UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

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Report Nos.: 50-369/92-25 and 50-370/92-25

Licensee: Duke Power Company
422 South Church Street
Charlotte, NC 28242

Docket Nos.: 50-369 and 50-370 License Nos.: NPF-9 and NPF-17

Facility Name: McGuire 1 and 2

Inspection Conducted: October 13-15, 1992

Inspector: James L. Kreh 11-19-92
F. N. Wright, Team Leader Date Signed

Team Members: A. Belisle
G. Weale

Approved by: for J. W. Hufham 11/19/92
W. M. Sartor, Acting Chief Date Signed
Emergency Preparedness Section
Radiological Protection and Emergency
Preparedness Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection involved the observation and evaluation of the annual emergency preparedness exercise. Emergency organization activation and response were selectively observed in the licensee's Emergency Response Facilities including: the Simulator Control Room; Technical Support Center; Operational Support Center; and Emergency Operations Facility. The inspection also included a review of the exercise scenario and observation of the licensee's post exercise critique.

Results:

In the areas inspected, violations or deviations were not identified. One exercise weakness, concerning information provided to off-site emergency agencies, was identified. Exercise strengths included command and control in

all emergency response centers and the control of damage control teams. The licensee's performance during the exercise was good, with the licensee successfully meeting most of their exercise objectives. Overall, the exercise demonstrated an effective capability to protect the public health and safety in the event of a radiological emergency.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

D. Arndt, Simulator Controller
*D. Bradshaw, Nuclear Services, Operations
*W. Byrum, Supervising Scientist, Radiation Protection
*M. Cloninger, Technical Support Center (TSC) Lead Controller
*G. Courtney, General Office, Radiation Protection (RP)
J. Dial, Nuclear Control Operator
*G. Gilbert, Safety Assurance Superintendent
*M. Greene, General Office, Corporate Communications
B. Hamilton, Operations Superintendent
*B. Hasty, Emergency Planning (EP) Director
C. Jennings, Emergency Operations Facility (EOF) Lead Controller
G. Johnson, Scientist, RP
M. Lackey, Nuclear Instructor
J. Lukowski, Simulator Control Room (SCR) Lead Controller
*T. McConnel, Station Manager/Emergency Coordinator
*T. McMeekin, Site Vice President
G. Mitchell, Operations Support Center (OSC) Lead Controller
J. Pressley, Shift Supervisor
*J. Reavis, EP

Other licensee employees contacted during this inspection included engineers, operators, mechanics, security force members, technicians, and administrative personnel.

Nuclear Regulatory Commission

*K. VanDorn, Senior Resident Inspector
*T. Cooper, Resident Inspector

2. Exercise Scenario (82302)

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the integrated capability and a major portion of the basic elements existing within the licensee's Emergency Plan and organization as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.F, and specific criteria in NUREG-0654, Section II.N.

The scenario was reviewed in advance of the scheduled exercise date and was discussed with licensee representatives. The exercise scenario was well organized, detailed, and adequate to exercise the participants. The scenario sequence of events made the emergency classification activity straight forward, however, the scenario kept the Emergency

Organization busy and thinking of courses to protect the reactor. The scenario allowed the staff the opportunity to prevent core damage and the players were successful in accomplishing the task. The scenario utilized the staff in resolving emergency problems until the exercise was terminated.

One prompt was identified during the exercise by a controller in the TSC. The prompt was made while the EOF Director (ED) in the EOF and the Emergency Coordinator (EC) in the TSC were discussing whether to go to a Site Area Emergency or a General Emergency. Each time the TSC team mentioned a General Emergency classification, the controller vehemently shook his head. The controller in the TSC then told the TSC players, "For scenario purposes, do not classify the event as a General Emergency." The ED, in the EOF, told the TSC EC that the classification would be Site Area Emergency, but the TSC should continue checking the classification. This prompting was unnecessary because the remaining scenario events would not have been appreciably changed by a General Emergency classification. The prompting affected play, in that, the TSC players stopped reviewing events for emergency classification upgrade. The inspector reported that the proper action would have been to allow the players the opportunity to make the classification decision. The inspector determined that the Controller/Evaluator prompt had not impacted the players ability to demonstrate proper emergency classification. The inspector discussed the importance of proper controller actions with licensee management and the controller. The licensee did not identify or commit to any specific proposed corrective action to prevent recurrence. However, the licensee did agree to emphasize the importance of controller rules during future drills and exercises.

