

COOK NUCLEAR PLANT

1994

EMERGENCY PLANT EVALUATED EXERCISE

SCENARIO

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DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

I. INTRODUCTION

In the interest of verifying that the health and safety of Plant staff, Plant visitors and the general public are protected in the event of an accident at the Cook Nuclear Plant, the Indiana Michigan Power Company conducts an annual emergency response exercise. In accordance with the schedule prescribed by the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA), the 1994 emergency exercise will be conducted as a day shift exercise. The State of Michigan and Berrien County will cooperate by providing communications interfaces with AEP and plant personnel to improve exercise realism.

Exercise events will begin at approximately 0800 on October 4, 1994 initiating the mobilization of Cook Nuclear Plant, American Electric Power Service Corporation (AEPSC), and Indiana Michigan Power Company (I&M) personnel. Exercise termination is expected to take place at approximately 1400 on October 4, 1994.

The intent of the exercise is to demonstrate that these various emergency response organizations (EROs) are adequately trained to implement their corresponding emergency plans and procedures from their respective emergency response facilities (ERFs). It will also serve to demonstrate their ability to effectively coordinate their activities.

This scenario will be different from many of those of the past in that since no offsite radiological objectives need be met then it will limit the release of radioactive material to the plant site only. Thus there will be no General Emergency declared but dose assessment will still be required. The scenario will force considerable non-licensed operator and OSA activity due to damage investigation and mitigation because of seismic events. In addition, for the first time, a HAZMAT exercise will be incorporated plus the addition of a medical emergency will occur.

The exercise will be evaluated by assigned observers from American Electric Power Nuclear Operations, the Cook Nuclear Plant, and the NRC. A critique will be conducted by ERO personnel and the NRC following the exercise to identify any deficiencies and evaluate the correction of past deficiencies, if any. Plant deficiencies, if any, will be documented with subsequent resolution being the responsibility of the Plant and AEPNO Emergency Planning Coordinators.

INTRODUCTION (CONTINUED)

This manual has been prepared to assist exercise Controllers and Observers in the conduct and evaluation of the exercise. This manual contains all information and data necessary to conduct the exercise in a coordinated and efficient manner in the event the simulator becomes unusable. Although the use of the simulator will provide the opportunity for more free-play, it is important to remember that the timeline in Section VI may not track with the exercise activities as closely as it has with the more artificial, closely controlled timelines used in past exercises.

Finally, given that the players response should be candid and spontaneous to affect a valid evaluation, this manual must be treated as confidential material. Potential players shall not have prior knowledge of the scenario material in this manual.

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

II. EXERCISE OBJECTIVES

The exercise objectives dictate the scope of the scenario. The objectives for this exercise were developed based upon the Donald C. Cook Nuclear Plant (DCCNP) Emergency Plan Administrative Manual.

Situations will be presented in the scenario to prompt the desired player response for each objective. Where appropriate, specific objectives and criteria for adequate demonstration will be included in the exercise messages for Controller/Observer use.

A. OVERALL LICENSEE OBJECTIVES

1. Demonstrate the ability of the emergency response organization to implement DCCNP Emergency Plan Procedures, the Indiana Michigan Power Company Emergency Plan Response Manual and the AEPSC Emergency Response Manual.
2. Demonstrate the ability to establish emergency management command and control, and maintain continuity of this function for the duration of the postulated event.
3. Demonstrate the ability to establish communications and information flow between DCCNP emergency response facilities and participating offsite agencies.
4. Demonstrate the ability to designate subsequent shifts of the emergency response organization.

B. CONTROL ROOM OBJECTIVES

1. Demonstrate the ability to recognize symptoms and parameters indicative of degrading plant conditions and to classify degraded conditions as emergencies.
2. Demonstrate the ability to initiate notification of offsite authorities and plant personnel.

3. Demonstrate communications and information flow to and from the Technical Support Center.
4. Demonstrate the ability to transfer emergency authorities and responsibilities from the on-shift emergency organization to the DCCNP emergency response organization.
5. Demonstrate the duties of the Control Room Emergency Organization as described in procedure OHI-2080.

