U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-315/88003(DRS); 50-316/88004(DRS)

Docket Nos. 50-315; 50-316 Licenses No. DPR-58; DPR-74

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

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

Inspection At: AEPSC, Columbus, Ohio and
D. C. Cook Site, Bridgman, Michigan

Inspection Conducted: January 11-14, 25-28, and March 2, 1988

Inspectors: R. N. Gardner for
D. S. Butler — Date: 3/8/88

R. N. Gardner for
J. M. Ulie — Date: 3/8/88

Approved By: R. N. Gardner
R. N. Gardner, Chief
Plant Systems Section — Date: 3/8/88

Inspection Summary

Inspection on January 11-14, 25-28, and March 2, 1988
(Reports No. 50-315/88003(DRS); No. 50-316/88004(DRS))
Areas Inspected: Special announced safety inspection of licensee actions on previously identified items and Licensee Event Report followup. The inspection was performed in accordance with IE Procedure 92700 and 92701.
Results: Of the areas inspected, one apparent violation was identified (Failure to implement adequate design control measures - Paragraphs 3.a(1), 3.a(2), and 3.b(1)).

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DETAILS

1. Persons Contacted

Indiana and Michigan Electric Company Personnel

*W. Smith, Jr., Plant Manager
*A. Blind, Assistant Plant Manager - Administration
*J. Rutkowski, Assistant Plant Manager - Production
*B. Svensson, Licensing Activity Coordinator
*T. Beilman, I & C/Planning Superintendent
*T. Postlewait, Technical Superintendent - Engineering
*C. Ross, Computer Science Superintendent
*J. Droste, Maintenance Superintendent
*S. Delong, I & C Production Control General Supervisor
*D. Krause, I & C Production Supervisor
J. Wojoik, Chemical Supervisor
R. Hennen, Nuclear Section Head
*T. Langlois, I & C Production Control
*G. Arent, Operations
*B. Stoner, Computer Science
B. Burgess, Training
•M. Barfelz, Safety and Assessment

American Electric Power Service Company Personnel

M. Alexich, Vice President, Nuclear Operations
+B. Auvil, Nuclear Safety and Licensing
+•P. Barrett, Manager, Nuclear Safety and Licensing
•R. Carruth, Manager, Electrical Generation Section-N
R. Kroeger, Manager, Quality Assurance
+B. Lauzau, Nuclear Safety and Licensing (NS & L)
R. Vassey, NS & L
R. Kraszewski, NS & L
K. Toth, NS & L
R. Shoberg, Mechanical Engineering Division - I & C
W. Sotos, Mechanical Engineering Division - I & C
J. Anderson, Electrical Generation Section - N
D. Maxwell, Nuclear Operations Division
C. Erikson, Nuclear Operations Division
G. John, Nuclear Fuels and Analysis
*R. Huerter, Supervisory Auditor - QA

NRC Personnel

*B. Jorgensen, Senior Resident Inspector
•J. Heller, Resident Inspector

* Denotes those attending the exit meeting on January 28, 1988.
• Denotes those attending the telecon meeting on February 3, 1988.
+ Denotes those attending the telecon exit meeting on March 2, 1988.

The inspectors also contacted other personnel during the course of the inspection.

2. Licensee Action on Previous Inspection Findings (92700 and 92701)

a. (Closed) Part 21 Item (315/78001-PP; 316/78001-PP): Deficiencies in environmental qualification of Cutler-Hammer (C-H) terminal blocks. The terminal blocks, if used, were found inside containment and were housed in penetration terminal boxes. The licensee removed all leads from any C-H terminal blocks and spliced the leads together with qualified (40 years) Raychem splices and terminations. Procedure 12 THP 6030 IMP.071, "Instrument and Control Environmental Qualification of Safety Related Electrical Equipment Surveillance/Maintenance and Replacement Program," recommended adequate surveillance and maintenance activities to ensure that electrical control, power and instrumentation cables and terminations that were EQ would retain their environmental qualification.

b. (Closed) Part 21 Item (315/81001-PP; 316/81001-PP): Possible failure of Volume Control Tank (VCT) level instrumentation. Westinghouse identified the potential for the VCT level controller (QLC-452) to fail high due to a failure of the controllers capillary reference leg. The VCT low level alarm (5 inches) was fed from QLC-452. Without reactor operator intervention the VCT could empty with a loss of suction to any operating centrifugal charging pump (potential to damage the pumps). A single random failure in the VCT level control system could lead to a loss of redundancy in the high head safety injection system.

