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Licensee: Baltimore Gas and Electric
Post Office Box 1475
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Facility: Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Inspection at: Lusby, Maryland

Inspection Conducted: May 22-26 and June 9-16, 1989

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Summary: May 22-26 and June 9-16, 1989: Inspection Report Nos. 50-317/89-15
and 50-318/89-16

Areas Inspected: Control of measuring and test equipment; Review and control of vendor technical manuals; Control of welding process activities; Control of quality control (QC) inspection activities; Configuration control related to control of maintenance activities; and Control of overtime (IP 92701).

Findings: The inspection confirmed instances of failure to adequately implement administrative controls related to the control of measuring and test equipment, vendor technical manuals, welding process activities, and quality control inspection activities which are collectively indicative of an apparent failure to implement an effective quality assurance program. Concern regarding uncontrolled modifications to systems or components as a result of maintenance activities was not substantiated. Isolated instances of apparent failure to approve overtime in excess of Generic Letter 82-12 requirements were noted.

DETAILS

During this inspection, interviews and discussions were conducted with various licensee personnel including operators, maintenance and surveillance technicians, technical and administrative support personnel, and the licensee's management staff.

1.0 Overview

During the period February 27 through March 31, 1989, a Special Team Inspection was conducted at the facility under the direction of the Chief, Special Inspection Branch, Office of Nuclear Reactor Regulation. (See Report Nos. 50-317/89-200; 50-318/89-200). During the conduct of that inspection, fourteen unresolved items and numerous other points of concern were identified. The purpose of this inspection was to follow up on selected items identified during that inspection.

2.0 Control of Measuring and Test Equipment (M&TE) (Unresolved Item 50-317/89-200-1)

2.1 Background

The Special Team Inspection determined that the licensee was using some test pressure gauges for safety related testing that were not in the M&TE program. In particular, the pressure gauges in question were not being verified in calibration following safety related use as were test pressure gauges within the licensee's M&TE program, were not subject to procedural controls, were not subject to recall, and means to verify test data from such gauges could not be relied upon.

2.2 Findings

The inspector reviewed the circumstances, effects and the licensee's corrective actions concerning this unresolved item. The inspector also examined the licensee's M&TE program to determine if it was being properly implemented. The examination included interviews, review of the licensee's Quality Assurance M&TE Audit findings and subsequent corrective action, training records, and review of the calibrations of randomly selected M&TE.

10 CFR 50, Appendix B, Criterion XII requires licensees to establish measures to assure that tools, gauges, instruments and other measuring and test devices used in activities affecting quality are properly controlled, calibrated and adjusted at specified periods to maintain accuracy within necessary limits. The licensee controlled

measuring and test equipment in accordance with Calvert Cliffs Instruction (CCI) 120D "Calibration Program for Measuring and Test Equipment" and Quality Assurance Procedure (QAP) 17, "Control and Calibration of Measuring and Test Equipment." This instruction and procedure required the supervisor of each group responsible for M&TE to ensure that approved calibration procedures for test equipment were available and used.

At Calvert Cliffs, the responsibility for M&TE was delegated to the supervisor of each group (i.e., Electrical and Control, Mechanical Maintenance, etc.). The control of M&TE varied within each group. Pressure gauges and electronic test equipment were calibrated by the Equipment Test shop. The control of this M&TE was divided between the Electrical and Controls Test equipment cage, Operations, and Performance Engineering. Torque wrenches, micrometers, etc., were calibrated and controlled by the Mechanical Maintenance unit; however, some of the measuring equipment was issued to certain craft for continued use between calibrations. Craftsmen maintained usage logs. There was also an Electric Test group which calibrated and issued M&TE for switchyard maintenance.

The inspector randomly selected five test instruments from the Electrical and Controls test equipment cage to verify that the licensee's M&TE program was being properly implemented. Proper storage was verified. Calibration procedures were reviewed against the vendor technical manuals and were found to be adequate.

