

U. S. NUCLEAR REGULATORY COMMISSION

Region III

Report Nos. 50-315/90009(DRP); 50-316/90009(DRP)

Docket Nos. 50-315; 50-316

License Nos. DPR-58; DPR-74

Licensee: American Electric Power Service Corporation
Indiana Michigan Power Company
1 Riverside Plaza
Columbus, OH 43216

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

Inspection At: Donald C. Cook Site, Bridgman, MI

Inspection Conducted: March 21 through April 24, 1990

Inspectors: B. L. Jorgensen

D. G. Passehl

Approved By:  Chief
Projects Section 2A

5/4/90
DATE

Inspection Summary

Inspection on March 21 through April 24, 1990 (Report Nos. 50-315/90009(DRP));
50-316/90009(DRP))

Areas Inspected: Routine unannounced inspection by the resident inspectors of: plant operations; radiological controls; maintenance; surveillance; fire protection; engineering and technical support; security; and, safety assessment/quality verification. No Safety Issues Management System (SIMS) items were specifically reviewed.

Results: Of the eight areas inspected, no violations or deviations were identified in any areas.

Weaknesses were noted as follows: working-level personnel did not exhibit an inquisitive attitude about the causes of equipment problems they were assigned to repair; job order duplication contributed to tags for a superseded job order being left behind after the job was done; and, confusion and errors occurred in the administration of compensatory measures for degraded fire protection equipment.

Strengths were noted as follows: a conservative safety philosophy was applied in addressing questions about the potential significance of loose "jam nuts" on nonessential service water valves; the System Engineer for service water systems succeeded in determining the root cause and taking corrective action for recent occurrences of rapid pump shaft seal degradation; and, management emphasis, in considering improvements in administering fire protection compensatory measures, was to avoid impacting operator focus on plant systems and safety.

9005230110 900504
PDR ADOCK 05000315
Q PIC

Details

1. Persons Contacted

- *A. Blind, Plant Manager
- *J. Rutkowski, Assistant Plant Manager - Technical Support
- *L. Gibson, Assistant Plant Manager - Projects
- *K. Baker, Assistant Plant Manager - Production
- *B. Svensson, Executive Staff Assistant
- J. Sampson, Operations Superintendent
- E. Morse, QC/NDE General Supervisor
- T. Beilman, Maintenance Superintendent
- J. Droste, Technical Superintendent - Engineering
- T. Postlewait, Design Changes - Superintendent
- L. Matthias, Administrative Superintendent
- *J. Wojcik, Technical Superintendent - Physical Sciences
- *S. Wolf, Quality Assurance Senior Auditor
- *M. Barfelz, Safety/Assessment Senior Engineer

The inspector also contacted a number of other licensee and contract employees and informally interviewed operations, maintenance, and technical personnel.

*Denotes some of the personnel attending the Management Interview on April 27, 1990.

2. Operational Safety Verification (71707, 71710, 42700)

Routine facility operating activities were observed as conducted in the plant and from the main control rooms. Plant startup, steady power operation, plant shutdown, and system(s) lineup and operation were observed as applicable.

The performance of licensed Reactor Operators and Senior Reactor Operators, of Shift Technical Advisors, and of auxiliary equipment operators was observed and evaluated including procedure use and adherence, records and logs, communications, shift/duty turnover, and the degree of professionalism of control room activities. The Plant Manager, Assistant Plant Manager-Production, and the Operations Superintendent were well-informed on the overall status of the plant, made frequent visits to the control rooms, and regularly toured the plant.

Evaluation, corrective action, and response to off-normal conditions or events, if any, were examined. This included compliance with any reporting requirements.

Observations of the control room monitors, indicators, and recorders were made to verify the operability of emergency systems, radiation monitoring systems and nuclear reactor protection systems, as applicable. Reviews of surveillance, equipment condition, and tagout logs were conducted. Proper return to service of selected components was verified.

