

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-315/90016(DRSS); 50-316/90016(DRSS)

Docket Nos. 50-315; 50-316

Licenses No. DPR-58, DPR-74

Licensee: Indiana Michigan Power Company
1 Riverside Plaza
Columbus, OH 43216

Facility Name: D. C. Cook Nuclear Plant, Units 1 and 2

Inspection At: D. C. Cook Site, Bridgman, Michigan

Inspection Conducted: August 6-10, 1990

Inspector: *William Snell for*
D. M. Barss

8/17/90
Date

Approved By: *William Snell*
William Snell, Chief,
Radiological Controls and
Emergency Preparedness Section

8/17/90
Date

Inspection Summary

Inspection on August 6-10, 1990 (Report Nos. 50-315/90016(DRSS);
50-316/90016(DRSS))

Areas Inspected: Routine, announced inspection of the D. C. Cook Nuclear Plant including the following areas: followup on actual emergency plan activations (IP 92700) and operational status of the emergency preparedness program (IP 82701). The inspection involved one NRC inspector.

Results: No violations, deficiencies or deviations were identified during this inspection. Two open items were identified. The D. C. Cook Emergency Preparedness Program continues to have excellent management support and is a well run and well maintained program. The licensee continues to make refinements to improve their Emergency Preparedness Program.

DETAILS

1. Persons Contacted

*A. A. Blind, Plant Manager
*J. E. Rutkowski, Assistant Plant Manager Technical Support
*R. S. Krieger, Emergency Plan Coordinator
*D. C. Loope, Radiation Protection Manager
*J. Fryer, Technical and Physical Section
D. Liebel, Senior Instructor Training Support Section
R. Anderson, Program Administration Operator Requalification
D. Schroeder, Program Administration Chemistry and Radiation Protection Training
K. Newell, Program Administration Training Instructor
J. Ersland, Supervisor Skills Training
B. Mutz, Shift Supervisor
*K. M. Haglund, General Chemistry Supervisor
*V. Kincheloe, Training Superintendent
*L. G. Umphrey, Senior Administrative Compliance Coordinator
*L. Bounds, Corporate Emergency Plan Coordinator
*S. Klementowicz, Radiation Support Manager

*Denotes those attending the NRC exit interview held on August 10, 1990.

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

2. Emergency Plan Activities (IP 92700)

Since January of 1989, the licensee has had eight actual activations of the emergency plan. Five of these events were reviewed during a previous inspection (Inspection Report No. 50-315/90003(DRSS) and 50-316/90004(DRSS), conducted on April 2-6, 1990. Four of the previously reviewed events were related to technical specification plant shutdown requirements and one was a bomb threat; the remaining three events occurred since April 1990.

On May 24, 1990, at 0315 hours an Unusual Event was declared under Emergency Condition Category five (ECC-5) in accordance with procedure PMP 2080 EPP.101 "Emergency Classification", due to the catastrophic failure of a current transformer which resulted in a fire in the switch yard which lasted more than 10 minutes.

By 0616 hours it was determined that it would be prudent to reduce power in Unit 1. Concurrent with the initiation of power reduction an Alert was declared under ECC-4, "Explosion damage to the plant affecting unit operation on offsite power supplied". This was a conservative decision to declare an Alert. The Alert was terminated at 1138 hours that same day.

On July 13, 1990, at 1310 hours an Unusual Event was declared under ECC-4 "Any explosion near or on site with the potential to affect plant operations", when a worker made contact with an energized conductor while working on switch gear, which resulted in an "explosion" or "electrical flashover". Three persons were injured and one fatality was reported. The event was terminated at 1340 hour that same day.



On July 29, 1990, at 0359 hours an Unusual Event was declared under ECC-10 "Loss of all on-site AC power capability (both diesel generators for one unit are unavailable or inoperable due to mechanical, electrical or error efforts)". Train A Diesel Generator (DG) was inoperable due to work on it's associated 4160 Volt Emergency Bus and Train B DG was removed from service and declared inoperable to perform Technical Specification required inspections. This condition was anticipated and prior notification was made to the NRC Resident Inspector as well as NRC Emergency Operations Center Duty Officer. At the time of this report the Unusual Event was ongoing and anticipated to last until approximately August 20, 1990.