Review of the calibration records for one of the test instruments indicated that requirements of the M&TE program were not being met consistently. Specifically, the inspector determined that a 8600A series Fluke Multimeter (Serial No. 10273) used for safety related activities was found to be out of tolerance in the kilohm range on January 11, 1989, and could not be successfully calibrated without repairs. The instrument was repaired and calibrated on April 1, 1989. The shop supervisor reviewed the calibration record sheet two days later. QAP 17 required that a Nonconforming Report (NCR) be promptly prepared when M&TE is found to be out of tolerance and used for safety related applications. Neither the technician nor his supervisor prepared a NCR as required even though the instrument's usage card indicated it had been used for a safety-related activity (STP 527A-2 Reactor Vessel Level Indication System). On May 1, 1989, the same instrument was found to be out of tolerance on the same range. Again, an NCR was not prepared as required although it had been used for a modification to the nuclear instrumentation system (Field Change Request 82-150). When this procedural noncompliance was identified to the licensee by the inspector, NCRs were immediately prepared. The licensee determined that, in both instances, the instrument was used as a go - no-go device (i.e., checking state of relays) and concluded that there was no nuclear safety impact. Further

review of the instrument's calibration records indicated that on three previous occasions (January 88, October 88, and November 88), the kilohm range was found out of allowed tolerance. American National Standards Institute (ANSI) N18.7-1976 to which the licensee is committed requires that any calibration, testing or measuring device that is consistently found to be out of calibration be repaired or replaced. The licensee's M&TE program did not have provisions for trending M&TE performance or requirements to remove unreliable M&TE from the program. The licensee subsequently removed the above instrument from the M&TE program. The licensee acknowledged the weakness due to a lack of trending, but made no subsequent commitments.

QAP 17 required that uncalibrated M&TE be physically segregated from calibrated M&TE to prevent inadvertent use. QAP 17 also required that storage conditions protect cleanliness and meet suitable environmental requirements. CCI-120D required that the use of calibrated M&TE be controlled. Contrary to the above requirements, the inspector found that M&TE assigned to the Performance Engineering section was being stored in an uncontrolled area, was not properly segregated and was stored in an environmentally unsuitable area. The Performance Engineering's M&TE was stored in a large equipment cage on the 12-foot level in the water treatment building. There was no control of the M&TE in that electricians and instrument technicians had access to the normally unmanned cage. The inspector found an uncalibrated ultrasonic flowmeter stored along with calibrated M&TE. The area used to store the calibrated instruments was dirty and very humid. The licensee related to the inspector that the Performance Engineering's M&TE storage area was temporary and that a permanent air conditioned and clean storage area would soon be made available.

Another weakness noted by the inspector was that the Equipment Test shop supervisor along with many other duties must typically review an average of more than 30 calibration data sheets per day. It appeared that the staff in the Equipment Test shop was insufficient to assure proper reviews were conducted as indicated by the failure to prepare NCRs. This weakness had been previously recognized by the Group Supervisor of Electrical and Controls who was reportedly taking action to increase staffing.

The inspector also examined the M&TE program controlled by the Mechanical Maintenance unit. The program appeared to be adequate with the exception of timely reviews of Calibration Data Sheets by the unit supervisor. Calibration data sheets were being reviewed two to six weeks after the calibration was performed. The M&TE program did not specify any time requirements for these reviews.

The licensee reviewed the practice of using some test pressure gauges for STP's that were not included in their M&TE program and took several steps to prevent further occurrence. It was determined that, for several years, instrument maintenance technicians were using a group of test pressure gauges which did not receive a post-use calibration check as did similar test pressure gauges issued via the licensee's M&TE program. Immediately prior to issuing a test pressure gauge, instrument maintenance technicians would perform a bench calibration check using a ten times more accurate instrument as the standard. After use, it would be placed on a shelf until it was used again at which time another calibration check was performed. The licensee took several actions to determine safety significance of this practice. To ensure the adequacy of the calibrations performed on the above gauges, the licensee was able to trace back each calibration to the appropriate National Bureau of Standards calibration standard. A calibration check was performed on all the gauges in question and all were found to be properly calibrated. The licensee also determined which STP's were performed with the gauges so that if any of the gauges were found to be out of tolerance, a determination of operability of plant equipment could have been made. All gauges in question have been removed from use and all test pressure gauges utilized were incorporated into the licensee's M&TE program.