C. TECHNICAL SUPPORT CENTER OBJECTIVES

1. Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
2. Demonstrate the ability to provide analytical assistance and operational guidance to the Control Room.
3. Demonstrate the ability to coordinate onsite activities in response to the emergency.
4. Demonstrate the ability to establish and maintain hard copy communications with the EOF and verbal communications with the EOF, OSA, IAG, and JPIC.
5. Demonstrate the ability to provide analytical radiological assistance to the OSA and Control Room.
6. Demonstrate the ability to obtain data from the OTSC/PSSD System and Plant Process Computer.
7. Demonstrate the ability to request emergency response teams from the OSA.
8. Demonstrate the ability to evaluate the results of TSC/OSA habitability surveys and assess the need to evacuate these facilities.
9. Demonstrate the ability to recognize degrading plant conditions and classify plant conditions as an emergency.
10. Demonstrate the ability to direct the implementation of site assembly, accountability and evacuation.

11. Demonstrate the ability to evaluate site evacuation routes and determine an appropriate route based on indicated radiological and meteorological conditions.
12. Demonstrate the actions required to be taken in the TSC if the emergency involves a breach of the reactor coolant system.

D. OPERATIONS STAGING AREA OBJECTIVES

1. Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
2. Demonstrate the ability to assemble, brief, and dispatch, within an average time of 20 minutes or less after being requested, the following emergency response teams:
 - a. Damage Control
 - b. Chemistry Sampling
 - c. On-site Radiation Monitoring
 - d. Off-site Radiation Monitoring
3. Demonstrate the ability to designate a second shift for OSA operation.
4. Each emergency response team assembled and dispatched shall demonstrate the following actions as applicable to the team type and mission:
 - a. Assembly of tools/equipment;
 - b. Pre-operation checks of equipment and communications devices;
 - c. Performance of appropriate radiological precautions;
 - d. Performance or simulation of team mission
 - e. Post-mission debriefing and radiological controls;
5. Demonstrate the ability to provide emergency radiological support. As a minimum, the following activities should be demonstrated:
 - a. Establishment of emergency dosimetry and exposure tracking system;
 - b. Determination and establishment (if necessary) of emergency control points;
 - c. Performance of habitability surveys prescribed by procedure;

- d. Analysis of radiological conditions to be encountered by emergency response teams;
 - e. Specification of radiological controls and precautions for emergency response teams;
- 6. Demonstrate the ability to perform offsite radiological monitoring. As a minimum, two teams should be dispatched and direct radiation monitoring as well as airborne radioactivity analysis should be demonstrated.
 - 7. Demonstrate the ability to implement damage control activities in accordance with applicable Emergency Plan Procedures.
 - 8. Demonstrate the ability to perform onsite radiological monitoring in accordance with applicable Emergency Plan Procedures. This monitoring should include direct radiation surveys and analysis of airborne radioactivity samples.
 - 9. Demonstrate the ability to obtain post accident samples from one of the following mediums and complete appropriate chemical and isotopic analysis within three hours of the sample request.
 - a. RCS Loop
 - b. Containment Sump

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES

- 1. Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
- 2. Demonstrate the ability to establish overall command and control of the DCCNP emergency response within one hour of declaration of a site area emergency or higher classification, as applicable.
- 3. Demonstrate the ability to establish and maintain effective emergency communications with each of the following agencies and facilities:
 - a. State of Michigan
 - b. Berrien County
 - c. NRC
 - d. Technical Support Center
 - e. Joint Public Information Center
 - f. Initial Assessment Group

4. Demonstrate the ability to establish and maintain hard copy data transmission and reception with each of the following facilities:
 - a. Technical Support Center
 - b. Joint Public Information Center or Emergency News Center
 - c. State of Michigan EOC
5. Demonstrate the ability to direct Offsite Radiation Monitoring Teams in order to determine the geographical location and radiological magnitude of the postulated plume.
6. Demonstrate the ability to update the State of Michigan on the status of the emergency at 15 minute intervals.
7. Demonstrate the ability to respond to inquiries from the TSC, JPIC, IAG and State of Michigan in a timely manner.
8. Demonstrate the ability to project the magnitude of offsite dose using the Dose Assessment Program.
9. Demonstrate corporate augmentation of the EOF staff.
10. Demonstrate recovery planning associated with the emergency termination.
11. Demonstrate the ability to designate a second shift for EOF operations.

F. PUBLIC AFFAIRS OBJECTIVES

1. Demonstrate activation of the Joint Public Information Center.
2. Demonstrate the ability to conduct media briefings.
3. Demonstrate the ability to respond to actual or simulated inquiries from media representatives.
4. Demonstrate the ability of rumor control personnel to respond to simulated inquiries from the general public.
5. Demonstrate the ability to monitor media transmissions and respond to inaccurate information being transmitted by the media.
6. Demonstrate coordination of news announcement content with State and County authorities.

