

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-315/85022(DRP); 50-316/85022(DRP)

Docket Nos. 50-315; 50-316

Licenses No. DPR-58; DPR-74.

Licensee: American Electric Power Service Corporation
Indiana and Michigan Electric 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: July 23 through September 2, 1985

Inspectors: B. L. Jorgensen

J. K. Heller

C. L. Wolfsen

Approved By: *John F. Suermann*
J. F. Suermann, Acting Chief
Reactor Projects Section 2A

9/20/85
Date

Inspection Summary

Inspection on July 23 through September 2, 1985 (Reports No. 50-315/85022(DRP); 50-316/85022(DRP))

Areas Inspected: Routine unannounced inspection by the resident inspectors of licensee actions on previous inspection findings; operational safety verification; refueling; surveillance; maintenance; and NRC Region III requests. The inspection involved a total of 322 inspector-hours onsite by three NRC inspectors including 44 inspector-hours during off-shifts.

Results: No violations or deviations were identified in any of the areas inspected. Flammable materials control is an area of concern for which corrective action effectiveness will be followed closely (Paragraph 3.f). Licensee control of special plant conditions/prerequisites needs attention (Paragraph 4) as does the test documentation process (Paragraph 6).

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DETAILS

1. Persons Contacted

- *W. G. Smith, Jr., Plant Manager
- *B. Svensson, Assistant Plant Manager
- *T. Kriesel, Technical Superintendent-Physical Science
- *A. Blind, Assistant Plant Manager
- *K. Baker, Operations Superintendent
- *J. Stietzel, Quality Control Superintendent
- T. Beilman, Design Change Supervisor
- *J. Allard, Maintenance Superintendent
- *L. Gibson, Technical Superintendent-Performance
- C. Murphy, Production Supervisor
- G. Caple, Administrative Compliance Coordinator - Quality Control Department
- *J. Sampson, Production Supervisor
- *M. Evarts, Licensing Scientist (By telephone)

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

*Denotes personnel attending the exit interview on September 3, 1985.

2. Licensee Actions on Previously Identified Items

- a. (Closed) Open Item (315/85016-01; 316/85016-01): Use of the 25% grace period when a Technical Specification Section 4 surveillance is being performed at an accelerated frequency pursuant to a Technical Specification Section 3 action statement. The inspector requested an interpretation concerning the validity of the licensee's position and was informed via telephone by NRC Region III that the 25% grace period does not apply when performing Technical Specification Section 3 action statements. This was discussed with the licensee who revised procedures previously permitting use of the 25% grace period.
- b. (Open) Violation (316/83004-01) and Open Item (316/83004-04) as updated in Inspection Report 316/85016(DRP): The test program could not demonstrate Containment Spray Additive System operability. By letter dated July 18, 1985, from Nuclear Reactor Regulation (NRR) (Varga) to IMEC (Dolan), NRR found the licensee's approach for continued operation acceptable subject to one stipulation. Specifically, for the interim period IMEC should maintain emergency procedures for operation of the Spray Additive System in the event of unsatisfactory system performance during an accident. The inspector verified that the instruction for operation of the Spray Additive System is contained in 1 and 2 OHP 4022.034.002,