In each of these events licensee personnel correctly classified the event and made appropriate notifications in accordance with approved procedural guidance and within required time limits. Personnel call-outs and facility activations associated with the Alert declared on May 24, 1990 were also accomplished within the established guidance of one hour. The licensee has prepared and maintains files for each event. These files contain copies of such items as Condition Reports, problem reports, Accident Information Report data sheets, Event Notification worksheets, initial off-site notification lists, control room logs, other applicable logs and data sheets as well as internal memorandums relating to the particular event. Adequate information was available to understand the event and corrective action taken to permit exiting from the emergency declaration. The licensee also conducted a post event evaluation of the May 24, 1990 incident utilizing newly implemented guidance found in the licensee's Emergency Plan Administrative Manual, Section G.), "Post Emergency Investigations". This evaluation included a critique with emergency response personnel to identify areas for improvement in the emergency plan and procedures identified during an actual event. These improvement items have been entered on the licensee Emergency Preparedness Administrative Tracking System (EPATS) to ensure followup until completion.

No violations or deviations were identified during the review of this program area.

3. Operational Status of the Emergency Preparedness Program (IP 82701)

a. Emergency Plan and Implementing Procedures

Revision 8 of the licensee's Emergency Plan was issued on November 30, 1989. Copies of this revision were distributed to appropriate personnel and organizations, including the NRC, within 30 days of the change.

By letter dated March 1, 1990, NRC Region III staff documented their review and approval of Revision 8 to the Emergency Plan for the D. C. Cook Nuclear Plant, which had an effective date of November 30, 1989. A review of the several minor revisions made to the emergency preparedness program indicated that major changes had not been made, and these changes had not adversely affected the overall state of emergency preparedness. Licensee personnel were aware that changes to the Emergency Plan determined to decrease the effectiveness of the plan could not be implemented without prior NRC approval.

Minor revisions to several of the licensee's implementing procedures have been made since the last inspection and review by the NRC. The licensee has taken care to ensure that these changes have been reflected, as appropriate, in other station procedures. The inspector noted that for each revision an appropriate signed cover page was available, indicating each procedure had been properly reviewed and approved in accordance with established procedural guidance. Copies of each revised procedure were submitted to the NRC within 30 days of implementation.

Current copies of the emergency plan and appropriate implementing procedure were readily available in each emergency response facility and the Control Room.

No violations or deviations were identified during the review of this program area.

b. Emergency Response Facilities (ERF), Equipment and Supplies

The Emergency Operations Facility (EOF), Technical Support Center (TSC), and Operations Staging Area (OSA), are all dedicated facilities at this site. Each facility was toured and found to be clean and ready for use as was described in the Emergency Plan and relevant procedures.

During the tour of the OSA several storage lockers were opened for inspection. Each locker was properly sealed with a tamper indicating seal. Upon opening, the storage lockers were found to be neatly and efficiently organized. All Radiological Survey equipment was calibrated and had been source checked monthly in accordance with established procedures. One stabilized assay meter (SAM-2) was noted to have failed the latest monthly source check and was properly tagged to indicate this failure. A replacement meter was readily available for use.

Kits containing protective clothing (PC's) in varying sizes were prepared and ready for use. Each kit was sealed with a tamper indicating seal. These kits contained all items need for full dress out including a set of plastic as well as cloth PC's, tape, writing instruments and a flash light. Also available in separate packages were full face respirators with both particulate and iodine cartridges. Each respirator package had an appropriate seal indicating it had been inspected monthly as well.

A portal type monitor is utilized to monitor personnel entering the OSA. This monitor is kept energized and ready for use at all times. The inspector could not find any visible indication that this monitor had been source checked on a regular basis. A subsequent review of response check records indicated that this instrument was being routinely checked in accordance with established procedures, and a sticker had been affixed to the monitor to indicate this.

A copy of the current quarterly plant phone directory was not available in the OSA. However, several copies from the previous quarter were available.

The licensee maintains several working copies of forms, found in twelve procedures as attachments and exhibits, for use by personnel in the OSA. These working copies were compared to controlled copies and with one exception were found to be the current revision. Revision 1 of PMP 2081 EPP.208, Exhibit A was the current revision, while working copies of revision 0 were incorrectly maintained in the OSA forms file.

Inventory records for emergency equipment supplies were reviewed. All required inventories had been satisfactorily completed in accordance with established procedural guidance. The licensee has a very detailed procedure clearly identifying what equipment and supplies are to be maintained in each facility. Records of the completed inventories are maintained in an orderly manner and are readily retrievable. Surveillance records for operability checks of various communication equipment were reviewed and found to be in good order. These surveillances had been completed as required by established procedures.

