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 AUTH. NAME AUTHOR AFFILIATION
 ALEXICH, M.P. Indiana Michigan Power Co. (formerly Indiana & Michigan Ele
 RECIP. NAME RECIPIENT AFFILIATION
 MURLEY, T.E. Document Control Branch (Document Control Desk)
 SUBJECT: Forwards "1990 Annual Emergency Preparedness Exercise on
 900403 for DC Cook Nuclear Plant."

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AEP:NRG:0965T
10 CFR 50 App. E

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. 50-315 and 50-316
License Nos. DPR-58 and DPR-74
1990 EMERGENCY PLAN EXERCISE SCOPE AND OBJECTIVES
1990 EMERGENCY PLAN EXERCISE SCENARIO

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

April 23, 1990

Dear Dr. Murley:

The 1990 Emergency Plan Exercise was held at the Donald C. Cook Nuclear Plant on April 3, 1990. Advance submissions of the exercise scope and objectives, and the exercise scenario package, were made to the NRC Region III Emergency Preparedness Section on December 21, 1989 and January 31, 1990, respectively.

In accordance with guidance provided by letter from Mr. A. B. Davis, NRC Region III to Mr. John E. Dolan, AEPSC, dated March 16, 1987, the exercise information noted above was not transmitted to the NRC Document Control Desk or the NRC Resident Inspector.

The exercise has now been completed and in accordance with 10 CFR 50.4, enclosed are the exercise scope and objectives, and the detailed scenario documentation.

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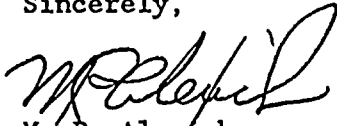
Dr. T. E. Murley

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AEP:NRG:0965T

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Sincerely,

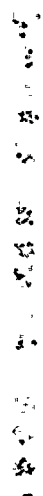


M. P. Alexich
Vice President

edg

Attachment

cc: D. H. Williams, Jr., w/o att.
A. A. Blind - Bridgman, w/o att.
R. C. Callen, w/o att.
NFEM Section Chief, w/o att.
G. Charnoff, w/o att.
NRC Resident Inspector - Bridgman, Attachments
A. B. Davis - Region III, w/o att.
W. G. Snell - Region III, w/o att.
Lt. J. M. Tyler - Lansing, MI, w/o att.



DONALD C. COOK NUCLEAR PLANT

1990 ANNUAL GRADED EXERCISE SCOPE

This exercise is being conducted to satisfy the NRC requirement for an annual demonstration and is intended to demonstrate to NRC and FEMA evaluators that the health and safety of individuals within the Plume Exposure Pathway Emergency Planning Zone can be protected in the event of a radiological emergency at the Cook Nuclear Plant.

The exercise is scheduled for the week of April 2, 1990 as an off-hours, unannounced exercise. The events will be initiated at approximately 0100 on April 3, 1990 and will terminate at approximately 0900. The scenario will progress in order to facilitate activation of State and County emergency organizations prior to 0400.

It is intended to conduct the exercise using the Unit 2 simulator and the simulated Technical Support Center in the Cook Nuclear Plant Training Center. Controller information and simulation data are also being developed to provide back-up for the exercise in the event of simulator equipment problems.

The event will be initiated by a loose part from a reactor coolant pump which causes a steam generator tube leak in excess of 500 gpm, and both pin damage and nozzle pluggage in the reactor core. The PORV and the upstream manual valve will fail open on the effected steam generator causing it to blowdown. The event will progress to a General Emergency based on either the loss of fission product barriers or dose rates at the site boundary. The severity of the event and subsequent off-site releases are intended to drive both the on-site and off-site exercise objectives.

The meteorology will be simulated to reflect weather anticipated in early April on the shore of Lake Michigan.

The DCCNP emergency response organization, as well as the I&M Public Affairs and AEPSC organizations, will participate in this exercise. The following licensee emergency response facilities will be exercised.

- o Technical Support Center (TSC)
- o Operations Staging Area (OSA)
- o Emergency Operations Facility (EOF)
- o Joint Public Information Center (JPIC).

This will be a joint exercise with the State of Michigan and Berrien County, Michigan participating to demonstrate plume exposure pathway planning objectives. The State and County will activate the following facilities:



- o State Emergency Operations Center (SEOC) - Lansing, MI
- o Berrien County Emergency Operations Center (BEOC) -
St. Joseph, MI
- o Joint Public Information Center (JPIC)
- o Local Reception/Decontamination/Congregate Care and Emergency
Worker Decontamination Centers.

Exercise participants will not have prior knowledge of the event scenario.

Objectives of the off-site organizations are being transmitted to FEMA by the State of Michigan. Specific actions to be demonstrated by the licensee emergency response organization are reflected in the following objectives.

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DONALD C. COOK NUCLEAR PLANT

1990 EMERGENCY PREPAREDNESS EXERCISE OBJECTIVES

OBJECTIVE

A. OVERALL LICENSEE OBJECTIVES

- A-1 Demonstrate the ability of the emergency response organization to implement DCCNP Emergency Plan Procedures, the IMPCo Emergency Response Manual and the AEPSC Emergency Response Manual.
- A-2 Demonstrate the ability to establish emergency management command and control, and maintain continuity of this function for the duration of the postulated event.
- A-3 Demonstrate the ability to establish communications and information flow between DCCNP emergency response facilities and participating offsite agencies.
- A-4 Demonstrate the ability to designate subsequent shifts of the emergency response organization.
- A-5 Demonstrate the ability to notify and mobilize off-duty personnel during non-working hours, between 0000 and 0400.