The licensee added an additional VCT low level alarm (10 inches) for both units. Procedures 1-OHP 4024.109 and 2-OHP 4024.209, "Annunciator #9 Response Boric Acid," were modified and contained adequate instructions on how to respond to VCT level annunciators. In addition, operator lesson plan RO-C-E507, "Basic Control Systems," was modified to include information on instrument reference legs and the effects of their failure on instrumentation.

c. (Closed) Part 21 Item (315/81002-PP; 316/81002-PP): Deficiencies in Eberline micro-computer based radiation monitoring equipment. There was a potential error in the interrupt structure of the central processing unit (CPU III) board. Two interrupts of increasing priority that occur sequentially could cause the interrupt data to be lost.

The vendor supplied the licensee with vendor manual procedure inserts and modification kits for the following equipment:

- PT-1 Portable Terminals
- CT-1 Control Terminals
- Sping-3/Sping-4 Particulate, Iodine and Noble Gas Monitors

All the modifications were completed and tested satisfactorily. The inspectors verified that all the controlled manuals had the insert attached to the CPU III manual section at American Electric Power (AEP) and at the plant. Only one manual (Sping-3/Sping-4) in the Instrument and control Satellite Library, at the plant, did not contain the insert. The licensee promptly removed the manual from circulation and issued paperwork to have a controlled copy of the insert placed in the manual. The Quality Assurance (QA) organization committed to perform a surveillance of all plant satellite libraries during their current on-going audit.

This item appears to be an isolated case and the inspectors have no further concerns in this area.

d. (Closed) Part 21 Item (315/82001-PP; 316/82001-PP): Brown-Boveri Electric/ITE low voltage circuit breaker solid state trip devices have an electrolytic capacitor which could potentially fail and prevent the trip unit from opening the breaker. Subsequent licensee investigation determined that the capacitor had a low failure rate and that immediate change out of all the trip units did not constitute a significant safety hazard.

The licensee has changed out some of the trip units, modified an existing Type 504 breaker test set and purchased a new 504 test set. The 504 test set can detect a failing capacitor. The inspector reviewed Procedure 12 MHP 5021.082.010, "Maintenance Calibration Procedure For Trip Devices, Types SS-13 and SS-14 used on 480V and 600V Power Circuit Breakers," and determined that there were adequate procedure steps and acceptance criteria to detect a failing capacitor.

e. (Closed) Part 21 Item (315/83002-PP; 316/83002-PP): Static calibration drift of zero suppressed Model 763 Barton pressure transmitters. These transmitters were supplied by Westinghouse to measure pressurizer (PZR) pressure. The potential magnitude of the drift between in-plant calibrations (18 months) was established as 4.2 percent and always in the negative direction. The licensee replaced the PZR pressure transmitters with new EQ Foxboro Units in 1985 for Unit One and 1986 for Unit Two.

The inspector reviewed the past two Barton calibrations, prior to their change out, and determined that the maximum drift experienced was within each units safety analysis. In addition, transmitters that were exhibiting a larger drift were calibrated more frequently and analyses were performed to address channel operability. None of the transmitters experienced a 4.2 percent drift.

f. (Closed) Part 21 Item (315/84001-PP; 316/84001-PP): Undetectable test switch failure in the Westinghouse Solid State Protection System (SSPS). A momentary pushbutton (PB) test switch was used to test the continuity path through the safeguards slave relay. The PB would energize the master relay and open contacts that were shorting out the logic test lamp. Failure of the PB contacts to close and short out the test lamp would place the test lamp in series with the slave relay coil. On a safeguard activation, failure of the lamp would prevent the slave relay from actuating safeguard equipment.

The licensee has adequately modified the test circuitry and procedures 1 THP 4030 STP.410, 1 THP 4030 STP.411, 2 THP 4030 STP.510, and 2 THP 4030 STP.511 (Reactor Trip SSPS Logic and Reactor Trip Breaker Train A(B) Surveillance Test (Monthly)) to detect a test switch failure.

g. (Closed) Part 21 Item (315/84002-PP; 316/84002-PP): Brown-Boveri Electric/ITE low voltage circuit breaker solid state trip devices have silicon controlled rectifiers (SCR) that could exhibit high leakage current. The excessive leakage current may cause improper operation of the trip device. The vendor recommended a special stress test be used to detect bad SCRs.