2.3 Conclusions

The above examples are indicative of a marginally acceptable M&TE program. While no direct impact on nuclear safety was determined, the failure to control the test pressure gauges within the M&TE program; the failure to prepare timely NCRs; and the improper control, segregation and storage of the Performance Engineering's M&TE are specific examples of failure to properly implement the M&TE program as required by CCI 120D and QAP 17. This is an apparent violation of quality assurance program requirements and licensee procedures and commitments.

3.0 Review and Control of Vendor Technical Manuals (Unresolved Item 50-317/89-200-07)

3.1 Background

The special team inspection identified three concerns related to the control of vendor technical manuals. Specifically:

- Five instances of failure to comply with Calvert Cliffs Instruction (CCI) 122E, paragraph V.B.2, which required that one who transmits a technical manual to the technical librarian review the manual and provide as much information as possible using the technical manual turnover cover sheet.

- Fifty-one instances of failure to comply with CCI 122E, paragraphs V.B.3f and V.B.4 which require that manuals be forwarded to the General Supervisor - Plant and Project Engineering (GS-PPE) for technical review and that the GS-PPE return approved manuals to the technical librarian within fifteen working days of receipt.
- The Engineering Department had not been provided detailed guidance regarding the required technical review and engineers responsible for the review did not appear to be sure of review requirements.

3.2 Findings

The inspector reviewed licensee actions taken to resolve the above concerns. The licensee had identified and documented approximately 300 technical manuals which had not been reviewed. An additional 26 manuals were in the review process, the oldest of which had been in that status since January 1988.

The inspector noted that, of the 26 unapproved manuals which were undergoing technical review, 45 copies had been distributed to the field. Follow-up inspection of this item with holders of the copies of unreviewed/unapproved manuals did not reveal any instance of the manuals having been used in conjunction with operating activities, i.e., functions associated with normal operation and maintenance of the plant and technical services routinely assigned to the onsite operating organization. The licensee representative responsible for the project of configuration management (including drawing and technical manual control) committed to immediate recall of all unreviewed and/or unapproved technical manuals and to the cessation of issuing technical manuals prior to having been reviewed and approved for issue and use. The inspector noted through review of administrative controls and interviews with licensee staff that the primary reason for document control, i.e., assuring that only properly reviewed and approved documents are utilized in activities important to safety, was not fully conveyed in procedures nor understood by many members of the licensee staff.

Current licensee practice relies solely on all individuals who may receive technical manuals, revisions to technical manuals, or other related technical information, forwarding such documents to the Technical Librarian (CCI-122E, III.D.3). The inspector noted that persons had "personal copies" of technical information received in vendor training courses and one instance in which an individual was reportedly on the vendor's (Limitorque) distribution list for maintenance-oriented technical reports. This individual had forwarded copies of these documents to the Technical Library. Again no

instances of use of such technical information was discovered during the course of the inspection. This practice and the potential for uncontrolled usage, and methods to strengthen control of unapproved documentation, including specifying delivery instructions in procurement documents, was discussed with licensee supervisory staff members. The inspector reviewed a copy of Section Guideline PPE-1 "Technical Information Review Checklist", dated June 9, 1989, issued by the GS-PPE to be used when performing reviews of vendor technical manuals or revisions. This document provided a checklist of information to be verified including technical data; equipment description; installation, operating, and maintenance instructions; testing and prevention maintenance; spare parts; and drawings. It was also noted that this checklist levied additional requirements on the Technical Library above those currently provided in CCI-122E. (The inspector reviewed a proposed revision to CCI-122 which would, among other changes, include this checklist as a revision to the existing Attachment 2, Technical Manual Review Cover Sheet. It was also noted during the review that a Note on page 5 stated that if the GS-PPE rejects the manual, all copies will be recalled by the Technical Librarian and destroyed, which would infer that the policy of distributing unreviewed technical manuals will be condoned.)