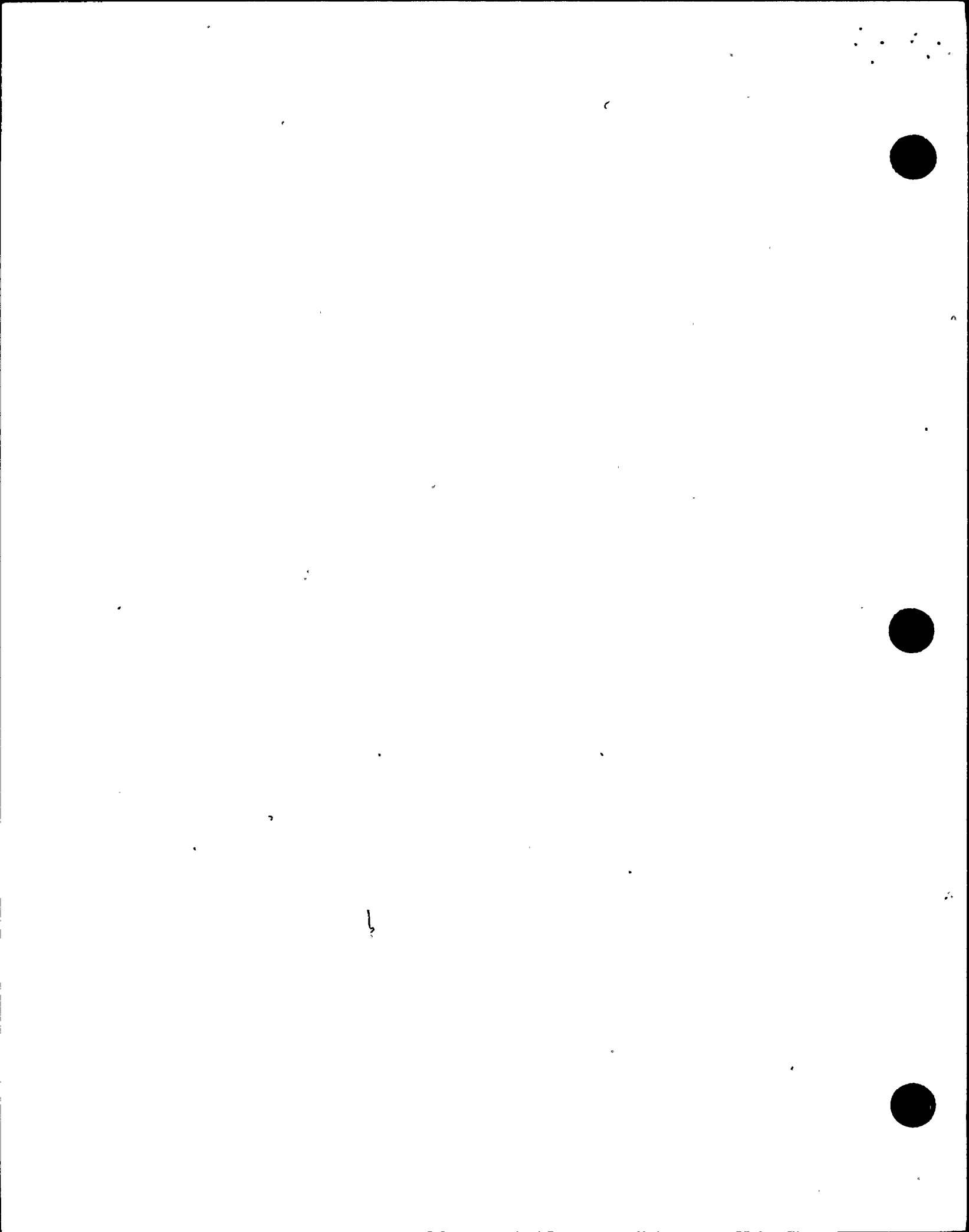
"Containment Isolation, Phase B, and Containment Spray Actuation". This item will be closed when the licensee completes analysis showing that the Spray Additive System can be removed and submits appropriate Technical Specification change requests.

- c. (Closed) Open Item (315/85021-03): Reactor Cavity Seal receipt inspection requirements should be revised to assure seal meets material, dimension, and hardness requirements. The requirements were revised as documented in a memo from Veach (I&M) to Stietzel (I&M) dated July 25, 1985.
- d. (Closed) Open Item (315/85016-03): Placement/spacing of tie-rods was not as specified in the vendor drawings. The licensee was asked to determine if the "as-left" tie-rods' spacing was acceptable with respect to seismic qualification. The licensee placed the tie-rods in the proper configuration as verified by the inspector.

No violations or deviations were identified.

3. Operational Safety Verification

- a. The inspector observed control room operations including manning, shift turnover, approved procedures and LCO adherence, reviewed applicable logs, and conducted discussions with control room operators during this inspection. Observations of the control room monitors, indicators, and recorders were made to verify the operability of emergency systems, radiation monitoring systems, and nuclear and reactor protection systems. Reviews of surveillance equipment condition, and tagout logs were conducted. Proper return to service of selected components was verified. Tours of the auxiliary building, Unit 1 containment, and screenhouse were made to observe accessible equipment conditions, including fluid leaks, potential fire hazards, and control of activities in progress.
- b. By observation and direct interview it was verified that the physical security plan was being implemented in accordance with the Station Security Plan.
- c. On August 14, 1985, the inspectors observed a firearm requalification exercise for the plant armed security staff. Certain problems were identified in the training and requalification program; however, the licensee has established corrective actions.
- d. The licensee performed the Unit 1 Containment Integrated Leak Rate Test (CILRT) the week of August 19, 1985. Sixteen valves located outside of containment were subsequently found mispositioned, several by an NRC regional inspector, resulting in the licensee reperforming the CILRT. The regional inspector and the resident inspectors independently verified that the previously mispositioned valves were in the correct position for the second CILRT. Inspection Report 315/85025(DRS) contains detailed discussions on the CILRT.