The licensee has incorporated the vendors recommended testing in procedure 12 MHP 5021.082.010. The procedure steps and acceptance criteria were adequate.

h. (Closed) Part 21 Item (315/84005-PP; 316/84005-PP): Deficiency in the DETECTOR computer code that is used to calculate the Technical specification (TS) limits for enthalpy rise peaking factors. The DETECTOR code was previously reviewed in NRC inspection report 87028. The report closed out LER 84007 and Open Item 84014-01 on licensee implemented corrective actions to ensure the adequacy of the DETECTOR code.

The inspector further reviewed the application of the process computer (P250) for providing acceptable plant data to support TS calculations. The DETECTOR code uses real-time plant data that is processed by the P250 computer. The licensee calibrates the process parameter voltage to frequency (V/F) converters that input to the P250 on an 18 month interval. The P250 verifies the adequacy of the information it receives by using internal diagnostic programs. A diagnostic error is generated when a V/F converter is out of specification. The DETECTOR code uses its own diagnostic programs to determine the adequacy of the data received from the P250.

The inspector has no further concerns in this area.

i. (Closed) Part 21 Item (315/86001-PP; 316/86001-PP): Instrumentation error in the analog version of Reactor Vessel Level Instrumentation System (RVLIS) used at non-upper head injection plants. The Westinghouse supplied RVLIS system is used to provide accurate level measurement over a wide range of steam density (temperature-pressure compensation for steam density). Westinghouse identified inconsistencies in the guidelines supplied to determine scaling constants used to steam density compensate full-range, upper-range, and dynamic head spans. At pressures approaching 2500 psi, the reactor level indication may be off as much as 20 percent.

Changes were made to the scaling procedure and plant specific gains and biases were determined during system testing. The inspector reviewed procedures 1 THP 6030 IMP.315, 1 THP 6030 IMP.316, 2 THP 6030 IMP.415, and 2 THP 6030 IMP.416, "Reactor Vessel Level Indication System (RVLIS) Train A(B) Calibration (18 Month)," and determined the procedures had incorporated the correct gain and bias values as detailed in RVLIS Scaling and Calibration Documents for D. C. Cook Units One and Two (Vendor Information Control #P-0986-020-N).

The inspectors verified training was provided to the technicians. Instrument and control technicians were selected to attend formal and on-the-job training (OJT) on RVLIS. Technicians that were not trained on the system did not calibrate the system unless accompanied by a qualified technician.

j. (Closed) Part 21 Item (315/87001-PP; 316/87001-PP): Transformer terminal corrosion that was caused by acid flux residue left on the transformer leads during the manufacturing process. The licensee replaced six (6) PCB transformers with qualified dry type transformers on the 4160V safety related busses for each unit. Unit Two transformers were installed upon receipt from the manufacturer (Brown Boveri Electric). No corrosion was observed. Unit One transformers were placed in a qualified storage area for approximately 15 months. During Unit One transformer installation, pitting was observed on the plated aluminum terminals. The licensee notified the vendor. The vendor cleaned the transformer leads, polished the terminal to remove the pitting, and coated the terminals with NO-OXIDE grease. Unit Two transformer terminals were inspected and were not pitted. The vendor indicated that heat from the installed transformers caused the acid flux to subliminate (change into a gas and dissipate).

Ten of the transformer terminals were inspected by observation through the louvered panels. All of the transformers were in use at the time. The terminals showed no signs of corrosion and were coated with NO-OXIDE grease.

k. (Closed) Violation (315/85030-01; 316/85030-01): Failure of the licensee to take timely corrective action to correct deficiencies identified in 10 CFR Part 21 reports. Four items (2.b,d,f, and g of this report) were considered as examples for this violation. AEP procedure GP 15.1, "Corrective Action," contained adequate steps to prevent the recurrence of this violation. If the Corrective/Preventive actions cannot be completed by the assigned due date, extensions were granted in accordance with increasing level of management approval. All changes in report status or due dates were reported to the Trend Coordinator for tracking.