- a. Unit 1 operated routinely at design power levels throughout the inspection period.
- b. Unit 2 likewise operated routinely at design power levels throughout the period.
- c. The inspector performed an alignment walkdown of parts of the Unit 1 Chemical and Volume Control System (CVCS) using licensee procedure 1-OHP 4021.003.001, Valve Lineup Sheet No. 1, "Letdown, Charging and Seal Water Alignment."
- d. On March 21, 1990 the inspector was informed of the discovery of apparently misadjusted "jam nuts" on nonessential service water (NESW) containment isolation valves. A member of plant management had noted a gap between the stem adjustment nut and its associated "jam" or locking nut on one such valve while he was performing a routine plant tour. All NESW containment isolation valves (approximately 80) in both units were immediately inspected. When 19 penetrations appeared to have valves with possible misadjustments, a special test process was begun to verify isolation capability. Within 48 hours, every penetration but one was verified (by inspection or test) to have either a valve whose adjustment was tight, a valve which proved leak-tight in testing, or both. Testing of the final penetration was delayed another day by the necessity of repairing the installed flow transmitter. The licensee concluded the "jam" nut loosening had not affected valve operation. Performance of the special testing on an expedited basis, however, reflected a conservative philosophy for dealing with operability questions. See also Paragraph 4.n.
- e. On April 12, 1990 the newly appointed NRC Region III Branch Chief for D. C. Cook toured the facility accompanied by another Region III staff member and the resident inspectors. A get acquainted meeting with corporate and plant managers was held and topics of mutual interest were discussed. Observations made while on tour were forwarded to plant management, who were responsive in addressing them.

No violations, deviations, unresolved or open items were identified.

3. Radiological Controls (71707)

During routine tours of radiologically controlled plant facilities or areas, the inspector observed occupational radiation safety practices by the radiation protection staff and other workers.

Effluent releases were routinely checked, including examination of on-line recorder traces and proper operation of automatic monitoring equipment.

Independent surveys were performed in various radiologically controlled areas.

- a. A specific review was performed on license procedure 12 PMP 6010 RPP.302, "Material Control For The Contaminated Equipment Storage Area (CESA)." A tour of the CESA was made to get an understanding of the building layout and to observe licensee compliance with the subject procedure. At the time of the tour approximately two-thirds of all material destined for the CESA had been delivered for storage. Items in storage were placed in proper designated containers with external surface radiation and contamination levels within prescribed limits. Storage containers were free from defects which could compromise container integrity. Documentation to show personnel and equipment passage into the area was also verified. The area was clean and free from loose debris except for some scrap ribbons which were removed by the accompanying radiation technician. Electrical connections to some of the building heater elements, however, were in poor condition and plant management was informed of this.
- b. The inspector reviewed licensee actions in dealing with radiological sampling valve 12-EMO-443, which was leaking by. This 0.25 inch motor-operated Post Accident Sampling (PAS) system liquid and gas diverting 3-way valve was non-technical specification equipment but was required OPERABLE prior to MODE 4 entry per Plant Manager Standing Order (PMSO) .097.

Job Order 759972 documented replacement of the valve and verification of proper function by Chemistry Department personnel on March 23, 1989. Subsequently, a series of problems with the PAS system led to submission of Problem Report (PR) 90-0304 (on March 15, 1990) where it was documented that valve 12-EMO-443 was installed with a wrong motor actuator. Further investigation revealed the valve has been installed backward under the subject JO and problems occurred, which were "corrected" by reversing the wires to the actuator vice reversing the valve itself. This caused the valve to rotate in the opposite direction and to change the valve's alignment. JO A049616, dated March 17, 1990, was written to orient the valve correctly and to correct the wiring.

No violations, deviations, unresolved or open items were identified.

4. Maintenance (62703, 42700, 62700)

Maintenance activities in the plant were routinely inspected, including both corrective maintenance (repairs) and preventive maintenance. Mechanical, electrical, and instrument and control group maintenance activities were included as available.

The focus of the inspection was to assure the maintenance activities reviewed were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with Technical Specifications. The following items were considered during

this review: the Limiting Conditions for Operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures; and post maintenance testing was performed as applicable.

The following activities were inspected:

- a. Job Order (JO) B000553: "Clean and inspect 4KV bus 2B breaker (main turbine turning gear motor)." This maintenance activity was performed in conjunction with procedure **12 MHP 5021.082.001, "Inspection and Repair of 4KV Power Circuit Breakers." The only problem noted was that the breaker was removed from its service cubicle before lunchtime, then sat for about an hour and a half before work started.
- b. Job Order (JO) 759972 and A049616: "Replace (Repair) leaking Post Accident Sampling (PAS) valve 12-EMO-443." See Paragraph 3.b above.
- c. Job Order (JO) B018549: "Repair/replace leaking inboard mechanical seal on Non-Essential Service Water (NESW) pump 2N." The D. C. Cook NESW pumps are not safety-related, but they provide critical normal containment cooling which, if lost, requires a timely reactor trip and may result in containment spray actuation. At the time this job was worked, two other NESW pumps were also experiencing increasing seal leakage through their mechanical shaft seals. The inspector learned the mechanical seals had recently been experiencing chronic problems.