COOK NUCLEAR PLANT
EMERGENCY RESPONSE EXERCISE

III. CONDUCT OF THE EXERCISE

A. EXERCISE PLAYER INFORMATION

This exercise is intended to satisfy the requirements for an annual emergency response exercise to demonstrate the readiness of the Plant to respond to an abnormal Plant condition. The following information should be understood by all players prior to initiation of the exercise.

1. It should be understood that the circumstances simulated for this exercise are unrealistic in certain aspects, which should not be construed as flaws in the scenario. Moreover, it is due to the reliable design and construction of nuclear power facilities that require unrealistic assumptions to be made in order to generate conditions that will affect the general public. Thus, in order to obtain a sequence of events that will result in a significant radiological hazard to the general public, the exercise scenario must contain an incredible Plant condition, an unlikely series of equipment failures, or an improbable sequence of events coupled with equipment failure.
2. The purpose of the exercise is to demonstrate actual integrated emergency response capabilities, including the use of emergency equipment and facilities. Personnel knowledge and familiarity with the Emergency Plan and Procedures are the primary aspect of the evaluation. Demonstration of detailed knowledge of plant systems, equipment and operation is of secondary importance for purposes of this evaluation. Although knowledge of the plant is not being evaluated, system evaluations should not be eliminated from discussions during the exercise since this contributes to the realism of the response.
3. All emergency communications that relate to the exercise shall be identified as part of the drill. Verbal communications should be initiated and closed by the statement, "this is a drill". Exercise extreme care to ensure that individuals who may overhear or observe exercise activities are not misled into believing that an actual emergency exists.

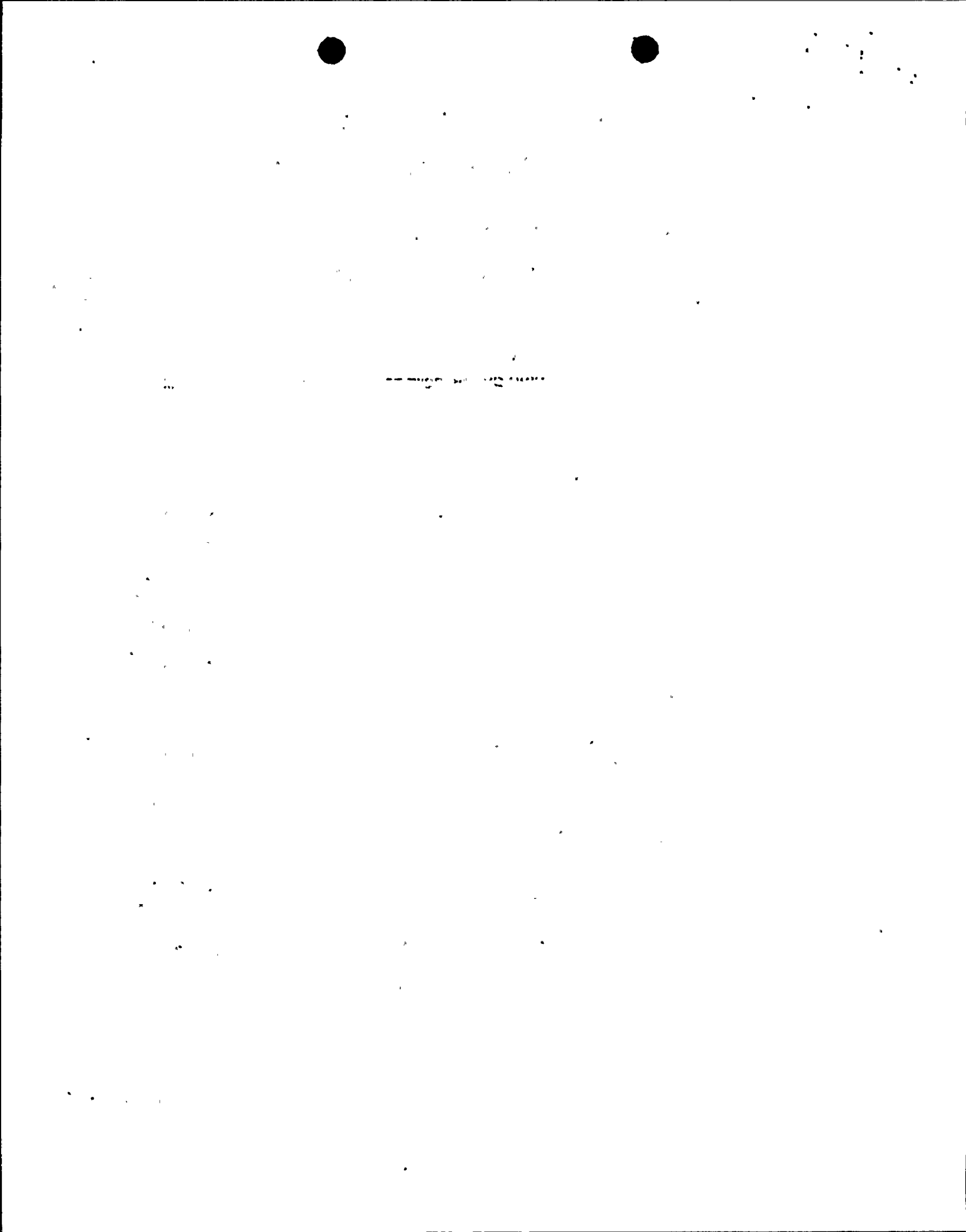
III. CONDUCT OF THE EXERCISE (CONTINUED)