No violations or deviations were identified.

3. Assignment of Responsibility (82301)

This area was observed to determine that primary responsibilities for emergency response by the licensee had been specifically established and that adequate staff was available to respond to an emergency as required by 10 CFR 50.47(b)(1), 10 CFR 50, Appendix E, Paragraph IV.A, and specified criteria in NUREG-0654, Section II.A.

The inspector observed that the onsite and offsite emergency organizations were adequately described and the responsibilities for key organization positions were clearly defined in approved plans and implementing procedures.

No violations or deviations were identified.

4. Onsite Emergency Organization (82301)

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response were unambiguously defined, that adequate staffing was provided to insure initial facility

accident response in key functional areas at all times, and that the interfaces were specified as required by 10 CFR 50.47(b)(2), 10 CFR 50, Appendix E, Paragraph IV.A, and specific criteria in NUREG-0654, Section II.B.

The inspector observed that the initial onsite emergency organization was adequately defined; the responsibility and authority for directing actions necessary to respond to the emergency were clear; that staff were available to fill key functional positions within the organization; and that onsite and offsite interactions and responsibilities were clearly defined.

The licensee adequately demonstrated the ability to alert, notify, and mobilize licensee response personnel. Augmentation of the initial onsite emergency response organizations was accomplished through activations of the Emergency Response Facilities (ERFs). The inspector observed the activation, staffing, and operation of the emergency organizations in the SCR, TSC, OSC, and the EOF. The inspector determined that the licensee was able to staff and activate the facilities in a timely manner. The required staffing and assignment of responsibility was effective and consistent with the licensee's approved procedures. Because of the scenario scope and conditions, long term or continuous staffing of the emergency response organization was not required.

The inspector observed good command and control in all emergency facilities. The operations staff and supervision did an excellent job of maintaining control of facility. The Shift Supervisor was quick to recognize that no procedure existed for shifting the switchyard electrical lineup to power Station Auxiliary Transformer A from the B train incoming supply for Unit 2. He also recognized that the evolution would have to be done with a dead bus method if B Diesel Generator (DG) was not available, and that an undesirable plant trip might be caused during the shift. A plant trip would have caused a station blackout, which would have severely degraded the plant conditions.

The EC used two new good practices in the TSC to maintain effective command and control. The work/task priority status board had been recently modified to include the current status of all priority tasks. This status board was well maintained and provided the EC with useful information. The TSC system of "timeouts" was also very useful in getting information out to most TSC players. The preparation period provided just prior to each timeout prevented excessive disruptions on individual phone circuits during the timeouts.

Operations Superintendent in the TSC provided the EC excellent support and was proactive in determining and recommending appropriate operation directions. He recognized that the only source of electrical power available to the plant, following a reactor shutdown, would be the B DG. He recommended starting and operating the B DG prior to shutting down the reactor. When the DG failed to start, the staff knew that they would need to maintain a low power level until an alternate source of

power could be arranged. Had they shut the reactor down and then tried to start the B DG the threat to the reactor would have been more severe. The licensee promptly requested NRC guidance for situation, through the Resident Inspectors, and was told to prepare a 50.54x review. A 50.54x was prepared for temporary operation outside Technical Specifications limits.

Command and Control in the OSC was excellent. A significant number of damage control teams were dispatched in a timely manner with appropriate prioritization and work controls.

No violations or deviations were identified.

5. Emergency Response Support and Resources (82301)

This area was observed to determine that arrangements for requesting and effectively using assistance resources have been made, that arrangements to accommodate State and local staff at the licensee's onsite EOF have been made, and that other organizations capable of augmenting the planned response have been identified as required by 10 CFR 50.47(b)(3), 10 CFR Part 50, Appendix E, Paragraph IV.A and specific criteria in NUREG-0654, Section II.C.

The inspector determined that State and local staff could be accommodated at the EOF and arrangements for requesting offsite assistance resources were in place.

No violations or deviations were identified.