The week following completion of repairs on the items noted above, the inspector met with the System Engineer assigned to the service water system.

Root cause for the new NESW pump seal failures had been identified. These seals were originally installed through a plant modification in 1988. At that time, the seal rotary face, which had multiple springs to provide even face loading, was designed to rotate against both the stationary face, and also against the springs. Subsequent to the original installation, the manufacturer modified the seals by adding a holder drive pin to the rotary holder and a notch to the rotary face so the rotary face would not rotate against the springs. Customers were apparently not notified of this "upgrade."

The Cook plant problem was caused when new (notched) rotary faces were installed with existing rotary holders not having the holder drive pin. When the rotary face moved, a spring would expand into the rotary face notch and be sheared. At least five seal failures during the last three months were attributed to this root cause.

Temporary corrective action was to replace one of the springs with a site-manufactured holder drive pin. Preventive action will involve



installing new rotary holders which contain the holder drive pin. These have been ordered.

- d. Job Order JO B018550: "Inspect and repair control problem on valve 2-IMO-324 (RHR header crosstie valve)." The valve would not open unless the handswitch was held to the "Open" position for several seconds. An auxiliary contact assembly for sealing in a protective interlock (blocking any close signal while opening) was found operating erratically and was replaced with a new assembly. The like contact assembly for the "Close" cycle was also replaced with a new one. The inspector discussed potential root cause of the problem with the assigned Instrument and Electrical (I&E) foreman. He suspected "aging" but indicated these relays were sealed with a riveted cover (which would have to be destroyed to permit an internal inspection) so they would probably simply be thrown away. Becoming more curious, he decided the destructive examination might prove useful, so it was performed later. The inspection showed the relay internals were undamaged and the contacts all appeared clean. Resistance tests across the contacts, however, gave inconsistent results in repeated tests; several times, resistance readings of several ohms were noted where there should have been negligible resistance. It was concluded that a slight amount of dirt or corrosion, not evident visibly, was present on the contacts and, depending on the exact geometry of contact, variously affected relay operation.
- e. Job Order (JO) 727814: "Sand in Unit 1 North chill water expansion tank." The Job Order tag for this component in the control room air conditioning system was dated August 23, 1987 and was noted during a routine plant tour. The initial investigation with Maintenance Department found no documentation to verify the work was ever performed. A check with the Construction Department revealed a similar finding. A more thorough investigation later found the job was done under a different Job Order (No. 10789) and was completed in December, 1987. The duplication of job paperwork contributed to the failure to remove the superseded tags.
- f. Job Order (JO) A018783: "Remove white insulation to inspect Control Air (CA) tubing...." This job was observed while touring the Auxiliary Feed Pump corridor. Workmen were removing the fire protectant to verify the physical layout of control air small bore tubing as part of an effort to develop detailed control air system flow diagrams.
- g. Job Order (JO) A011304: "Installation of baseplates for design change RFC-12-2868 involving switchgear room ventilation." This work started about April 2, 1990, and was expected to last for several weeks. At the time of the inspection on April 9, the procedure in use at the job site (**12CHP5021.CCD.005, "Anchor Bolt Installation Procedure") was the correct Revision 4 dated April 2, 1990. A subsequent Change Sheet dated April 5, however, had not been posted to the working copy of the procedure. This Change Sheet

slightly relaxed requirements for perpendicularity of anchor bolts, to conform the procedure to the Mechanical Design Standards. As such, there was no practical effect (in this case) of not updating the procedure for an activity already in progress. Since some prolonged activities, however, could benefit from in-progress procedure enhancements, means for accomplishing such enhancements were discussed with licensee management. It was found such means exist and are applied on a case basis with the significance of the change controlling the schedule. The subject Change Sheet was to be posted the same day the inspector noted the need.