4. Manipulation of any plant operating system, valves, breakers or controls in response to this exercise are to be simulated. There is to be no alteration of plant equipment, systems or circuits in response to this exercise.
5. Any motor vehicle response to this exercise, whether it be ambulance, fire fighting equipment, security or field monitoring vehicle should observe all normal motor vehicle operating laws including posted speed limits, stop lights/signs, one-way streets, etc.
6. Should any on-site security actions be required in response to this exercise, exercise participants are to cooperate as directed, and security representatives are to be prudent and tolerant in their actions.
7. Participants should inject as much realism into the exercise as is compatible with the safe performance of the exercise.
8. Play out all actions, as much as possible, in accordance with the Emergency Plan Procedures. Unless specifically instructed by the controller, you should not simulate your actions. If instructed to simulate an activity, tell the observer/controller how and when you would actually perform the activity.
9. Periodically speak out loud, verbalizing your key actions and decisions to the controller and federal evaluator. This may seem artificial, but it will assist in the evaluation process and is to your benefit.
10. If ever in doubt, ask your controller for clarification. The controller will not provide prompting or coaching information.
11. Periodically the controller may issue messages or instructions designed to initiate response actions. You must accept these messages immediately.
12. You must not accept any messages or instructions from federal evaluators. If they desire to initiate some action, they must work through the controller.

III. CONDUCT OF THE EXERCISE (CONTINUED)

13. If entering radiologically controlled areas, observe all rules and procedures governing access and egress. Do not enter high radiation areas for purpose of exercise response. Follow normal ALARA principles and guidelines.
14. Utilize status boards, log books, three-part message forms, etc., as much as possible to document and record your actions, instructions, and reports to co-players.

REMEMBER - PUT IT IN WRITING



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EMERGENCY RESPONSE EXERCISE

IV. CONTROLLERS/OBSERVERS INFORMATION

The Controller/Observer group is essential to the successful implementation of the exercise. Controllers are responsible for ensuring the scenario proceeds on schedule by disseminating timely information and maintaining scenario integrity. Observers are responsible for observing, documenting and analyzing players actions. Observers may assume the function of Controller if identified in the scenario or directed by the facilities lead controller. The following personnel will be filling the Controller/Observer positions listed:

A. Control Room

- | | |
|---------------------------------|--------------|
| 1. Exercise Lead Controller | R. Stephens |
| 2. Control Room Lead Controller | I. Fleetwood |
| 3. AEO Controller | J. Harner |
| 4. ERO Observer | R. Perrine |
| 5. EOP Controller | T. Conrad |
| 6. PE Controller | T. Fisher |
| 7. Simulator Operator | J. Dickson |
| 8. Simulator Operator | T. Garrison |
| 9. Simulator Operator | S. VanAtta |

B. Technical Support Center

- | | |
|----------------------------|-----------|
| 1. TSC Lead Controller | R. Ptacek |
| 2. TSC Observer | M. Ke |
| 3. Radiological Controller | M. Norton |

C. Operations Staging Area

- | | |
|------------------------------|-------------|
| 1. OSA Lead Controller | J. Schrader |
| 2. I&C Controller | D. Walker |
| 3. DCT Controller-Electrical | G. Troxell |
| 4. DCT Controller-Mechanical | J. Moline |
| 5. DCT Controller-Mechanical | W. Lee |
| 6. RRT/Onstie RMT Controller | B. Abbgay |

Operations Staging Area (cont.)