The QA organization has included a Part 21 surveillance in audit C13-86-31 & 31.1 (Electrical Generation Section) and in audit C13-86-21-21.6, 21.8 (Instrument and Control Section). No deficiencies were identified.

l. (Closed) Violation (315/86027-01): Failure of the licensee to adequately response time test the Unit One steam generator water high-high level turbine trip reactor trip. The licensee has adequately modified procedures 12 THP 4030 STP.205A and 205B, "Engineered Safeguards Features Time Response Train A(B)," to satisfy Unit One TS 3.3.2.1 and TS Table 3.3-5.

m. (Closed) Open Item (315/86027-02; 316/86027-02): Change procedures 1 THP 4030 STP.100A and 2 THP 4030 STP.100, "Reactor Protection and Engineered Safeguards System Time Response," to measure the neutron flux signal time response from the input of the first electronic component in the channel. The licensee has adequately modified these procedures to response time test the neutron instrumentation from the first electronic component.

3. Licensee Event Report (LER) Followup (92700)

a. (Open) LER (315/87023): Failure to provide electrical isolation between Local Shutdown and Indication (LSI) panels for Unit One and Unit Two.

(1) On November 9, 1987, during an investigation into the feasibility of using existing Reactor Coolant System Wide Range T-Hot and T-Cold indications (EIIS/AB-TI) for Regulatory Guide 1.97 compliance, the licensee determined that the fuses (EIIS/FU) required for isolation between the various LSI panels (EIIS/PL) were improperly located on Unit Two and were not included in the existing design on Unit One. Therefore, a condition existed that, in the event of a fire local to an LSI panel, power (both normal and alternate) to some or all of the same unit's remaining LSI panels could be lost. If power was lost to all panels, those indications available locally would

be lost. In addition, all Wide Range T-Hot and T-Cold indications, 1 of 4 channels of pressurizer level indication (EIIS/AB-LI), and both trains of the Reactor Vessel Level Indication System (EIIS/AB-LI) would be lost in the control room.

According to the licensee's analysis of this issue, with the exception of Wide Range T-Hot and T-Cold, all of the process variables indicated locally at the LSI panels would not be required locally due to their availability in the control room and the fact that a fire at any LSI panel location would not require remote shutdown. The inspectors, including NRC contractors (Brookhaven National Laboratory), performed a selected review of this issue and concluded that the process variable indications would still be available in the control room to enable a safe shutdown of the plant. Each of the units were in a power operation condition (Mode 1) at the time of discovery of this issue.

As a result of the identified deficiencies, the licensee, on December 22, 1987, implemented roving fire watch patrols to tour the LSI panel locations within each unit. At the request of Region III personnel, the licensee, on December 24, 1987, upgraded the roving fire watches to continuous fire watches. These interim compensatory measures were maintained until the necessary design changes were implemented. These changes were implemented for Unit Two on December 30, 1987 and for Unit One on December 29, 1987.

The cause of the electrical isolation deficiencies was attributed to an oversight (cognitive personnel error) by design engineers in the design and engineering process associated with the initial Appendix-R modifications. The failure to perform adequate design reviews regarding electrical isolation between LSI panels is considered an example of a potential violation of 10 CFR 50, Appendix B, Criterion III.

(2) During this inspection, the inspector reviewed the licensee's implementations of the design changes discussed above. During this review the inspector determined:

The LSI panels were located in the following fire zones:

Zone	Power Feed (Breaker)	Panel	Fuse Addition (Amperes)	Unit
5	20a(Unit 1)	LSI-3	10a	1
5		LSI-4		1
33		LSI-1	5a	1
33		LSI-5	5a	1
12		LSI-2		1
12	20a(Unit 2)	LSI-6	10a	1
5	20a(Unit 2)	LSI-3	10a	2
5		LSI-4		2
34		LSI-1	5a	2
27		LSI-5xx	5a	2
22		LSI-2		2
24	20a(Unit 1)	LSI-6xx	10a	2

The licensee implemented modification RFC-12-2992 to install fuses in the LSI panels to provide electrical isolation between fire zones. The fuse installation and power feeds to the panels are similar for both units. The LSI panels located in Unit 1(2) receive their normal power from Unit 1(2). The alternate power source comes from Unit 2(1). Procedure 12 OHP 4023.100.001, "Emergency Remote Shutdown," provided the operator with steps necessary to switch from normal to alternate power sources. Power transfer switches were located in panels LSI-4 (supplied power to LSI-3), LSI-5 (supplied power to LSI-1), and LSI-6 (supplied power to LSI-2). The fuses installed were 1E qualified. The design maintained an adequate fuse to fuse amperage coordination (2 to 1). The inspectors requested the coordinating curves for the 10a fuse to the 20a feeder breaker on 1/25/88. The licensee had not verified the adequacy of the fuse-breaker coordination. The licensee informed the inspector on 1/27/88 that the 10a fuse to breaker coordination was not adequate. This effectively placed the LSI panels in a similar configuration as initially identified on 11/9/87. Failure to apply adequate design control measures for verifying the adequacy of the design (fuse to breaker coordination) is considered an example of a potential Violation of 10 CFR 50, Appendix B Criterion III.