A review of distribution lists indicated that approximately 3000 copies of technical manuals were in the controlled distribution system.

3.3 Conclusion:

Title 10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures, ...and shall be accomplished in accordance with these instructions, procedures or drawings. Title 10 CFR 50 Appendix B, Criterion VI further requires that measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel...The practice of distributing unreviewed technical manuals to the onsite operating organization is an apparent violation of these Criteria.

4.0 Control of Welding Process Activities (Unresolved Item 50-317/89-200-08)

4.1 Background

During the NRC Special Team Inspection, inspector observations in the area of weld filler material control gave rise to concern that licensee management was not providing adequate guidance to workers in this area. Specifically, requirements for weld filler material control were being provided through a recently issued shop/lab memorandum No. M-64 rather than a Plant Operational Safety Review Committee (POSRC)

approved procedure. In addition, the shop/lab memorandum referenced welding program procedures, WPP 6.006, Weld Authorization and Documentation, and WPP 6.009, Control of Welding Materials, neither of which had received POSRC review or approval. Moreover, WPP 6.006 and WPP 6.009 were not available for reference at stations that issued weld filler material. A sketch meant as an aid for the attendant in locating weld rod types being heated in a particular weld rod holding oven was also found at one weld rod issue station but had become outdated and no longer accurately depicted the actual type of weld rod being heated. The Special Team inspector also observed the temperature reading on one rod holding oven to be slightly outside the temperature band specified by WPP 6.009.

4.2 Findings

During this inspection, the inspector followed up on these concerns and reviewed corrective actions taken by the licensee since the Special Team Inspection. The inspector reviewed additional records associated with the control and documentation of weld filler materials and weld rod holding oven temperature calibrations. Additional observations of weld filler material control activities were also made in the field. From these reviews and observations, the inspector concluded that there did not appear to be pervasive problems with the control of weld filler materials at the site. The inspector noted that the licensee had taken immediate corrective action subsequent to the Special Team Inspection to assure that at each weld rod issue station, copies of WPP 6.006 and WPP 6.009 and shop/lab memorandum No. M-64 were available to the attendant for reference. A proposed Calvert Cliffs instruction, CCI-226, "Filler Material Control", which would replace the currently in-use shop/lab memorandum was being reviewed. The inspector's review of the draft CCI-226 indicated that the new procedure would more appropriately delineate the requirements for the control and issuance of weld filler materials. The new procedure would also provide for an increased frequency of conducting oven temperature calibrations and checks of oven temperature by the rod attendants prior to issuance of any weld rod thereby reducing the chances of deviations in oven temperatures going undetected. The inspector also inspected a number of different weld rod holding ovens; in all cases, the rod inside each oven was properly identified by type, purchase order number, and heat or lot number. The licensee had discarded the attendant aids as being unnecessary and potentially confusing.

4.3 Conclusions

Immediate corrective actions taken to date by the licensee to address the concerns identified by the special team inspection in this area appeared appropriate. However, the inspector did determine that the licensee had failed to maintain appropriately approved procedures for control of weld filler material subsequent to cancellation of CCI-222, "Calvert Cliffs Control of Welding Activities" on February 14, 1989. This is considered an example of apparent failure to maintain adequately reviewed and approved procedures for the conduct of safety related activities related to special processes.