B. CONTROL ROOM OBJECTIVES

- B-1 Demonstrate the ability to recognize symptoms and parameters indicative of degrading plant conditions and to classify degraded conditions as emergencies.
- B-2 Demonstrate the ability to initiate notification of off-site authorities and plant personnel.
- B-3 Demonstrate communications and information flow to and from the Technical Support Center.
- B-4 Demonstrate the ability to transfer emergency authorities and responsibilities from the on-shift emergency organization to the DCCNP emergency response organization.
- B-5 Demonstrate the ability to implement site assembly and accountability during off-hours (i.e., 1700-0600).

C. TECHNICAL SUPPORT CENTER OBJECTIVES

- C-1 Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.

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OBJECTIVE

C. TECHNICAL SUPPORT CENTER OBJECTIVES (cont'd.)

- C-2 Demonstrate the ability to provide analytical assistance and operational guidance to the Control Room.
- C-3 Demonstrate the ability to coordinate on-site activities in response to the emergency.
- C-4 Demonstrate the ability to establish and maintain hard copy communications with the EOF and verbal communications with the EOF, OSA, IAG, ENC and/or JPIC.
- C-5 Demonstrate the ability to provide analytical radiological assistance to the OSA and Control Room.
- C-6 Demonstrate the ability to obtain data from the OTSC/PSSD system.
- C-7 Demonstrate the ability to request emergency response teams from the OSA.
- C-8 Demonstrate the ability to designate a second shift for TSC operation.
- C-9 Demonstrate the ability to evaluate the results of TSC/OSA habitability surveys and assess the need to evacuate these facilities.
- C-10 Demonstrate the ability to recognize degrading plant conditions and classify plant conditions as an emergency.
- C-11 Demonstrate the ability to evaluate site evacuation routes and determine an appropriate route based on indicated radiological and meteorological conditions.
- C-12 Demonstrate the actions required to be taken in the TSC if the emergency involves a breach of the reactor coolant system.
- C-13 Demonstrate the ability to determine the level of core damage based on plant parameters provided.
- C-14 Demonstrate the ability to process personnel dose extension request.
- C-15 Demonstrate the ability to assess the need for, and process request for potassium iodide administration.

OBJECTIVE

D. OPERATIONS, STAGING AREA OBJECTIVES

- D-1 Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.
- D-2 Demonstrate the ability to assemble, brief and dispatch the following emergency response team(s):
 - a. Damage Control Team
 - b. Post Accident Sampling Team
 - c. On-site Radiation Monitoring Team
 - d. Off-site Radiation Monitoring Team
- D-3 Demonstrate the ability to designate a second shift for OSA operation.
- D-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. Preoperation 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.
- D-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. Establishment 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.
- D-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.

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OBJECTIVE

D. OPERATIONS STAGING AREA OBJECTIVES (cont'd.)

- D-7 Demonstrate the ability to implement damage control activities in accordance with applicable Emergency Plan Procedures.
- D-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.
- D-9 Demonstrate the ability to obtain post accident samples from the RSC Loop and complete appropriate chemical and isotopic analysis within three hours of the sample request.
- D-10 Demonstrate the ability to obtain radiological base data required to evaluate the release level from the secondary plant during a steam generator tube rupture.
- D-11 Demonstrate the ability to respond to a contaminated person. Included in this demonstration, personnel decontamination shall be simulated.
- D-12 Demonstrate the actions required for an individual to exceed the exposure limits of 10CFR20. Included in this demonstration should be a discussion of post exposure actions and limitations.
- D-13 Demonstrate the actions required to administer potassium iodide. This demonstration should include a discussion of the follow-up actions associated with KI administration.
- D-14 Demonstrate a shift turnover.
- D-15 Demonstrate the ability to obtain environmental samples in accordance with applicable Emergency Plan Procedures. The following samples should be obtained:
 - a. Vegetation
 - b. Soil

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES

- E-1 Demonstrate the ability to activate the facility within one hour of declaration of an emergency requiring facility activation.

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OBJECTIVE

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES (cont'd.)

- E-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 general emergency, as applicable.
- E-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
 - f. Initial Assessment Group
- E-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
 - c. State of Michigan EOC
- E-5 Demonstrate the ability to direct Offsite Radiation Monitoring Teams in order to determine the geographical location and radiological magnitude of the postulated plume.
- E-6 Demonstrate the ability to designate a second shift for EOF operation.
- E-7 Demonstrate the ability to develop protective action recommendations based on projected dose and/or core and containment status.
- E-8 Demonstrate the ability to update the State of Michigan on the status of the emergency at 15 minute intervals.
- E-9 Demonstrate the ability to respond to inquiries from the TSC, JPIC, IAG and State of Michigan in a timely manner.
- E-10 Demonstrate emergency de-escalation and termination.
- E-11 Demonstrate the ability to project the magnitude of offsite dose using the Dose Assessment Program and the IBM Personal Computer.
- E-12 Demonstrate corporate augmentation of the EOF staff.

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OBJECTIVE

E. EMERGENCY OPERATIONS FACILITY OBJECTIVES (cont'd.)

- E-13 Demonstrate recovery planning associated with emergency termination.
- E-14 Demonstrate the ability to take compensatory action in the event of a failure of the Meteorological Data Terminal.

F. PUBLIC AFFAIRS OBJECTIVES

- F-1 Demonstrate activation of the Joint Public Information Center.
- F-2 Demonstrate the ability to conduct media briefings.
- F-3 Demonstrate the ability to respond to actual or simulated inquiries from media representatives.
- F-4 Demonstrate the ability of rumor control personnel to respond to simulated inquiries from the general public.
- F-5 Demonstrate the ability to monitor media transmissions and respond to inaccurate information being transmitted by the media.
- F-6 Demonstrate the ability to designate subsequent shifts for JPIC operations.
- F-7 Demonstrate coordination of news announcement content with State and County representatives.