- | | | |
|-----|-----------------------------------|----------------|
| 7. | RP Lead Controller | H. Springer |
| 8. | Offsite RMT Controller (Counting) | T. Taylor |
| 9. | Offsite RMT Controller (Survey) | S. Watkins |
| 10. | Chemistry Lead Controller | D. Andrews |
| 11. | Chem Sampling Team Controller | V. Ball |
| 12. | Hazmat Controller | M. Greendonner |

D. Emergency Operations Facility

- | | | |
|----|-------------------------|--------------|
| 1. | EOF Lead Controller | J. Wojcik |
| 2. | Communications Observer | J. Ersland |
| 3. | Radiological Controller | D. Foster |
| 4. | Managerial Controller | J. Rutkowski |

E. Joint Public Information Center

- | | | |
|----|----------------------|---------|
| 1. | JPIC Lead Controller | C. Ross |
|----|----------------------|---------|

F. Communications

- | | | |
|----|---------------------------|--------------|
| 1. | Communications Controller | K. Unphrey |
| 2. | Communications | D. Whisenant |
| 3. | Communications | P. Hauch |

G. Security

- | | | |
|----|--------------------------|----------------|
| 1. | Security Lead Controller | E. Gerschoffer |
| 2. | Security Controller | R. McCord |
| 3. | Security Controller | J. Newton |
| 4. | Security Controller | L. Cramer |
| 5. | Security Controller | R. White |
| 6. | Security Controller | P. Jacques |

DONALD C. COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

IV. CONTROLLERS/OBSERVERS INFORMATION (CONTINUED)

H. Controller/Observer Guidelines

Controllers and Observers are utilized in this exercise to provide exercise information to the participants and to observe players response. In doing so, the Controllers and Observers should allow players to make, and correct, their own mistakes, while the Controller or Observer identifies the items to improve Plant emergency response capability. However, situations may arise where complete freedom of player response and success of the overall exercise are conflicting objectives. In such cases, the Controller or Observer must ensure proper continuity of the scenario, while identifying problem areas in sufficient detail to allow corrections. Generally, the following rules apply to control of the exercise:

1. Keep the reaction and emergency response going according to the time element established in the scenario.
2. Provide command messages to key personnel as a mechanism to prevent deviation from the scenario.
3. Observe player procedural discipline.
4. Provide prepared input data to players to stimulate response actions.
5. Observe and critique the participants actions, procedure effectiveness, equipment capability and general emergency response.

I. Exercise Controller/Observer Instructions

1. Each Controller/Observer shall participate in exercise briefings and critiques scheduled as follows:
 - Exercise Walkthrough - October 3, 1994, at 0800. Location to be announced.
 - Exercise Facility Critique - Immediately upon exercise termination in each Emergency Response Facility.

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EMERGENCY RESPONSE EXERCISE

V. OFF-SITE AGENCY PARTICIPATION

This exercise will be an announced, day shift exercise as required by NUREG-0654/FEMA-REP-1, Rev.1. Since it is an off-year, utility-only exercise, State and County participation will be limited to their presence at the JPIC and assistance with offsite notifications and communications.

COOK NUCLEAR PLANT

EMERGENCY RESPONSE EXERCISE

VI. EXERCISE NARRATIVE SUMMARY

Unit 1 Mode 6 Core Off-loaded

CVCS Crosstie - Out of Service for flow orifice replacement.

1AB Diesel and Train "B" Equipment - Out of Service for related work.

Unit 2 100 % Power, End of Life

Control Air Compressor - Out of Service for oil change and preventive maintenance.

RWST level indicator ILS-951, Failed as is.

NARRATIVE

Simulated events at the plant will begin with a Reactor Coolant System (RCS) leak of just sufficient magnitude to force a Technical Specification shutdown and subsequent **Unusual Event** declaration. As the Control Room operators are determining the size and source of the leak, a mild earthquake occurs. An **Alert** is declared as a result of the earthquake and as damage assessments continue, a strong aftershock is felt causing the RCS leak to increase significantly. A reactor trip results along with safety injection. A Refueling Water Storage Tank level indication malfunction, high turbine vibrations and a high pressure differential across the travelling screens is also noted. High containment pressure causes containment spray to actuate and a phase B isolation to occur. A **Site Area Emergency** is declared. A second aftershock occurs creating electrical malfunctions and the spill of a barrel of hazardous water treatment chemicals. A short release of radioactive material via the plant vent occurs because of a 20 gpm leak in an RHR pump. This leak is soon isolated, terminating the release. At about that same time a medical emergency occurs in the TSC. The exercise will terminate with the RHR leak isolated, electrical and chemical problems neutralized and the plant on its way to safe shutdown.