- h. Job Order (JO) B018191: "Replace cracked flange on Unit 2 diesel-driven fire pump."
- i. Condition Report (CR) 01-04-90-0511: "While performing STP.011 (Containment Isolation and ISI valve operability test)... operator was unable to fully close 1-DW-163S (control room air conditioning chill water to south liquid chiller shutoff valve)." A Condition Report on the same valve was submitted two days later (No. 12-04-90-0518) and upgraded to a Problem Report (No. 90-0389) after the root cause was determined to involve poor design and installation.
- j. Problem Report (PR) 90-0375: "2E Centrifugal Charging Pump (CCP) inoperable for room decontamination activities." The CCP was wrapped in plastic to protect it from water spray. This wasn't removed before releasing the clearance, and the pump was erroneously declared OPERABLE. There was no post-work area inspection before restoration, but the situation was recognized and corrected before the pump was started.
- k. Problem Report (PR) 90-0416: "Procedure **12 MHP 5021.032.031 Rev: 1 (emergency diesel engine auxiliary jacket water pump disassembly, inspection, and reassembly) is inadequate in current format. The body of the procedure does not identify nor direct the installation of packing."
- l. The inspector reviewed Bellville washer decompression in Limatorque motor-operated valve assembly spring-packs in followup to a report of the problem from another plant. The matter was referred to plant management, who responded by arranging an inspector briefing concerning the Cook plant experience. According to the assigned Maintenance Engineer, two batches of washers have been identified from D. C. Cook (and other plants) experience as being susceptible to decompression. These were reported via NPRDS. The D. C. Cook maintenance group had specially verified that the subject washer problem can be (and has been) detected by the use of MOVATS valve diagnostics.
- m. Job Order (JO) A009221: "Repaint Unit 1 East and West Centrifugal Charging Pump Rooms." Procedures for painting steel and masonry surfaces (**12CHP 5021.CCD.013 and ...CCD.014 respectively) were in

use for this activity. These "construction head procedures" (CHP) were converted from maintenance (MHP) in early March, 1990, after the job was already in progress. The documentation reflected a smooth transition. Item 4.g above also involved a case of changing procedures after the work had begun.

- n. As noted in 2.d above, a number of nonessential service water (NESW) valves in both units were found with their "jam nuts" not tight against their respective stem adjustment nuts. Problem Report 90-0331 documented the finding and the immediate actions. The inspector followed the investigation of the matter to verify a determination as to root cause. Though the investigation appeared thorough, root cause could not be determined. The test histories, maintenance histories and corrective action histories showed no activity which involved the subject valves in a way likely to leave some (but not most) with variously adjusted, but not tight, "jam nuts." Procedures were researched, personnel were interviewed, and valve design was re-examined. Current procedures properly address "jam nut" tightening. Personnel knew of no activity which could have caused the observed conditions. Workers who might be assigned to repair or adjust the valve were knowledgeable about "jam nut" function and setting. Given valve design and service conditions, however, it was concluded the problem was not service-induced. It was therefore concluded the condition resulted from an activity not now identifiable (probably due to its vintage) and which would not recur with current procedures/controls.

No violations, deviations, unresolved or open items were identified.

5. Surveillance (61726, 42700)

The inspector reviewed Technical Specifications required surveillance testing as described below and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that Limiting Conditions for Operation were met, that removal and restoration of the affected components were properly accomplished, that test results conformed with Technical Specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The following activities were inspected:

- a. Problem Report (PR) 90-0152: "Unit 1 Turbine Driven Auxiliary Feedwater Pump (TDAFP) tripped when a start was attempted...." Problem Report 90-0220, "Unit 1 TDAFP trip and throttle valve failed ISI (inservice inspection) stroke time." Both Problem Reports were submitted within twenty days of one another and were examined for likeness.

PR 90-0152 was written as a result of the Operations Department monthly surveillance test on February 5, 1990. The pump tripped seconds after starting when the trip and throttle valve unlatched.

Operators then cycled the governor and successfully ran another test. Subsequent interviews with operators who observed the trip indicated that governor stem binding caused the event. A plan was approved to install new corrosion resistant governor stems in both units' TDAFPs during upcoming refueling outages. Until then, tests to stroke the governor valve are scheduled to be done on a weekly basis.

The investigation resulting from PR 90-0220 found the limit switch, which gives open indication for the trip and throttle valve, to be slightly out of adjustment. After adjustment the trip valve opened in 13.12 seconds, well below the 21 second maximum.