6. Emergency Classification System (82301)

This area was observed to determine that a standard emergency classification and action level scheme was in use by the nuclear facility licensee as required by 10 CFR 50.47(b)(4), 10 CFR 50, Appendix E, Paragraph IV.C, and specific criteria in NUREG-0654, Section II.D.

McGuire Nuclear Station RP/O/A/5700/00, Classification of Emergency, revision dated January 23, 1992, provided for off-normal events to be classified into one of the four emergency classification categories. The exercise began with the facility in a Notification of Unusual Event (NOUE) emergency classification. The NOUE had been declared at 06:30 a.m., due to increased radioactivity levels in the reactor coolant system that was in excess of Technical Specification limits for more than 48 hours.

The following classifications were made by the emergency response organization during the exercise:

- Alert declared at 08:49 a.m. by the EC in the SCR for SG tube leak greater than 10 gpm.

- Site Area Emergency declared at 11:23 a.m. by the ED in the EOF, due to unisolable secondary steam leak. Primary to secondary SG leak rate was 65 gpm.

The designated EC in the SCR promptly and correctly used the procedure to identify and classify the Alert as did the ED in the EOF to classify the Site Area Emergency.

During the Alert classification the EC was distracted from his primary duty of determining and announcing the Alert classification. A report from Chemistry that the primary to secondary leak rate had increased to 33 gpm was received by the EC at about 08:44 a.m. The EC started doing other things and directed another Senior Reactor Operator (SRO) to check the classification. At about 08:49 a.m. the other SRO informed the EC that the classification should be upgraded to an Alert. The EC then got distracted by other chores and delayed announcing the classification upgrade until 08:57 a.m. Because the TSC and OSC had already been activated, as a "precautionary measure," the 13-minute delay in classification did not materially affect this exercise emergency response. In a different accident, this delay might have been more detrimental. The delay also did not prevent the licensee from meeting the 15 minute Emergency Notification to State and local agencies. The message went out at 08:58 a.m.

All emergency classifications were made in accordance with the licensee's Emergency Plan and implementing procedures.

No violations or deviations were identified.

7. Notification Methods and Procedures (82301)

This area was observed to assure that procedures were established for notification of State and local response organizations and emergency personnel by the licensee, and that the content of initial and followup messages to response organizations was established. This area was further observed to assure that means to provide early notification to the population within the plume exposure pathway were established pursuant to 10 CFR 50.47(b)(5), Paragraph IV.D of Appendix E to 10 CFR 50, and specific guidance promulgated in Section II.E of NUREG-0654.

NUREG-0654, Rev. 1, Criteria for Preparation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, in part, provides guidance Notification Methods and Procedures. The guidance suggests the need to have procedures that define the content of initial and followup messages to response organizations, and the means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone. The guidance lists the contents of Emergency Notifications to include the type of actual or projected release and estimated duration/impact times.

The inspector reviewed the licensee's implementing procedures for notifying offsite authorities and the Nuclear Regulatory Commission. The inspector observed that notification methods and procedures were used to provide information concerning the simulated emergency conditions to Federal, State, and local response organizations and to alert the licensee's augmented emergency response organization.

Exercise Objective B. 3. was "Demonstrate the proper use of message format and authentication methodology for messages transmitted to the state and counties."

The inspector observed the following problems with offsite notification messages generated during the emergency exercise. The problems are grouped by section on the licensee's Emergency Notification Form.

- Section 7, Emergency Description/Remarks: Messages 2 and 3 contained Emergency Description/Remarks which may not have been clear to the public agencies. For example:

  Message No. 2. Technical Specification 3.4.8 Levels of I-131 greater than limits for more than 48 hours in the Reactor Coolant System. Both units-related main bus lines de-energized in Modes 1-6.

  Message No. 3. Steam Generator tube leak greater than 10 gpm. Reactor coolant system subcooling greater than 0° F. Both unit main bus lines de-energized.

  The underlined messages could have been less technical for the offsite distribution. The inspector noted that the first three messages were initiated and transmitted by the Operations staff in the SCR.