- e. On July 15, 1985, the licensee entered an 18 day outage for Unit 2, during which steam generator tube leakage was investigated and two tubes were plugged in Steam Generator No. 23. Shortly after returning the unit to operation, primary-to-secondary leak indications recurred and the licensee returned the unit to cold shutdown. Late in the cooldown on August 4, 1985, several loose parts monitoring system "impacts" were received from Steam Generator No. 23. During the subsequent outage, the licensee removed a split pin (source of the "loose parts" indication) and plugged 35 tubes in Steam Generator No. 23. Reactor startup commenced on August 21, 1985, with the inspector observing in the control room. During power increase on August 22, 1985, Engineered Safety Feature (ESF) actuations occurred on VRS 2101 and VRS 2305 (upper containment radiation monitors) because the setpoints had not been reset. The licensee was holding at 30% power for secondary side chemistry when the decision was made on August 24, 1985 to shutdown the reactor to repair primary-to-secondary tube leaks in No. 23 and No. 24 Steam Generators.
- f. During a tour of the 633 foot level of the Unit 1 lower containment on August 15, 1985, the inspector found a quart container of neolube (flammable liquid) in a tool chest next to the pressurizer. The neolube was in its original container which was not an approved safety container equipped with a self-closing lid and flame arrestor. The inspector discussed this with the Quality Control Supervisor who took steps to have the neolube removed and issued a Condition Report. Plant Managers Instruction (PMI) 2271 "Control of Combustible Material", Paragraph 4.2.2 requires that flammable liquid be stored in approved safety containers and the containers shall be UL or FM approved with a self-closing lid and an interior flame arrestor. Unit 1 Technical Specification 6.8.1.f requires that written procedures shall be implemented for fire protection. Failure to comply with PMI 2271 as described above is a violation of Technical Specification 6.8.1.f. A Notice of Violation was not issued for this item because the licensee's corrective action for a previous Notice of Violation (315/85014-01(DRP); 316/85014-01(DRP)) had not been fully implemented. This was discussed with the licensee at the Management Interview. The inspector had noted that a can of neolube was previously removed from the tool chest on June 18, 1985 (315/85016(DRP); 316/85016(DRP)). At that time a Notice of Violation was also not issued because the licensee was responding to 315/85014-01(DRP); 316/85014-01(DRP).
- g. The inspector performed a walkdown/review of the systems listed below to verify that: each accessible flowpath valve and associated instrumentation was in its correct location and properly labelled, and that no condition existed that degraded the system.
- (1) Emergency Core Cooling outside containment using prints OP-1-5142 and OP-2-5142.

- (2) Containment Spray outside containment using prints OP-1-5144 and OP-2-5144.
 - (3) Containment Ventilation using prints OP-1-5147 and OP-1-5147A.
 - (4) Auxiliary Building Ventilation using prints OP-12-5148 and OP-12-5148A.
- h. As discussed in a previous Inspection Report (315/85014(DRP); 316/85014(DRP)) the inspector found several areas of coating delamination in Unit 1 containment. These areas and many more had been identified in a plant coating repair program that was reviewed by the inspector. On subsequent tours, the inspectors observed implementation of this program throughout the term of the Unit 1 outage. The inspector has no further questions concerning this item.

No violations or deviations were identified.

4. Refueling Activities

From the control room, spent fuel building, and inside containment, the inspectors witnessed several shifts, including offshift activities of fuel handling operations for the Unit 1 refueling outage. The inspectors verified that the refueling activities were performed in accordance with refueling Technical Specification requirements and approved plant procedures. The resident inspectors verified by observation that the licensee's staffing during refueling was in accordance with Technical Specifications. As observed, the licensee maintained good housekeeping practices in the refueling area both inside containment and in the spent fuel building. The licensee also established measures to protect against the potential for foreign objects falling into the reactor vessel.

Using portions of Plant Procedure STP.041, the inspectors verified that containment integrity was maintained as required by facility Technical Specifications. However, on July 25, 1985, at 1810 hours the licensee notified the NRC via the Emergency Notification System (ENS), pursuant to requirements of 10 CFR 50.72, that a containment penetration isolation valve had been left open for approximately ten hours during refueling activities. The valve in question, designated DCR-620, is an isolation valve on the containment ventilation unit's drain line to the clean waste holdup system outside containment.