(3) The licensee has conducted training for the Electrical Generation Section - Nuclear (EGS-N) on properly addressing Appendix R requirements during design reviews.

The operators were notified of the previously discussed electrical deficiencies in Information Review Package IN-R-0188. The information adequately described the finding, discussed how a fire could result in the loss of redundant control room indication and described the corrective actions (fuse addition).

(4) The inspectors evaluated LER 87023 for meeting the time limit for reporting as required by 10 CFR 50.73(d). The event date was November 9, 1987 as stated in the LER. The licensee performed several evaluations of this event prior to determining the event was reportable on December 22, 1987. The report date was determined to be January 21, 1988.

NUREG-1022, Supplement No. 1, (Licensee Event Report System) recommends that the LER text include a discussion on the reason for having a significant length of time (>30 days) between the event and reportability date. The licensee did not include this discussion in LER 87023, Revision 0. The licensee was notified of this discontinuity by phone on February 3, 1988. The licensee committed to submit a supplement to the LER by February 17, 1988, and to address the reason for the delay (>30 days) between the event and reportability date. This LER will remain open pending further review.

b. (Closed) LER (315/87020): Deficient design which could have caused insufficient breaker interrupting capability between Balance of Plant (BOP) and Essential Safety System (ESS) 250 VDC loads for Unit One and Unit Two.

On September 17, 1987, during a review of an internal Safety System Functional Inspection (SSFI) on the auxiliary feedwater system (EIIS/BA), it was determined that in the event of a fault in certain BOP cables (EIIS/CBL), which would involve distribution panels from both independent trains, a loss of control power on both independent trains of related ESS distribution panels could occur.

The following distribution panels (EIIS/BL) utilize electrical circuit breakers (EIIS/BKR) manufactured by the Heinemann Electric Company (Series 0441).

Unit 1:	Train A 1-CCV-CD	1-SSV-A1, 1-SSV-A2
	Train B 1-CCV-AB	1-SSV-B
Unit 2:	Train A 2-CCV-CD	2-SSV-A1, 2-SSV-A2
	Train B 2-CCV-AB	2-SSV-B

The breakers are used for 250 VDC service. It was discovered that the interrupting capability of the Heinemann breakers, as used for D.C. Cook, is not specified by the manufacturer at 250 VDC. Furthermore, with the specified lower voltage (125 VDC) interrupting curves (trip current vs. time), a comparison of the breakers with their upstream fuses (Gould-Shawmut Trionic, or Bussman FRN) (EIIS/FU) indicated a lack of coordination for fault currents above approximately 1500 amps. Investigation concluded that this condition has existed since the initial startup of the units.

(1) Design Review

The design of D.C. Cook plants complies with the separation requirements of Safety Guide 1.75 as applied to Class 1E equipment and circuitry. The design and installation criteria was implemented by design specification DCCEE-627-QCN, "Electrical Design and Installation Criteria for Reactor Protection and Engineered Safeguards Cable Systems." BOP cables may be run in the same trough with ESS cables provided the separation criteria for BOP cables has been met. In this case, BOP loads were added to safety-related DC busses with an assumed adequate breaker coordination with the 100 amp feeder fuse. It was assumed that a BOP fault would open the breaker and not the feeder fuse. Once breaker-fuse coordination had been achieved, a BOP cable could then be run in conduit or cable trough with properly coordinated BOP cables that were fed from the redundant DC bus; provided, the BOP cables were no longer routed in a safeguard trough.

The licensee determined that the Heinemann breakers could interrupt a fault current up to approximately 1500 amperes. It was determined that this fault current protection would begin at approximately 50 feet of cable length from the breaker. The ESS load feeder fuse could have opened on a fault, given the wiring fault had occurred within 50 feet of the breaker. The licensee postulated this type of fault as being nonmechanistic (unlikely to happen) because the inadequate coordination involved both safety trains. ESS loads which may have been affected were certain containment isolation valves, reactor head vent valves, post-accident sampling valves, and steam generator stop valve dump valves.