- Section 8, "Plant Condition": Messages 2, 4, and 5 all indicated plant conditions were stable versus improving or degrading. However, the inspector noted the following:

  Message No. 2, issued at 08:38 a.m., reported that both units related main bus lines were de-energized. The site had lost offsite power and plant conditions were degrading.

  Message No. 4, issued at 09:53 a.m., reported that the SG tube leak rate was greater than 33 gpm. The leak rate had increased from 10 gpm, as recorded in Message No 3, and the plant conditions were degrading.

  Message No. 5, issued at 10:50 a.m., reported SG tube leak rate was 45 gpm and both Unit 1 DGs were not available. The plant conditions were degrading with loss of onsite power capability from the Unit 1 DGs and increasing SG tube leak rate.

- Section 13, "Estimate of Projected Offsite Dose": The inspector determined that there was some confusion, among players, concerning the release duration value reported on messages 5 through 9. Following the exercise the inspector determined that the licensee had not made an estimate of release duration during the exercise. Instead, the licensee reported the duration time of the existing release. The duration time reported was the time interval from start of the release until the offsite dose projection calculation was made.

- Section 16, "Approved By": Licensee procedure RP/0/A/5700/01, Notification of Unusual Event, Rev. 0, dated July 22, 1992, stated in Section 2.1.1, the EC shall approve Emergency Notification Form for transmission. However, notification Message 2 was signed by the Assistant Shift Supervisor instead of the EC.

  Message No. 5, an Alert followup message, was sent at 10:50 a.m. and the message transmission verification was not completed until 11:13 a.m. This took 23 minutes to complete.

The numerous problems identified above were minor when considered individually, however, in aggregate they indicate a general weakness in the licensee's ability to provide clear and accurate Emergency Notification messages to State and local agencies. In the previous annual graded exercise, a Exercise Weakness (50-369, 370/91-15-01) was identified for failure to adequately describe to offsite agencies the changes in emergency conditions onsite. The inspector determined that the licensee had done a better job of reporting significant onsite events than in the previous exercise and the open item would be closed. However, the errors made during the 1992 exercise were not limited to one particular component of the Emergency Notification message and indicate declining performance. The inspector stated that failure to provide clear and accurate messages to the State and local agencies was an exercise weakness.

Exercise Weakness 50-369, 370/92-25-01: Failure to provide clear and accurate Emergency Notification messages to the State and local agencies.

No violations or deviations were identified.

8. Emergency Communications (82301)

This area was observed to determine that provisions existed for prompt communications among principal response organizations and emergency personnel as required by 10 CFR 50.47(b)(6), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654, Section II.F.

The inspector observed that adequate communications existed among the licensee's emergency organizations, and between the licensee's emergency

response organization and offsite authorities.

The licensee did experience some minor problems with communication equipment. The headsets used in the TSC faded in and out for persons moving about in the TSC. There was also a computer data link problem between the site and the EOF for plant parameter information. The licensee identified the issues during their critique process.

Players did a good job of transmitting drill messages and identifying the messages as drill messages.

No violations or deviations were identified.

9. Emergency Facilities and Equipment (82301)

This area was observed to determine that adequate emergency facilities and equipment to support an emergency response were provided and maintained as required by 10 CFR 50.47(b)(8), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654, Section II.H.

The inspector observed the activation, staffing and operation of key ERFs, including the SCR, TSC, OSC, and EOF.

a. Simulator Control Room

Overall, operations personnel adequately assessed the problems faced during the exercise and their responses were timely and appropriate to the circumstances. The Shift Supervisor demonstrated good command and control throughout the exercise. Both reactor operators and supervisors demonstrated good use of the normal, abnormal, and emergency operating procedures; and the Emergency Plan Implementing Procedures throughout the exercise. The operations staff worked well as a team. The inspectors noted that the turnover briefing from the Shift Supervisor to the EC was effective.

b. Technical Support Center

The TSC was activated and staffed promptly upon request of the EC in the SCR. A Public Address (PA) announcement was made to activate the TSC and OSC at 08:45 a.m. By Plan and procedure, the TSC was required to activate at Alert. In this exercise, the TSC activated at NOUE as is permitted. The NRC inspector questioned the lead TSC controller about premature activation and was informed that this was both prudent and customary. The TSC and OSC were activated at 09:19 a.m. and the Station Manager assumed the responsibilities of the EC in the TSC at that time. The emergency organization's response, to staff the TSC, was excellent with most of the TSC staff in the facility by 08:58 a.m. The TSC was fully staffed by 09:03 a.m.