Fortuitously, the specific line involved has a water seal such that an atmosphere-to-atmosphere pathway from inside to outside containment was not created by opening the valve. Licensee Event Report (LER) 315/85033-00 was issued on August 23, 1985, because the potential existed that a more significant valve could have been involved. This item will be reviewed further in followup to the identified LER, with a focus on clear/unambiguous assignment of responsibility for manipulation of controls in the main control room and to evaluate the effectiveness of

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licensee control of special activity prerequisites. Because the line involved contained a water seal, no violation of Technical Specification requirements occurred. However, the procedure (STP.041) to establish containment control prerequisites was apparently violated. Pending further evaluation, this matter has not been determined to be either acceptable or a violation but is being considered an Unresolved Item (315/85022-01(DRP); 316/85022-01(DRP)). This was specifically discussed at the Management Interview.

This area requires further review and is considered unresolved pending such review.

No violations or deviations were identified.

5. Monthly Surveillance Observation

The inspector reviewed Technical Specifications required surveillance testing on the systems listed 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 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.

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| **2 OHP 4030 STP.013A and .013B | Train A and Train B Electric Hydrogen Recombiner Semi-Annual Functional Test. |
| **1 THP 6030 IMP.095 | Delta T/TAVG Protection Set II Calibration. |
| **12 THP 6030 IMP.087 | Pressure Indicator Calibration. |
| **2 THP 4030 STP.109 | Pressurizer Level Protection Set III Surveillance Test (Monthly). |
| **2 THP 4030 STP.106 | Overtemperature and Overpower Protection Set III Surveillance Test (Monthly). |
| **1 THP 4030 STP.020 | Steam Generator 3 & 4 Mismatch Protection Set I Surveillance Test (Monthly). |
| 12 THP 4030 STP.239 | Reactor Coolant Pump Fire Protection System. |
| 1 THP 4030 STP.217B | Diesel Generator Load Shedding and Performance Test. |

No violations or deviations were identified.

6. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed and/or reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards, and in conformance with Technical Specifications.

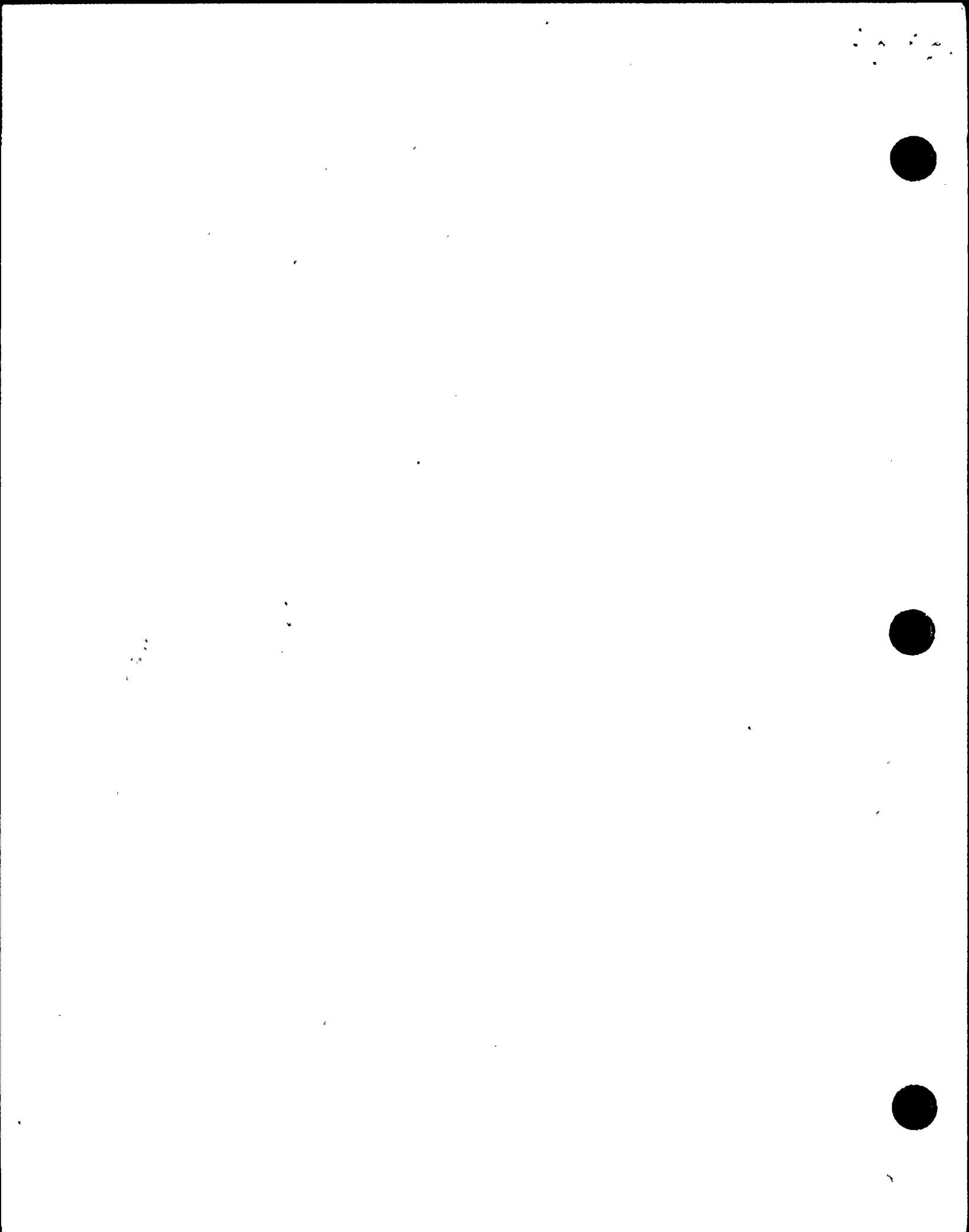
The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; and activities were accomplished using approved procedures.