TIMELINE

The times listed for the events below are times which have been estimated based on trial simulator runs of the scenario. They are nominal only and may vary depending on minor simulator changes or techniques the exercise control room crew may have that are different than the test crew's.

<u>REAL TIME</u>	<u>SCENARIO TIME</u>	<u>EVENT/CONDITION</u>
0800	00:00	Exercise begins
0815	00:15	A RCS (Reactor Coolant System) leak of 15 gpm occurs.
0820	00:20	The Operators recognize a RCS leak is occurring and begin actions to identify source of leakage and attempts to isolate it in accordance with the RCS Excessive Leakage procedure. Symptoms occurring are: decreasing pressurizer level and pressure along with increasing containment pressure and humidity.
0845	00:45	The Operators recognize the RCS leak cannot be isolated. Plant conditions are stabilized and the decision is made to perform a Unit shutdown.
0900	01:00	Unit shutdown is initiated. Unusual Event is declared based on ECC-14. Initial notifications are made to plant management and off-site agencies.
0930	01:30	During Unit shutdown, the site experiences an Earthquake (No. 1), which can be readily felt in each Control Room.
0935	01:35	Plant Seismic Instrumentation confirms an Earthquake has occurred. An Alert is declared based on ECC-3. Initial notifications are made to plant management and off-site agencies.
		Plant tours/inspections are begun to assess plant damage and determine if a site area emergency is necessary. Plant shutdown continues.
1015	02:15	TSC and OSA are operational.

1020	02:20	Plant tours/inspections reveal no plant damage has occurred.
1030	02:30	EOF is operational.
1045	02:45	Earthquake #2 is readily felt in each Control Room causing the pre-existing RCS leak to increase, causing a Reactor Trip and SI (Safety Injection) to occur. Plant symptoms occurring include: RWST Level Indicator malfunction, turbine high vibration, circulating water travelling screen High ΔP .
1050	02:50	High containment pressure causes a containment spray and containment isolation Phase B to occur. Site Area Emergency is declared based on either ECC-3 or ECC-14. Initial notifications are made to plant management and off-site agencies.
1115	03:15	PACHMS is placed in service.
1120	03:20	Plant accountability is completed.
1130	03:30	Earthquake #3 is readily felt in each Control Room. Plant symptoms occurring include: loss of 600 Volt AC electrical buss 2-AM-D, a barrel of hazardous water treatment chemicals falls and is punctured, resulting in a hazardous chemical spill.
1145	03:45	ECCS suction source is switched from the RWST to the recirculation sump.
1200	04:00	A 20 gpm leak occurs on the "East" RHR Pump. This results in a small off-site release via the plant vent.
1215	04:15	A medical emergency occurs in the TSC.
1230	04:30	"East" RHR Pump leak is isolated, termination of the off-site release.
1245	04:45	Hazardous chemical spill is neutralized/contained.
1400	06:00	Drill terminates with approval from the Recovery and Control Manager.

COOK NUCLEAR PLANT
1994
EMERGENCY PLAN EVALUATED EXERCISE
SCOPE AND OBJECTIVES

PURPOSE

The purpose of this emergency preparedness exercise is to meet the conditions of 10CFR50, Appendix E,(IV)(F)(2) which requires a licensee to annually exercise its Emergency Plan.

SCOPE

This exercise will take place between the hours of 0800 and 1600 on October 4, 1994. It will include actions taken by the Cook Plant, the American Electric Power Service Corporation, and Indiana Michigan Power Company personnel. State of Michigan and the County of Berrien will participate at the initial notification stages and Plant personnel will be stationed in the State and County EOCs to maintain continuous communications with the EOF.

The Cook Plant Unit 2 simulator will be utilized to drive scenario events and all emergency response facilities will be activated. They include the Operations Staging Area (OSA), Simulated Technical Support Center (TSC), Emergency Operations Facility (EOF) and the Joint Public Information Center (JPIC).

Simulated events at the plant will begin with a Reactor Coolant System (RCS) leak of just sufficient magnitude to force a Technical Specification shutdown and subsequent **Unusual Event** declaration. As the Control Room operators are determining the size and source of the leak, a mild earthquake occurs. An **Alert** is declared as a result of the earthquake and as damage assessments continue, a strong aftershock is felt causing the RCS leak to increase significantly. A reactor trip results along with safety injection. A Refueling Water Storage Tank level indication malfunction, high turbine vibrations and a high pressure differential across the travelling screens is also noted. High containment pressure causes containment spray to actuate and a phase B isolation to occur. A **Site Area Emergency** is declared. A second aftershock occurs creating electrical malfunctions and the spill of a barrel of hazardous water treatment chemicals. A short release of radioactive material via the plant vent occurs because of a 20 gpm leak in an RHR pump. This leak is soon isolated, terminating the release. At about that same time a medical emergency occurs in the TSC. The exercise will terminate with the RHR leak isolated, electrical and chemical problems neutralized and the plant on its way to safe shutdown.