5.0 Control of Quality Control (QC) Inspection Activities (Unresolved Item 50-317/89-200-09)

5.1 Background

The Special Team Inspection identified a significant weakness in that the licensee did not have approved administrative procedures or written instructions for controlling, implementing, and documenting QC inspections. Inspections of activities affecting quality were reportedly routinely waived due to inspector unavailability, apparently precipitated by lack of effective planning and scheduling. Further, it appeared that the licensee relied on the QC inspector's judgement to ensure that required inspections were performed, that appropriate acceptance criteria were met and that inspections were adequately documented.

5.2 Findings

The inspector reviewed the activities of the Quality Control Unit (QC), a part of the Quality Assurance organization, and associated administrative controls and implementing procedures. QC inspectors were accompanied, interviewed and observed during their monitoring of maintenance work being performed in accordance with selected Maintenance Orders (MOs). Selected MO packages were reviewed for recently completed work and tasks scheduled to be worked on during the course of this inspection.

The QC inspector assigned to monitor work performed under MO 209-025-756A, Circuit Breaker Pole Shaft Replacement, and the maintenance electricians doing the job were observed at various stages of the task. The MO had been reviewed by QC when it was initially issued; it contained instructions to notify QC prior to the start of any work. The governing procedures (CCI-201G and FTE 53) had been obtained and previously reviewed by the QC inspector. The scope of

work was essentially a refurbishment of one of a number of like breakers and FTE 53 was a comprehensive step by step instruction to accomplish the job. This procedure included post maintenance test requirements and provided for entry of as-found/as-left data and technician signatures, but no specific QC hold/witness points. The QC inspector and QA/QC supervision stated that maintenance work selected for overview was, for the most part, monitored in its entirety.

Portions of the repair work being done on Charging Pump 13 breaker under MO 209-50-559A were observed including QC monitoring of this task. The MO instructions included only eight steps that were (1) a tagout requirement, (2) four general work statements, and (3) three references. One of the references was Procedure FTE 53 and the two maintenance electricians were using those steps of that comprehensive procedure (see above) that they determined were necessary for the task. It was noted that the workers had appropriate electrical diagrams at the job site in addition to the other referenced documents (e.g., vendor technical manual 12-410-120 02-1). The QC overview again was of the entire task.

MO 209-137-252G work package for the disconnection, repair and reconnection of eight Unit 1 pressurizer heaters was reviewed and discussed with QA/QC and maintenance personnel. The MO steps contained general statements such as megger all heaters and check resistance with a digital megger meter (DMM) or volt-ohm meter (VOM). One step gave criteria to reconnect cable leads to L-shaped lugs and a maximum torque value of 65 inch pounds. There were no other acceptance criteria or QC hold/witness points specified or referenced in the MO. Licensee management stated that the QC Critical Characteristics Inspection Program (see below) was being implemented for this task and provided a partially completed inspection procedure. This procedure was completed prior to the conclusion of the inspection and contained appropriate acceptance criteria and parameters for important work steps. However, it was noted that the same task for Unit 2 will have at least six detailed procedures provided in the MO package. This difference in philosophy between essentially identical work was discussed with licensee management. Prior to the conclusion of this inspection, licensee management decided to provide the same level and type of instructions/procedures for the Unit 1 work.

Work package MO 209-142-369G under which two solenoid valves were replaced on a Service Water heat exchanger was reviewed. The MO sheet was a general statement of work scope; however, the package included specific special step-by-step instructions. Although there were no QC hold/witness points on the instruction, the QC inspector had written a short paragraph on what had been witnessed.

MO 209-31-001A package, a pressurizer level modification, was reviewed. The package contained detailed work and functional test procedures that included specific QC hold/witness points. In addition to properly executed entries and signoffs, the package contained cable pull slips, daily action sheet writeups, etc. The QC inspector had signed all the hold/witness points.

MO 209-114-542A package for removal of old and installation of new straps on an instrument air header was reviewed. The package contained appropriate prints and a welding procedure. The procedure was annotated as required, the worker had written a short description of work done and an NDE data sheet was also in the package.