The following maintenance activities were observed:

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| RFC 274F | Door installation for Unit 2 hot shutdown panel - verified welding/burning/grinding permit satisfied. |
| JO 101846 12 MHP 5100.001.004 | Color coating of offgas monitoring (Coating of concrete and block walls, ceilings and floors, and drywall surfaces in non-nuclear service). |
| JO 9983 12 MHP 5021.001.043 | Maintenance procedure for replacing charcoal filter medium for AES-1 Unit 1. |
| JO 95689 12 MHP 5021.001.002 | Remove internals from valve 1-MS-108-2 and 1-MS-108-3. (Maintenance Procedure for Reactor Vessel Head removal and replacement.) |
| JO 100403 ECP 1-2-13-04 | Calibrate IFI 321 per ECP 1-2-13-04. |
| JO 95329 | Replace battery cell No. 68 for 1-AB Battery. |

On August 19, 1985, the inspector observed a technician calibrate IFI-321 using ECP 1-2-13-04. The inspector found that the technician was recording the calibration data on a scrap piece of paper with the intention of transferring the data to a calibration sheet. This is the second time the inspector has found a technician recording data on scrap paper and then transferring to a calibration sheet. (See Inspection Report 315/85009; 316/85009 Paragraph 4). This questionable practice was discussed at the management interview and is an open item pending licensee review of this matter (Open Item 315/85022-02(DRP); 316/85022-02(DRP)).

No violations or deviations were identified.



7. Region III Request

- A. In response to a regional request regarding steam generator snubber testing, the licensee provided snubber testing schedules, and results of previous tests which were relayed to regional personnel.
- B. The inspector provided assistance and was the liaison to an NRC Inspection and Enforcement Headquarters inspection team which conducted a special inspection during the period August 19-28, 1985. The results of that inspection will be documented in a separate report (315/85028; 316/85028). A Confirmatory Action Letter (CAL) addressing certain findings of the team was issued on August 30, 1985 by Region III. Licensee implementation of the Confirmatory Action provisions will be monitored by the Resident Inspector Office. The team also identified some potential violations. Enforcement action to address those matters will be handled by NRC Region III separately from the team inspection report. The line items of the Confirmatory Action Letter are:
1. Conduct a review by both corporate Quality Assurance and Plant organization of all surveillances which are contained in tabular form in the Technical Specifications to ensure that the surveillance scheduling meets the Technical Specification requirements. (Confirmatory Action Letter 315/85022-03; 316/85022-03).
 2. Conduct a review by all departments of the surveillances which are contained in tabular form in the Technical Specifications to determine, for tests which are not the sole responsibility of a single department, that no omissions of test requirements exist and to determine which documents show how that responsibility is established. (Confirmatory Action Letter 315/85022-04; 316/85022-04).
 3. Conduct a review of Technical Specification surveillances which involve calibration and time response testing of process sensors and take actions to ensure that Technical Specification surveillance requirements are satisfied. (Confirmatory Action Letter 315/85022-05; 316/85022-05).

No other violations or deviations were identified.

8. Open Items

Open Items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspection is discussed in Paragraph 6.

9. Unresolved Items

Unresolved Items are matters about which more information is required in order to ascertain whether they are acceptable, violations, or deviations. An unresolved item is discussed in Paragraph 4.

10. Management Interview

The inspectors met with the licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on September 3, 1985 and summarized the scope and findings of the inspection.

The inspector asked those in attendance whether they considered any of the items discussed to contain information exempt from disclosure. No items were identified.