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3. Demonstrate the ability to establish communications and information flow between DCCNP emergency response facilities and participating offsite agencies.
4. Demonstrate the ability to designate subsequent shifts of the emergency response organization.

B. CONTROL ROOM OBJECTIVES

1. Demonstrate the ability to recognize symptoms and parameters indicative of degrading plant conditions and to classify degraded conditions as emergencies.
2. Demonstrate the ability to initiate notification of offsite authorities and plant personnel.
3. Demonstrate communications and information flow to and from the Technical Support Center.

4. Demonstrate the ability to transfer emergency authorities and responsibilities from the on-shift emergency organization to the DCCNP emergency response organization.
5. Demonstrate the duties of the Control Room Emergency Organization as described in procedure OHI-2080.

C. TECHNICAL SUPPORT CENTER OBJECTIVES

1. Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
2. Demonstrate the ability to provide analytical assistance and operational guidance to the Control Room.
3. Demonstrate the ability to coordinate onsite activities in response to the emergency.
4. Demonstrate the ability to establish and maintain hard copy communications with the EOF and verbal communications with the EOF, OSA, IAG, and JPIC.
5. Demonstrate the ability to provide analytical radiological assistance to the OSA and Control Room.
6. Demonstrate the ability to obtain data from the OTSC/PSSD System and Plant Process Computer.
7. Demonstrate the ability to request emergency response teams from the OSA.
8. Demonstrate the ability to evaluate the results of TSC/OSA habitability surveys and assess the need to evacuate these facilities.
9. Demonstrate the ability to recognize degrading plant conditions and classify plant conditions as an emergency.
10. Demonstrate the ability to direct the implementation of site assembly, accountability and evacuation.
11. Demonstrate the ability to evaluate site evacuation routes and determine an appropriate route based on indicated radiological and meteorological conditions.

12. Demonstrate the actions required to be taken in the TSC if the emergency involves a breach of the reactor coolant system.

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1. Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
2. Demonstrate the ability to assemble, brief, and dispatch, within an average time of 20 minutes or less after being requested, the following emergency response teams:
 - a. Damage Control
 - b. Chemistry Sampling
 - c. On-site Radiation Monitoring
 - d. Off-site Radiation Monitoring
3. Demonstrate the ability to designate a second shift for OSA operation.
4. Each emergency response team assembled and dispatched shall demonstrate the following actions as applicable to the team type and mission:
 - a. Assembly of tools/equipment;
 - b. Pre-operation checks of equipment and communications devices;
 - c. Performance of appropriate radiological precautions;
 - d. Performance or simulation of team mission
 - e. Post-mission debriefing and radiological controls;
5. Demonstrate the ability to provide emergency radiological support. As a minimum, the following activities should be demonstrated:
 - a. Establishment of emergency dosimetry and exposure tracking system;
 - b. Determination and establishment (if necessary) of emergency control points;
 - c. Performance of habitability surveys prescribed by procedure;
 - d. Analysis of radiological conditions to be encountered by emergency response teams;
 - e. Specification of radiological controls and precautions for emergency response teams;
6. Demonstrate the ability to perform offsite radiological monitoring. As a

minimum, two teams should be dispatched and direct radiation monitoring as well as airborne radioactivity analysis should be demonstrated.

7. Demonstrate the ability to implement damage control activities in accordance with applicable Emergency Plan Procedures.
8. Demonstrate the ability to perform onsite radiological monitoring in accordance with applicable Emergency Plan Procedures. This monitoring should include direct radiation surveys and analysis of airborne radioactivity samples.
9. Demonstrate the ability to obtain post accident samples from one of the following mediums and complete appropriate chemical and isotopic analysis within three hours of the sample request.
 - a. RCS Loop
 - b. Containment Sump

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES

1. Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
2. Demonstrate the ability to establish overall command and control of the DCCNP emergency response within one hour of declaration of a site area emergency or higher classification, as applicable.
3. Demonstrate the ability to establish and maintain effective emergency communications with each of the following agencies and facilities:
 - a. State of Michigan
 - b. Berrien County
 - c. NRC
 - d. Technical Support Center
 - e. Joint Public Information Center
 - f. Initial Assessment Group
4. Demonstrate the ability to establish and maintain hard copy data transmission and reception with each of the following facilities:
 - a. Technical Support Center
 - b. Joint Public Information Center or Emergency News Center
 - c. State of Michigan EOC