The records for two subsequent surveillance tests (**1-OHP 4030 ; STP.017F, "Turbine Driven Auxiliary Feedwater System Test") were reviewed to ensure problems with the TDAFP were resolved. Both the March 5 and March 21, 1990 tests were conducted satisfactorily.

- b. **2 THP 4030 STP.511, "Reactor Trip SSPS Logic and Reactor Trip Breaker Train B Surveillance Test (Monthly)." The inspector observed instrumentation testing in the main control room, where no problems were noted. A problem did occur during setup for the test at the reactor trip breaker and bypass trip breaker cabinets in the electrical equipment room. The bypass breaker failed to close properly on the first attempt but tripped open instead. This appeared to be due to internal misalignment after racking in, which was a consequence of looseness in the fit of guide parts. The breaker was successfully closed on the second attempt and the test completed. Condition Report 2-04-90-0539 was initiated to document and track resolution of the problem.
- c. **2 IHP 4030 STP.113, "Pressurizer Pressure Protection Set III Surveillance Test (Monthly)." This activity was observed in part during the afternoon on April 10, 1990. The like procedure STP.114 had been performed that morning. The inspector noted the calibrated instrument usage log had not been completed for either test at the time of his observation of the later activity. This was properly completed before the end of the work day. A plant QC inspector was also present and observing this testing.
- d. **2 IHP 6030 IMP.273, "Class 1E Time Delay Relay Calibration." The calibration was performed on relay No. 62-515-TA1, a time delay pickup for the Unit 2 South safety injection pump. The procedure data sheets were properly completed and all pickup times were within the stated acceptance criteria.
- e. **IHP 4030 STP.121, "Steam Generators 1 and 3 Mismatch Protection Set 2 Surveillance Test (Monthly)."
- f. A special test of the emergency lighting system in the Auxiliary Building was conducted on April 19, 1990. Problems were found with five battery packs that only partially worked or didn't work at all.

Several areas were noted where there was poor or no lighting, and restoration difficulties occurred involving circuit breakers. The licensee is working with their corporate staff to resolve the problems, which were documented on Problem Report 90-0436.

- g. The inspector met with representatives of the Technical-Engineering group to review the status and results of ongoing special surveillance of the main steam stop valve dump valves. This was in follow up to observation on tour that two Unit 2 dump valve discharge shrouds were evidencing steam leakage. The data from the special monitoring showed no trend to increased leakage. Acoustic emissions, in fact, had twice shown step decreases, first when the valve strokes were checked/adjusted and again on addition of enhanced insulation on the dump valve piping. Because acoustic emissions are the primary method for detecting changes in leakage, a new "baseline" was being planned which will involve a valve pressure-drop test as the standard. This is expected to validate the continued use of acoustic emissions to detect any adverse trend.
- h. **12 THP 6010 RPC.804, "Eberline Radiation Monitoring System Secondary Source Calibration."

No violations, deviations, unresolved or open items were identified.

6. Fire Protection (71707)

Fire protection program activities, including fire prevention and other activities associated with maintaining capability for early detection and suppression of postulated fires, were examined. Plant cleanliness, with a focus on control of combustibles and on maintaining continuous ready access to fire fighting equipment and materials, was included in the items evaluated.

No violations, deviations, unresolved or open items were identified.

7. Engineering and Technical Support (37828)

The inspector monitored engineering and technical support activities at the site and, on occasion, as provided to the site from the corporate office. The purpose of this monitoring was to assess the adequacy of these functions in contributing properly to other functions such as operations, maintenance, testing, training, fire protection and configuration management.

- a. Two scaffold erection concerns were documented in Problem Reports 90-0287 and 90-0322 describing, respectively, where scaffolding crossed safety-related cable trays and where proper operation of a low pressure turbine intercept valve could be impeded because of physical movement of valve parts. As noted in a previous inspection report (50-315/90006(DRP); 50-316/90006(DRP)) a general review of the area of scaffold control has been requested. Meanwhile,



information concerning control practices of other licensees is being collected for comparative review.