As corrective action, the licensee removed all BOP cables from ESS cabinets SSV-A1 and SSV-B for both units. The design added a 35a 1E fuse to 1E cabinet SCP. The 35a fuse supplies the BOP loads and the coordination is acceptable with the 100a ESS feeder fuse (≥2 to 1 amperage ratio). The inspector found the installation was performed adequately and the correct fuse (35a) was installed.

Even though the licensee identified and corrected this miscoordination deficiency, this is an additional example of failure to apply adequate design control measures for verifying the adequacy of design. This is considered an example of a potential violation of 10 CFR 50 Appendix B, Criterion III.

(2) Coordination Studies

The licensee has performed a Vital AC and DC bus coordination study to support Appendix R requirements. The inspectors did not review these studies. However, the inspectors asked the

licensee to re-examine the DC study and determine if the 250 VDC miscoordination could have been identified earlier. The response was that the DC Appendix R study addressed fault currents at the actuated equipment end of the cable. Typical fault currents were 149 amperes; therefore, the coordination study appeared adequate. The licensee indicated they were preparing to re-examine all the vital bus coordination studies.

(3) Safety Significance

The actual safety significance appeared to be small. For a safety problem to have existed, BOP cables from related panels would have had to completely fail and interact simultaneously with an accident which would have required the affected ESS equipment to function.

The ESS loads that would have been affected were certain containment isolation valves, reactor head vent valves, post-accident sampling valves, and steam generator stop valve (MSIV) dump valves. All of the valves would have failed to their safe position (i.e., closed) or would have already been closed, except for the MSIV dump valves.

Each MSIV has two redundant dump valves. Each valve receives power from a separate ESS 250 VDC bus. The energization (ESF Phase B isolation) of either dump valve will initiate fast closure of its associated MSIV. The postulated nonmechanistic failure of the DC busses could prevent the fast closure of the valves. However, the MSIVs could have been closed through their hydraulic closure mechanism. Controls for the hydraulic closures were located in the control room and were powered from the 600 VAC Auxiliary Bus.

The inspector reviewed the operating procedures that would be used to identify and respond to an uncontrolled depressurization of all steam generators. The following procedures were reviewed:

- 1-OHP 4023.001.005 Steam Line Break (1981)
  (procedure superseded by the following)
- 1-OHP 4023.E-0 Reactor Trip or Safety Injection (1986)
- 1-OHP 4023.E-2 Faulted Steam Generator Isolation (1986)
- 1-OHP 4023.ECA-2.1 Uncontrolled Depressurization of ALL Steam Generators (1986)
  (procedures are similar for Unit 2)

All of the above procedures provided instructions to the operator on how to identify and respond to MSIVs that failed to automatically close on a Phase B isolation signal. It appears that the licensee had adequate procedures in place to mitigate the consequences of a steam line break without fast closure of the MSIVs.

The inspectors have no further concerns in this area.

c. (Open) LER (315/87022): Potential violation of ESF instrumentation limiting conditions for operation tolerances due to Foxboro pressure transmitter calibration shifts. These transmitters were installed in 1985 for Unit One and 1986 for Unit Two. Preliminary review of the last calibrations determined that there were 24 instances of calibration shift on Unit One, with four of these possibly due to a calibration error. Also, two transmitters were replaced. Unit Two experienced 25 instances of calibration shift with one transmitter being replaced.

Interviews with instrument and control technicians indicated that Foxboro transmitters typically experience some calibration shifts during their first calibration interval due to the mechanical zero and span mechanism. Once the transmitters find a mechanical equilibrium point (from use), the technicians indicated the transmitters were stable.

Many of the technicians had previous experience with existing Foxboro transmitters. The new transmitters work in a similar manner. The technicians gained additional experience with the new transmitters prior to their installation by performing bench calibrations. The calibration shift does not appear to be training related.

The licensee committed to submit supplemental information. This will include a complete analysis of the event and any corrective actions to be implemented to reduce the calibration shift. This LER will remain open pending further review.

No other violations or deviations were identified.

4. Exit Interviews

The inspectors met with licensee representatives (denoted in Paragraph 1) on January 28, 1988 to discuss the scope and preliminary findings of the inspection. A followup meeting was held with licensee representatives (denoted in Paragraph 1) via telecon on February 3, 1988. A final exit meeting was held with licensee representatives (denoted in Paragraph 1) via telecon on March 2, 1988. The licensee stated that the likely content of the report would contain no proprietary information.