The inspector observed good command and control of the emergency

organization. Technical assessment and mitigation activities were aggressively and properly pursued by the TSC staff and periodic briefings regarding the incident status and ongoing mitigating actions were frequently given. The support provided by the Operations Superintendent was excellent.

The floor plan of the TSC had been modified and opened up, following the 1991 graded exercise. Some walls had been eliminated and the changes made the facility look larger. The floor plan seemed to be more efficient. Although improvements have been made, the TSC facility work space remains small. The available space was efficiently utilized.

c. Operational Support Center

The inspector observed the initial activation and personnel response in the staffing of the OSC. Upon the direction by the EC in the SCR, the OSC was activated, fully staffed, and functional in a timely manner. The request for activation of the OSC was announced at 08:45 a.m. and the OSC was activated at 09:19 a.m.

The OSC Supervisor was well qualified and assumed the responsibility in a professional, organized manner. It was apparent that personnel were prepared to implement the necessary actions requested by management to assist in the mitigation of problems incurred during the emergency exercise. The OSC Director informed OSC staff of plant and emergency status through frequent briefings.

Repair teams coordinated with the TSC and RP before dispatch and the teams were briefed on potential radiological conditions and protective measures. RP technicians accompanied the teams.

The exercise scenario generated a lot of work for the OSC, as approximately 34 missions were initiated. The OSC was effective in monitoring and controlling the teams and in responding to the simulated events.

d. Emergency Operations Facility

Licensee procedure RP/0A/5700/02, Alert, Revision 0, dated May 21, 1992, required the EC to activate the EOF upon declaration of an Alert classification. The Alert declaration was made at 08:49 a.m., and EOF activation was requested at about 09:03 a.m. The EOF was activated at 10:08 a.m., approximately 65 minutes after the request for staffing was made. The licensee's goal was to activate the EOF within 75 minutes of notification. The EOF was promptly staffed and activated with qualified personnel.

The ED provided timely and accurate status updates to the EOF staff. Emergency classifications were timely and correct and good

State interaction was observed in Protective Action Recommendations (PAR) process.

The accident assessment staff was aggressive in their support to the plant staff in recovering electrical power to the station.

The EOF facilities were excellent and utilized accordingly. The inspector noted, however, that the dose projection status board did not clearly specify release duration times or times of dose determinations. As the dose status boards were updated the previous data was removed, making it difficult to observe trends in dose information. The inspector discussed the issues with licensee representatives. The issues were included with others identified by the licensee's staff for review and disposition.

No violations or deviations were identified.

10. Accident Assessment (82301)

This area was observed to determine whether adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition were in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Apnendix E, Paragraph IV.B, and specific criteria in NUREG-0654, Section II.I.

The accident assessment program included an engineering assessment of plant status and assessment of radiological hazards to both onsite and offsite personnel resulting from the accident. The operations and engineering staff in the TSC and EOF did an excellent job of mitigating plant conditions during the scenario accident.

Exercise Objective 14. was "Demonstrate the ability to develop offsite dose projections in accordance with procedures".

During the exercise the dose assessment staff had some problems reporting projected offsite radiological dose on status boards in the EOF and on Emergency Notification message forms. The inspector determined that the licensee had made the proper dose calculations using approved procedures. However, the licensee was using a computer to make the dose calculations and the computer was not sorting the results into the correct position on the licensee's printout. Therefore, some of the offsite dose projections posting in the EOF were incorrect. The inspector determined that the licensee had not provided projected dose information to offsite agencies. Instead the licensee provided cumulative dose information.