- b. Problem Report (PR) 90-0386: "While performing a fire detection surveillance on 1-HV-AES-1 (auxiliary building ventilation, engineered safety feature exhaust unit No. 1) the incorrect technical specification action statement was followed whereby a roving firewatch was instituted in lieu of a continuous firewatch." The fan fire detection/protection was inoperable for about one hour and fifty minutes. This event was originally classified reportable to the NRC via a Licensee Event Report.
- c. Problem Report (PR) 90-0402: "The fire detection for fire zone No. 28 (east valve enclosure and nonessential service water area) was rendered inoperable when the control panel was drenched with water." A problem with valve 1-DRV-350 (steam generator blowdown flashtanks to turbine room sump shutoff valve) caused the normal flash tank safety valve to lift thus spraying the panel with water. The required fire watches required by Technical Specifications were not established within the required time limit. A Licensee Event Report is anticipated on this event.

Items b. and c. above, as well as a recent Licensee Event Report (LER 315/90001) appear to have in common the improper implementation of compensatory measures for degraded fire protection equipment. A specific joint review for possible repetitiveness is planned.

Following the latest event, plant management implemented instructions per Operations Standing Order OSO.096 to immediately initiate continuous firewatches in every instance where time does not permit a thorough prior evaluation of degraded fire protection. Termination of this maximum-level compensatory measure, or establishment of lower-level compensation such as a periodic tour, will only occur after a dual independent review of the circumstances has been made to assure the selected means for compliance is appropriate.

Management expressed an appropriate concern that licensed plant operators may be distracted from dealing with a potential transient or operating problem (such as occurred with valve 1-DRV-350; Item c. above) by a need to study Technical Specifications and procedures relating to fire protection compensatory measures. The option of immediately going to maximum compensation, until time is available to study the issues, appears to address this concern.

No violations, deviations, unresolved or open items were identified by the NRC inspector. The licensee identified two potential violations which are still being evaluated.

8. Security (71707)

Routine facility security measures, including control of access for vehicles, packages and personnel, were observed. Performance of dedicated physical security equipment was verified during inspections in



various plant areas. The activities of the professional security force in maintaining facility security protection were occasionally examined or reviewed, and interviews were occasionally conducted with security force members.

No violations, deviations, unresolved or open items were identified.

9. Safety Assessment/Quality Verification (35502, 40500)

The effectiveness of management controls, verification and oversight activities, in the conduct of jobs observed during this inspection, was evaluated.

The inspector frequently attended management and supervisory meetings involving plant status and plans and focusing on proper co-ordination among Departments.

The results of licensee auditing and corrective action programs were routinely monitored by attendance at Problem Assessment Group (PAG) meetings and by review of Condition Reports, Problem Reports, Radiological Deficiency Reports, and security incident reports. As applicable, corrective action program documents were forwarded to NRC Region III technical specialists for information and possible followup evaluation.

- a. During a March 14-15, 1990 visit by NRC Region III senior management, an observation was made that an excessive amount of "loose" material (scaffolding parts, carts, gas cylinders, ladders, etc.) was strewn throughout the Auxiliary Building. The topic was discussed among site management the following morning when it was decided to form a multi-disciplined team to walkdown the area.

Items which could damage plant equipment in the unlikely event of an earthquake were identified and evaluated for disposition. A number of the items were removed to the Contaminated Equipment Storage Area (CESA). (See Paragraph 3.a).

- b. Problem Report (RP) 90-0061: "Control Room Instrumentation Distribution (CRID) supply fan 2-HV-SGRS-1A threw its blades..." Pieces of a stationary suction turning vane became dislodged on January 11, 1990 and impacted the operating fan, breaking the blades at the hub mounting. The pieces were retrieved for failure analysis, which, it turned out, showed the root cause to be metal fatigue. It is believed the stationary vanes were originally damaged some seven months earlier (May 1989) when a maintenance mechanic's hardhat blew into the suction ductwork through a manway opening. The licensee's evaluator of this problem report couldn't locate any documentation about the hardhat incident, but had witnesses who admitted to its occurrence.

The preliminary investigation found the ductwork damage confined to the immediate vicinity of the fan. A detailed inspection of the ductwork is to be accomplished during the unit's upcoming refueling outage. A cautionary label was placed on the manway cover to notify personnel of the danger.

No violations, deviations, unresolved or open items were identified.

10. Management Interview (30703)

The inspectors met with licensee representatives (denoted in Paragraph 1) on April 27, 1990 to discuss the scope and findings of the inspection as reported in these Details. In addition, the inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.