MO 209-058-345A package for a snubber changeout was reviewed. The package contained a traveller in addition to a specific work procedure. The lead worker and the supervisor had entered their signatures where required. Although no QC hold/witness points had been entered in the procedure or traveller, the QC inspector had initialed the worker written short description of work done.

A review of QA/QC administrative procedures found no descriptions of the methodology or process followed by the QC Unit in implementation of their inspection and overview responsibilities. A similar review of 16 plant implementing procedures (Calvert Cliffs Instructions) identified that they did include statements of QC notifications, requirements, actions, inspections, etc. The licensee was aware of the lack of administrative type procedures as a result of the Special Team Inspection and a series of such procedures were being developed. Two new procedures were in draft form and an existing procedure was being modified/revised in an initial effort to correct this condition. A number of CCIP inspection procedures that had been completed were in a validation process.

Discussions with QA/QC management determined that the licensee had identified several areas where steps need to be taken to correct/enhance the QA program and its implementation and the organization is in a transitional phase. During this inspection a realignment of the QC Unit was effected and experienced craft people were appointed to newly established supervisory positions. Licensee management stated that the effectiveness of the new QC structure will be closely monitored and any needed changes would be made in addition to those already planned to enhance the remainder of the organization.

Licensee management outlined their plan for enhancing QC overview of maintenance work that has been designated as the Critical Characteristics Inspection Program (CCIP). This approach is based on verification of attributes/characteristics that are most important to quality and the CCIP is currently under development. An interdisciplinary team (engineering, operations, maintenance, etc.) has been established to develop QC inspection procedures using the new approach. The inspector attended a meeting of this team during the course of this inspection.

The licensee's initiative to develop the methodology for QC overview of ongoing maintenance and receipt inspection activities that would enhance the use of QC resources is commendable. However, the necessity of this undertaking by the QA/QC organization itself is indicative of a lack of engineering and technical support in the past.

5.3 Conclusions

Ongoing work was being independently monitored and subjected to overview by QC personnel. Audits and surveillances (i.e., monitoring of ongoing activities) were being conducted. Implementing plant procedures contained statements of QC overview and involvement. However, most of the controls, methodology, and process by which QC was to conduct its routine activities were not described in administrative type procedures. This is an example of an apparent failure to have such procedures as required by 10 CFR 50, Appendix B, Criterion V.

The lack of adequate work details that was identified in the MO packages discussed above and in section 6.0 are additional examples of apparent violations of the requirements of 10 CFR 50, Appendix B, Criterion V.

6.0 Configuration Control Related to Control of Maintenance Activities (Unresolved Item 50-317/89-200-14)

6.1 Background

The Special Team Inspection raised concern regarding the possibility of loads having been added to busses and piping systems or components having been modified without engineering evaluation or approval, and without the alterations having been reflected in drawings or manuals.

6.2 Findings

The inspector specifically reviewed selected maintenance activities to determine whether modifications might have been done to equipment during maintenance work without appropriate engineering involvement including technical evaluations in accordance with 10 CFR 50.59.

The corporate computerized data base of maintenance work completed since 1985 was scanned and approximately 60 Maintenance Orders (MOs) were selected for further review based on the summary statements of work done. It was determined that 30 MO packages would be reviewed in depth because of the type of tasks involved, e.g., troubleshooting, use of jumpers, repairs and time needed to complete the work. The MO packages represented twelve systems, e.g., Reactor Protection System, Service Water, Containment Isolation and Main Feedwater. Further followup was conducted on 17 MO packages with respect to replacement of equipment, associated procurement, QA/QC requests for corrective actions and other such significant work evolutions. Additionally, the electrical panels associated with the Emergency Diesel Generators (Control Room and local) were compared against engineering drawings. Interviews were conducted with two individuals who had commented to STI inspectors that they were aware of unauthorized plant modifications.

The work associated with the reviewed MOs ranged from no work being done to modification or replacement of equipment. Troubleshooting MOs included a trip indicator light that was found to be operational (therefore, no work was done), cleaning steam generator pressure indicator slide links, resoldering a link to a terminal in the reactor protection system (RPS) and replacement of a 5-vDC power supply for the peak detector in the RPS. Repair MOs included work on damaged insulation, butt splicing cable, cleaning resistors and replacement of transmitters. When work associated with either a troubleshooting or repair MO indicated equipment replacement was necessary, a new MO was generated and processed in accordance with established requirements. Examples of replaced equipment were charging pump valves and switches in the N2 supply system. MOs were also issued to replace component parts such as emergency trip springs in feedwater throttle valves.

One example of a repair MO that resulted in what might be described as a modification was the replacement of controllers on Feed Regulator Valves FIC-1111 and 1121. During installation of the spare controllers purchased from the original vendor, it was discovered they had arrived missing a wire necessary for the DC power supply. This was brought to the attention of Engineering who issued oral permission to install a permanent jumper. Followup indicated that the drawings in existence at the time of this work had been subsequently

consolidated and the current applicable drawing shows the permanent jumper. Although there was documentation of engineering involvement (e.g., notification of jumper installation and drawing revision), a documented safety evaluation could not be located. The lack of documenting safety evaluations for modifications to equipment important to safety was the subject of a previously scheduled May 26, 1989, NRC Enforcement Conference with the licensee.

While reviewing the sampled MOs, it was noted that a Provisional Modification process had been in use for a number of years. This method of performing modifications was reviewed and discussed with cognizant technical personnel. The Provisional Modification process was used whenever a need arose for a minor modification to be completed in an urgent fashion. The details of the process had changed a number of times during the past few years, so particular attention was directed at the current methodology and controlling procedures. The process appeared not to have consistent engineering involvement if the equipment was not safety related. The most recent practice appeared to be that when a need for an urgent modification was identified: (1) QC initiated a Nonconformance Report (NCR); (2) a Field Change Request (FCR) was initiated; (3) work could commence under oral direction from engineering; (4) evaluations, reviews, requirements, approvals, etc. flowed through the normal modification process; (5) a documentation package was routed through the modification review process; (6) the as installed modification was verified to be in accordance with the modification package; (7) the modification package was reviewed by QC, additional corrective actions taken if necessary and the NCR closed when everything is determined to be satisfactory; and, (8) the equipment was then returned to operations.

Discussions with the two individuals previously interviewed during the STI identified that the unauthorized modifications had been to a house services bus and the plant sewage system, both of which are not safety-related or important to safety. The power supply to welding machine receptacles had been connected to the non safety-related bus, located in what was then the chlorine treatment building. Subsequently, that building was converted to a welding shop and authorized modifications were done to electrical power panels to make them suitable for their intended use. The welding shop was visited and it was apparent that the panels were newer than the building and remaining contents. Visual examination indicated that the installation was exclusively for welding shop use.

6.3 Conclusions

Based on the inspector's onsite followup, interviews with workers, and review of maintenance and modification records, no immediate safety concern was identified. Unresolved item 50-317/89-200-14 is considered closed. The modification area will continue to be reviewed in conjunction with NRC followup of the licensee's Performance Improvement Program (PIP) initiatives.

7.0 Control of Overtime

7.1 Background

During the Special Team Inspection conducted from February 27 through March 31, 1989, the team identified 20 instances in which licensee employees had exceeded the overtime guidelines delineated in Calvert Cliffs instruction CCI-140E, "Shift Staffing and Overtime Controls."

7.2 Findings

To verify that licensee employees were not working excessive overtime and that the administrative requirements delineated in CCI-140E were being complied with, the NRC inspector reviewed randomly selected timekeeping records for licensee employees in the areas of operations, maintenance, and quality control. The records reviewed were from April through May 1989. During this review, the NRC inspector identified seven instances in which licensee employees worked more than 72 hours in a 7-day period without Attachment (1) to CCI-140E being submitted by appropriate licensee personnel. The number of hours worked in these 7 instances ranged from 76 to 84.5 hours. