.
F.2	JPIC	DEMONSTRATE THE OPERATION OF THE JOINT PUBLIC INFORMATION CENTER AND THE AVAILABILITY OF SPACE FOR THE MEDIA.
F.3	JPIC	DEMONSTRATE THE ABILITY TO BRIEF THE MEDIA IN A CLEAR, ACCURATE AND TIMELY MANNER.
F.5	SEC	DEMONSTRATE THE ABILITY TO WARN OR ADVISE INDIVIDUALS ONSITE OR IN OWNER CONTROLLED AREAS.
F.6	SEC	DEMONSTRATE THE CAPABILITY TO EVACUATE NON-ESSENTIAL PERSONNEL.
F.7	ECC, SEC	DEMONSTRATE THE ABILITY OF ALTERNATIVE EVACUATION ROUTES AND/OR OFFSITE RELOCATION CENTER DUE TO WEATHER, RADIOLOGICAL CONDITIONS, ETC.
F.11	OSC	DEMONSTRATE THE CAPABILITY FOR ONSITE FIRST AID (MEDICAL DRILL REQUIREMENT).
F.12	OSC	DEMONSTRATE THAT PROVISIONS ARE AVAILABLE FOR THE EVALUATION OF RADIATION EXPOSURE OF, AND RADIATION UPTAKE IN A RADIOLOGICAL ACCIDENT VICTIM (MEDICAL DRILL REQUIREMENT).
C.1	All	DEMONSTRATE PRELIMINARY DISCUSSIONS OF REENTRY AND RECOVERY CAPABILITIES AND AVAILABILITY OF PROCEDURES.
G.3	ECC	DEMONSTRATE THE AVAILABILITY OF CORPORATE TECHNICAL SUPPORT FOR PLANNING AND REENTRY/RECOVERY OPERATIONS.

6.0 EXERCISE SCENARIO

6.1 NARRATIVE SUMMARY

Initial conditions are established with the plant running in automatic at 100% power with Containment Spray Pump #1 out of service. The first event involves a minor tube leak in Once Through Steam Generator (OTSG) #2, which requires the plant to be shut down and can be classified as an UNUSUAL EVENT. Operators begin a controlled shutdown of the plant.

Two Maintenance personnel are replacing a piping flange gasket on an inlet valve to the High Temperature Demineralizer when the flange gives way, sprays high temperature water on one of the workers, causing a serious burn/contamination injury. This forms the basis for the annual medical drill and will involve response from the Carroll Township EMS and a demonstration by Magruder Hospital.

A Main Steam line from #2 OTSG breaks inside Containment and, in combination with the tube leak, can be classified as an ALERT. An SFAS Level 2 activation occurs on low primary system pressure. Containment pressure increases, however, Containment Spray Pump #2 will fail to start if the Operators attempt to use it. The excessive primary system cooldown causes crud bursts and several fuel rods to release gap activity into the primary coolant. A primary system sample is taken using the Post Accident Sampling System (PASS).

Shortly thereafter, the build-up of Containment radiation upgrades the classification to a SITE AREA EMERGENCY.

Because of the increasing Containment pressure, a Containment vacuum breaker fails, releasing radioactivity into the Containment annulus. Emergency ventilation subsequently passes the radioactivity into the environment through the station vent. This situation can be classified as a GENERAL EMERGENCY.

Offsite assembly of non-essential station personnel (i.e., a representative sample) will be demonstrated. This will include the capability to perform personnel/vehicle monitoring and decontamination at the assembly area.

Players will be given time to determine offsite protective actions, simulate use of the public alerting system, and demonstrate the ability to prepare news releases and to brief the news media at the alternate Joint Public Information Center.

Eventually Containment pressure starts to come down, the breach point is closed, terminating the release, and the plant is subsequently cooled down and depressurized.

Reentry and recovery discussions are performed and the Evaluated Exercise is then terminated.