Another problem concerning accident assessment had to do with determining and reporting release duration. Section 13 of the licensee's Emergency Notification Form, "Estimate of Projected Offsite Dose", provided a location for recording the "Estimated Duration". The inspector determined that the licensee was recording the interval from the start of the release to the time of dose and dose rate calculation

instead of the estimated release duration. Since the quantity of the radioactive release was low and did not pose a significant threat to the public, the release duration was not of significant consequence to the public. However, the estimate of expected release duration would have been important to offsite officials in their protective action decision processes had the source term been significant. The inspector reported that the licensee should make some attempt to estimate the duration of the release and make dose projections based upon that estimate. In cases where the extent of the release would be unknown the licensee should make a dose calculation on some default release time useful for emergency planning. The licensee planned to evaluate the offsite dose assessment process and improve the procedures so that the process was clear. The inspector stated that a review of the dose assessment procedures for reporting offsite dose, for information on Emergency Notification messages would be reviewed with licensee corrective actions for the Exercise Weakness 50-369, 370/92-25-01, identified in Paragraph 7.

No violations or deviations were identified.

11. Protective Responses (82301)

This area was observed to determine that guidelines for protective actions during the emergency, consistent with Federal guidance, were developed and in place, and protective actions for emergency workers, including evacuation of nonessential personnel, were implemented promptly as required by 10 CFR 50.47(b)(10), and specific criteria in NUREG-0654, Section II.J.

The inspector verified that the licensee had and used emergency procedures for formulating PARs for offsite populations within the 10-mile emergency planning zone. No PARs were required for the exercise, which did not progress beyond a Site Area Emergency. However, the licensee made recommendations to the State. The recommendations were to shelter in place four zones (L, M, B, and C) in the plume path.

Protective actions were initiated for onsite personnel following the Alert declaration by conducting a personnel accountability of those personnel inside the protected area. The site accountability process was achieved and reported within 30 minutes.

No violations or deviations were identified.

12. Radiological Exposure Control

This area was observed to determine that means for controlling radiological exposures during an emergency were established and implemented for emergency workers, and that these means included exposure guidelines consistent with Environmental Protection Agency recommendations as required by 10 CFR 50.47(b)(11), and specific criteria in NUREG-0654, Section II.K.

The TSC did not follow good radiation protection procedures in attempting to maintain the TSC and the TSC personnel free from radioactive contamination. Some problems identified included:

- o The personnel frisker was not made available until 26 minutes after the report was received that a safety valve on the steam generator, having tube leaks, was discharging to the interior doghouse. The report indicated that a radioactive release to the site area was occurring.

- o The personnel frisker was initially placed well inside the entry to the TSC. Despite an announcement by the EC and the placement of placards on the doors, two TSC personnel exited the TSC and returned without frisking themselves.

- o After the announcement, "No eating or drinking until further notice," was made, one TSC member was noted to be eating at 12:24 p.m. The above order was not rescinded or modified even 20 minutes later when everyone started eating lunch.

- o No portable air samples were taken in the TSC.

The inspector determined that the licensee did not have any predetermined radiological actions for the facility, such as; the setup of a radiation control boundary, limited facility access points or specified monitor locations. The issue was discussed with licensee personnel, however, the licensee did not commit to any specific corrective actions. The inspector stated that a review of the licensee's radiological control activities and procedures shall be made during the next graded exercise as an Inspector Follow-up Item IFI 50-369, 370/92-25-02.

No violations or deviations were identified.

13. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine whether shortcomings in the performance of the exercise were brought to the attention of management and documented for corrective action pursuant to 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654, Section II.N.

The licensee conducted facility critiques with exercise players immediately following the exercise termination. Licensee controllers and observers conducted additional critiques prior to the formal critique to management on October 15, 1992. The critique process, including the critique to management, was well organized and included a review of the objectives that had been established for demonstration during the exercise. Issues identified during the exercise were discussed by licensee representatives during the critique. Licensee

action on identified findings will be reviewed during subsequent NRC inspections. The licensee's critique addressed both substantive deficiencies and improvement areas. The conduct of the critique was consistent with the regulatory requirements and guidelines cited above and considered a program strength.

No violations or deviations were identified.

14. Action on Previous Inspection Findings (92701)

(Closed) Exercise Weakness 50-369, 370/91-15-01: Lack of information on emergency notifications concerning status of several emergency events.

The inspector reviewed the licensee response dated September 11, 1991 and observed the licensee making Emergency Notifications during the exercise. During the 1992 annual graded exercise the licensee demonstrated improvement on reporting the changing conditions on Emergency Notification messages. However, the inspector noted that there were additional problems identified during the 1992 graded exercise with other areas of message content. This item was closed, but a new Exercise Weakness identifying other issues concerning Emergency Notification messages was identified. (See Paragraph 7)

15. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on October 15, 1992. The inspector summarized the scope and findings of the inspection, including the exercise weakness. The licensee did not identify any such documents or processes as proprietary. Dissenting comments were not received from the licensee. Licensee management was informed that one previous open item (listed in Paragraph 14) was reviewed and considered closed.

Item Number	Description and Reference
50-369, 370/92-25-01	Exercise Weakness: Failure to provide clear and accurate Emergency Notification messages transmitted to the State and local agencies (Paragraph 7).
50-369, 370/92-25-02	Inspector Followup Item - Review the licensee's radiological controls, activities and procedures, for emergency response facilities during the next graded exercise. (Paragraph 12)

Attachments:
Exercise Objectives, Narrative
Summary, and Time Line

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INITIAL CONDITIONS
1992 ANNUAL EXERCISE
OCTOBER 14, 1992
0700

0700 Initial conditions

WEATHER FORECAST FOR 10/14/92:

70% CHANCE OF RAIN WITH THE HIGH IN THE MID TO LOW 50's. WINDS FROM NORTHWEST AT 2-5 MPH. RAIN THROUGHOUT TONIGHT AND INTO TOMORROW WITH LOWS IN THE LOW 40's.

Unit 1 EOL

- Notification of Unusual Event made this morning at 0630 due to Tech. Spec. 3.4.8, levels of I-131 for > 48 hours.

- "B" S/G tube leak of 60 GPD. Tube leak has been ongoing and slowly increased by 10 GPD, exceeded 50 gpd at 1:10 am 10/14/92.

- I-131 DE Increased from 0.75 Uci/ml to 1.4 Uci/ml at 0630 on 10-12-92. Since that time I-131 DE has been calculated every 4 hours and remains at 1.4 Uci/ml. Swapped from 120 gpm letdown to 75 gpm letdown in preparation for shutdown.

- Unit shutdown in progress from 100% power. Present power level is 50% and decreasing. Shutdown began at 0110 per AP/1/A/5500/10 "NC System Leak Within The Capacity of Both NV Pumps" now at step 3A (Case 1) and OP/1/A/6100/03 "Controlling Procedure for Unit Operation" is at step 2.6 of Enclosure 4.2.

- Chemistry continuously monitoring tube leak via EMF33 until unit is off line.

- "A" D/G tagged due to failure to start within 11 seconds, and a jacket water leak that became significantly worse. Maintenance is replacing a leaking cylinder (1L) liner and IAE has recalibrated the speed switch. It will be available 10-15-92 at about noon. 24 hour Tech. Spec. (3.8.8.1 D) to run "B" D/G started at 1000 on 10/13/92.

- "B" D/G PT/1/A/4350/02B due before 10:00 AM. Scheduled to start at 9:00 AM. Perform manual local start.

- "A" RN Pump down for oil sample. Ready to clear tags.

- "A" motor driven CA pump tagged out due to "A" train RN out of service. Tagged out on 10/14/94 ready to clear tags.

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0800 Exercise begins.

0815 Loss of offsite power occurs due to Yellow Bus Differential

- Generator decreases to inhouse loads. (AP/1/A/5500/03) "Load Rejection"

0830 Chemistry notifies the control room that the tube leak is now 30 GPM as monitored by EMF33.

PREDICTED RESPONSE

- ALERT should be declared based on > 10 GPM tube leak, loss of offsite power, and subcooling greater than 0 degrees Fahrenheit.
- Enter AP/1/A/5500/03 "Load Rejection"
- Activate TSC, OSC, and EOF.
- Conduct site assembly.
- Assemble offsite monitoring teams.

0900 Operations should be preparing to run the operable D/G. During the surveillance test the D/G trips on overspeed. Maintenance and I&E dispatched to determine and correct the problem.

0902 "1B" D/G trips on overspeed

PREDICTED RESPONSE

- Dispatch Mechanical Maintenance and IAE

0900 Employee leaving "D-Con room" finds he is contaminated

PREDICTED RESPONSE

- Radiation Protection will be dispatched to monitor and assist in decontamination.

0920 Hydrogen Panel Alarm sounds due to Hydrogen purity

PREDICTED RESPONSE

- Dispatch a NLO to verify and evaluate alarm

0930 Valve CF 35 gives a low nitrogen pressure signal alarm (due to a malfunctioning pressure switch (PS-4))

PREDICTED RESPONSE

- OSC should dispatch Mechanical Maintenance
- Mechanical Maintenance should request IAE assistance

0950 Ops should be about to put SATB into service. (Control this step to NOT allow in service).

1000 Fire occurs at the Medical Facility in the trailer.

PREDICTED RESPONSE

- Control room should notify the Offsite Agency Fire Departments (Gilead and Cornelius) to respond to extinguish a fire outside the McGuire Protected Area Fence.

1015 "B" centrifugal charging pump trips on overcurrent relay.

PREDICTED RESPONSE

- OSC should dispatch NLO
- NLO should request IAE

1020 Chemistry will report that the Waste Water Treatment Pond is full and the restrooms must be closed.

PREDICTED RESPONSE

- Chemistry should post signs on each restroom indicating it is closed and request Port-a-Jons be delivered.
- EOF should acquire Port-a-Jons and coordinate delivery

CONFIDENTIAL

- Rod Control Non-Urgent Failure on Logic Cabinet in alarm. IAE has been notified.

Unit 2

INITIAL CONDITIONS
1992 ANNUAL EXERCISE
OCTOBER 14, 1992
0700

- No mode. Refueling outage and defueled.
- Busline "2A" is down.
- "A" D/G is down for 18-month PM/PT. Will be available in one week.
- Busline 2B and "2B" D/G are available.
- 2B ND is available
- 2B RN, 2B KC, 2B KF are in service
- SATB still out of service from being hit by a vehicle a couple of weeks ago. New estimate of availability is in 1 week.

1030 "B" train VC/YC chillers trip on low oil pressure.

PREDICTED RESPONSE

- NLO should be dispatched to verify and evaluate alarm and request Mechanical Maintenance assistance
- OSC should dispatch an HVAC crew.

1100 Increase in S/G tube leak to > 55 GPM

1105 Safety valve SV-14 fails 100% open resulting in an onsite radiological release.

PREDICTED RESPONSE

- SITE AREA EMERGENCY should be declared.
- Dispatch NLO to identify source of release
- Dispatch Mechanical Maintenance to evaluate valve
- Dispatch RP for onsite and offsite monitoring

NOTE: On-site radiological data will be available and given as monitoring is completed throughout the exercise.

1105 Medical Facility request assistance in salvage of medical equipment and replacement of supplies.

PREDICTED RESPONSE

- EOF should acquire assistance and order necessary supplies

1130 Loss of SAMPLE FLOW on 1EMF36L due to motor burned up.

PREDICTED RESPONSE

- IAE and RP should be dispatched to evaluate and repair

1140 EOF Director is informed that 10 NRC personnel will be coming to the EOF

PREDICTED RESPONSE

- EOF should make arrangements for transportation from the airport and hotel/motel accommodations.

1205 Unit 1 Turbine Building Sump Pump 1A fails to start due to motor failure.

1206 Unit 1 Turbine Building Sump Pump 1B will not start Manually.

PREDICTED RESPONSE

- Dispatch NLO to TB Sump to evaluate and correct
- NLO request assistance from IAE
- IAE request assistance from Mechanical Maintenance
- RP dispatched to survey for radiological activity

1215 Medical emergency in the Auxillary Building Tool Issue Room. Worker suffers a back injury.

PREDICTED RESPONSE

- Dispatch the MERT (Medical Emergency Response Team)
- Decontaminate employee
- Escort employee to McGuire Medical Facility for evaluation

NOTE: Recovery will continue during this time. This will involve a point where we are required, by Tech Spec to trip the generator. If the generator is tripped at this time we would be left with NO power to Unit 1. The decision will have to be made to either: Hold to change the procedure, trip and loose power, or invoke 50.54X. After this decision is made various power sources will become available that are being repaired during the scenario.

1400 Exercise is terminated