Both Control Rooms (CR), Unit 1 and Unit 2, were toured. Current copies of the Emergency Plan and procedures were readily available as well as multiple copies of applicable forms personnel would need in an emergency. These forms were neatly kept in an attache case to be easily located and accessible. Emergency phones and radios were logically positioned and the area kept uncluttered to ensure quick accessibility.

The licensee maintains one dedicated four wheel drive utility vehicle for use in emergency offsite monitoring. This vehicle has been set up and equipped as a mobile counting laboratory. An inspection was made of this vehicle and the associated equipment storage area and supplies for use in emergency offsite monitoring. The vehicle, equipment and supplies were well maintained in accordance with procedures. One air sampler was found to have a deteriorated O-Ring seal on the sample head. The license has taken action to replace this O-Ring and inspect all other similar equipment for this condition.

No violations or deviations were identified during the review of this program area. However, the following item is recommended for improvement:

Develop a method to ensure that non-controlled documents, such as working copies of procedure forms and phone directories, are updated and maintained consistent with current revisions.

c. Organization and Management Control

There have been no major changes in the licensee organizational structure since the last routine inspection. However, there have

been several reassignments of top level management personnel. All of these reassignments involved individuals who have been long term company employees with long standing experience with the Emergency Preparedness (EP) program. None of these changes has adversely effected the EP program. The licensee management remain firmly committed to and supportive of the EP program. This support and commitment is demonstrated by the following:

- One full time corporate Emergency Plan Coordinator
- One full time Emergency Plan Coordinator (EPC) on site.
- One Technician made available to the site EPC to assist with emergency response facility equipment and supply maintenance activities, as well as surveillances. This individual devotes approximately 40% of his time to EP activities.
- Corporate staff members are assigned to conduct quarterly "Corporate Technical Reviews" of the EP program. These are indepth internal audits of selected program areas.
- The licensee has implemented the practice of conducting monthly EP drills focused on a different EP area each month.
- A permanent Scenario Development Committee has been assigned to develop and run the monthly EP drills. This committee consists of a representative from each appropriate area, (operations, maintenance, radiation protection, etc.), as necessary to meet established objectives. The site EPC is the chairman of the Committee to ensure uniformity and program consistency.
- New personnel assigned to the Emergency Response Organization must first complete an extensive training program complete with establish practical factors demonstrations and a position specific qualification card.

No violations or deviations were identified during the review of this program area.

d. Training

The Emergency Plan requires the following functional drills: an annual graded exercise, annual medical emergency drill, an annual radiological monitoring drill to include collection and analysis of water, vegetation, soil and air samples on and off site, a health physics drill to involve analysis of inplant liquid samples with actual radiation levels using the post accident sampling system, a semi-annual health physics drill involving response to and analysis of simulated airborne and liquid samples and direct radiation measurements in the environment. Licensee records documented the completion of all drills as specified in the Emergency Plan. In addition to the required drills and exercise the licensee has been conducting monthly mini-drills as training sessions for selected areas of the Emergency Preparedness program.

A critique is conducted for each drill to evaluate the program, procedures and player performance. Improvement items are tracked utilizing the Emergency Preparedness Administrative Tracking System (EPATS) until completed.

Interviews were conducted with five individuals, (two Radiation Protection Technicians who report to the OSA, two Plant Evaluation Team Members who report to the TSC, and one Shift Supervisor) and two Control Room crews. In each interview conducted station personnel were knowledgeable of their assigned emergency response duties and were aware of the appropriate procedural guidance which is provided.

The Emergency Plan and Plant Manager Instructions 2070 (PMI-2070) "Training" clearly outlines the licensee requirement to conduct specialized initial training and annual retraining for personnel assigned to the Emergency Response Organization (ERO). Initial Emergency Plan training requirements for each ERO position are well defined in established training program documents. However, annual retraining requirements are not clearly defined for each ERO position. Also, it was determined through discussion with cognizant licensee personnel that there was ambiguity between various portion of the licensee Emergency Plan and training documents as to the use of the term "Annual". (See particularly Procedure No. 12-PMP-2070. TRN.104 "Licensed Operator Requalification Training Program"; Section 4.4). This ambiguity along with the lack of a clear definition of the minimum criteria to satisfy the annual retraining requirement will be tracked for future review. (Open Item No. 50-315/90016-01)

The training records, including Qualification Cards, for 22 randomly selected personnel assigned to the ERO were reviewed. From the records which were inspected it appeared that all 22 personnel had completed the appropriate initial training requirements.

From this randomly selected group, four individuals had not completed the same retraining course as the others. These four individuals had each participated in some form of refresher training or drills during the time period in question. However to insure consistency these four individuals should receive the same retraining designated for other personnel assigned to similar ERO positions. (Open Item No. 315/90016-02)

No violations or deviations were identified during the review of this program area.

e. Independent Reviews/Audits

The licensee's Nuclear Safety Design Review Committee (NSDRC) conducted two separate audits of the Emergency Preparedness (EP) program since the last routine NRC inspection. NSDRC Audit No. 157 was conducted from February 13, 1989 to March 3, 1989. Each audit was conducted by a team consisting of personnel who were independent from the Emergency Preparedness Program.

The Audit Plan for each audit was reviewed and showed sufficient breadth to assess a large cross section of the EP program. A review of the audit records indicated the auditors probed to a sufficient depth to adequately review the EP program. Each audit included an assessment of drills, exercises, procedures and emergency capabilities, as well as the adequacy of the licensee's interface with State and local governmental officials.

Results and recommendation from each audit were well documented and reported to both corporate and plant management. They were also made available to both State and local governmental officials.

Audit findings and recommendations were responded to by appropriate personnel either on site or at the corporate level. When necessary, technically adequate corrective action were implemented in a timely manner to address open items. Top management personnel, including the corporate Vice President and Plant Manager, as well as others, reviewed and commented on the audit recommendations and responses contained in the final Audit Report.

These audits adequately satisfy the requirements found in 10 CFR 50.54(t).

The licensee's records of the critique for the annual graded exercise were also reviewed. This review indicated the licensee had adequately conducted a self evaluation. Critique findings were evaluated and implemented as appropriate. The EPATS was utilized to track open critique items until they were adequately resolved.

No violations or deviations were identified during the review of this program area.

4. TMI Safety Issues Management System (SIMS) Items

On October 31, 1980, the NRC issued NUREG-0737, which incorporated into one document all TMI-related items approved for implementation by the Commission at that time. On December 17, 1982, the NRC issued Supplement 1 to NUREG-0737 to provide additional clarification regarding Regulatory Guide 1.97 (Revision 2) - Application to Emergency Response Facilities, Emergency Response Facilities, and Meteorological Data, as well as other areas. The status of the completion of these TMI SIMS items are internally tracked by the NRC.

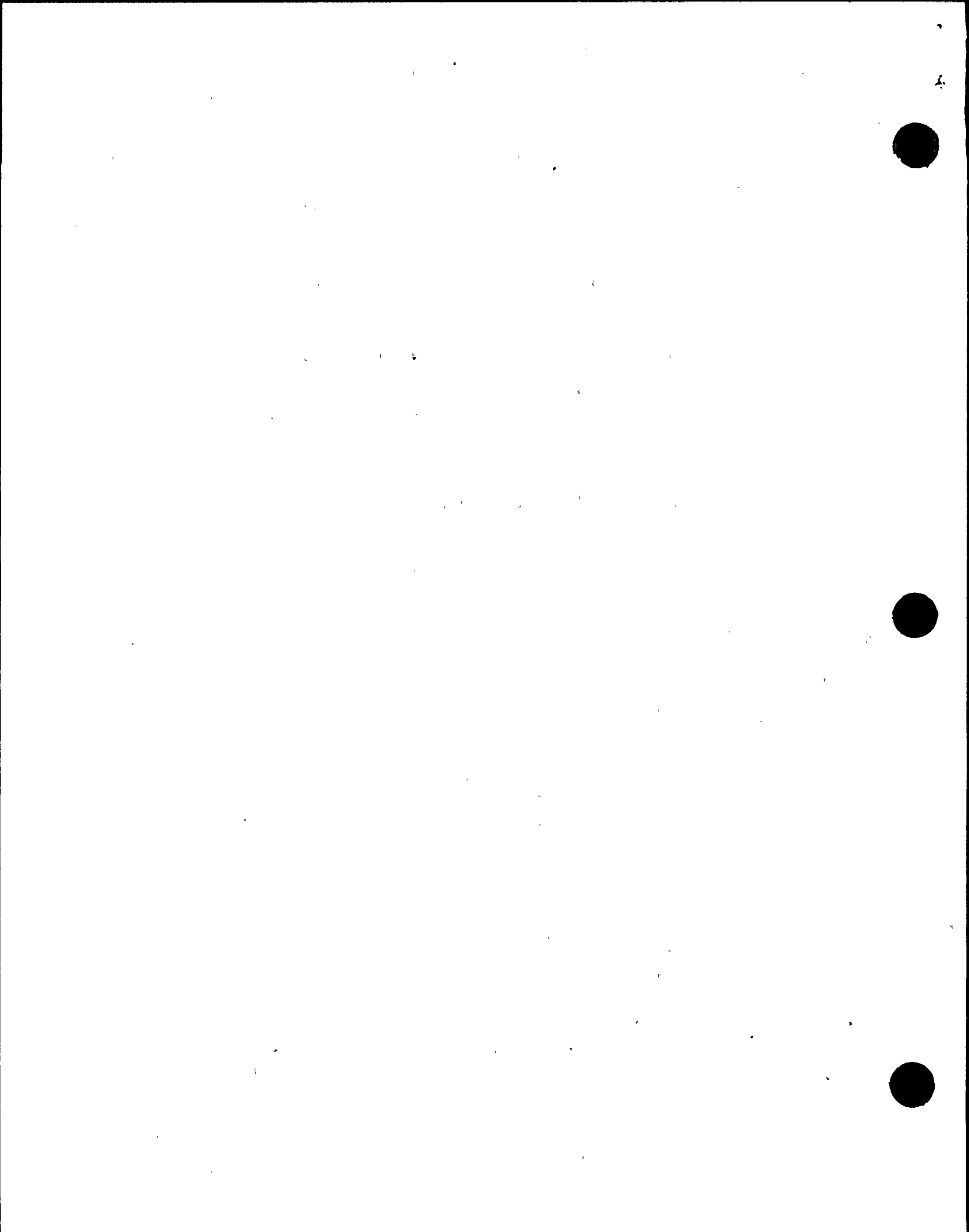
The below listing provides the basis for the closure of all remaining open SIMS items for D. C. Cook related to emergency preparedness.

III.A

This item refers to implementation of Chapter 8 of Supplement 1 to NUREG-0737, and was closed based upon completion of this inspection.

III.A.2.4

This item involved an acceptable final meteorological program and was closed based upon a review of the meteorological program during a



September 19-22, 1989 inspection: Report Nos. 50-315/89027; 50-316/89027 dated October 20, 1989.

III.A.2.5, III.A.2.6, III.A.2.8, MPA-F-63, MPA-F-65

Item III.A.2.5 involved an acceptable Class A meteorological model.

Item III.A.2.6 involved a licensee's review of their Class A meteorological mode.

Item III.A.2.8 involved an acceptable Class B meteorological model.

Item MPA-F-63 involved a review of the TSC.

Item MPA-F-65 involved a review of the EOF.

Based on recent verbal guidance from NRC Headquarters; numerous exercise evaluations, the most recent being September 20, 1989 and April 3, 1990 (Inspection Report Nos. 50-315/89027; 50-316/89027 and 50-315/90003, 50-316/90004); and numerous routine program evaluations, the most recent being January 30-February 2, 1989 and August 6-10, 1990 (Inspection Report Nos. 50-315/89006, 50-316/89006 and 50-315/90016, 50-316/90016); these items are administratively closed.

The closure of all other TMI/SIMS items related to emergency preparedness at D. C. Cook was discussed in Inspection Report Nos. 50-315/88022, 50-316/88025 dated September 12, 1988.

5. Exit Interview (IP 30703)

On August 10, 1990 the inspector held an exit interview with the licensee personnel denoted in Section 1. The inspector reviewed the scope and findings of the inspection and indicated that the licensee continues to have a well maintained and thoroughly thought out Emergency Plan.

The two open items identified in Section 3d were discussed with the licensee. With regards to these open items the licensee's plant manager voluntarily committed to the following:

- To review all ERO Training Records within 30 days and to correct any identified inconsistencies.
- To ensure clearly defined EP retraining criteria are established within 90 days.
- To review ERO Training records utilizing clearly defined EP retraining criteria within 120 days.

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