5. Demonstrate the ability to direct Offsite Radiation Monitoring Teams in order to determine the geographical location and radiological magnitude of the postulated plume.
6. Demonstrate the ability to update the State of Michigan on the status of the emergency at 15 minute intervals.
7. Demonstrate the ability to respond to inquiries from the TSC, JPIC, IAG and State of Michigan in a timely manner.
8. Demonstrate the ability to project the magnitude of offsite dose using the Dose Assessment Program.
9. Demonstrate corporate augmentation of the EOF staff.
10. Demonstrate recovery planning associated with the emergency termination.
11. Demonstrate the ability to designate a second shift for EOF operations.

F. PUBLIC AFFAIRS OBJECTIVES

1. Demonstrate activation of the Joint Public Information Center.
2. Demonstrate the ability to conduct media briefings.
3. Demonstrate the ability to respond to actual or simulated inquiries from media representatives.
4. Demonstrate the ability of rumor control personnel to respond to simulated inquiries from the general public.
5. Demonstrate the ability to monitor media transmissions and respond to inaccurate information being transmitted by the media.
6. Demonstrate coordination of news announcement content with State and County authorities.

INITIAL CONDITIONS

Unit 1

Mode 6 Core Off-loaded

CVCS Crosstie - Out of Service for flow orifice replacement.

1AB Diesel and Train "B" Equipment - Out of Service for related work.

Unit 2

100 % Power, End of Life

Control Air Compressor - Out of Service for oil change and preventive maintenance.

RWST level indicator ILS-951, Failed as is.

TIMELINE

The times listed for the events below are times which have been estimated based on trial simulator runs of the scenario. They are nominal only and may vary depending on minor simulator changes or techniques the exercise control room crew may have that are different than the test crew's.

<u>TIME</u>	<u>EVENT/CONDITION</u>
0800	Exercise begins
0815	A RCS (Reactor Coolant System) leak of 15 gpm occurs.
0820	The Operators recognize a RCS leak is occurring and begin actions to identify source of leakage and attempts to isolate it in accordance with the RCS Excessive Leakage procedure. Symptoms occurring are: decreasing pressurizer level and pressure along with increasing containment pressure and humidity.
0845	The Operators recognize the RCS leak cannot be isolated. Plant conditions are stabilized and the decision is made to perform a Unit shutdown.
0900	Unit shutdown is initiated. Unusual Event is declared based on ECC-14. Initial notifications are made to plant management and off-site agencies.

0930 During Unit shutdown, the site experiences an Earthquake (No. 1), which can be readily felt in each Control Room.

0935 Plant Seismic Instrumentation confirms an Earthquake has occurred. An Alert is declared based on ECC-3. Initial notifications are made to plant management and off-site agencies.

Plant tours/inspections are begun to assess plant damage and determine if a site area emergency is necessary. Plant shutdown continues.

1015 TSC and OSA are operational.

1020 Plant tours/inspections reveal no plant damage has occurred.

1030 EOF is operational.

1045 Earthquake #2 is readily felt in each Control Room causing the pre-existing RCS leak to increase, causing a Reactor Trip and SI (Safety Injection) to occur. Plant symptoms occurring include: RWST Level Indicator malfunction, turbine high vibration, circulating water travelling screen High ΔP .

1050 High containment pressure causes a containment spray and containment isolation Phase B to occur. **Site Area Emergency** is declared based on either ECC-3 or ECC-14. Initial notifications are made to plant management and off-site agencies.

1115 PACHMS is placed in service.

1120 Plant accountability is completed.

1130 Earthquake #3 is readily felt in each Control Room. Plant symptoms occurring include: loss of 600 Volt AC electrical buss 2-AM-D, a barrel of hazardous water treatment chemicals falls and is punctured, resulting in a hazardous chemical spill.

1145 ECCS suction source is switched from the RWST to the recirculation sump.

1200 A 20 gpm leak occurs on the "East" RHR Pump. This results in a small off-site release via the plant vent.

1215 A medical emergency occurs in the TSC.

1230

"East" RHR Pump leak is isolated, termination of the off-site release.

1245

Hazardous chemical spill is neutralized/contained.

1400

Drill terminates with approval from the Recovery and Control Manager.

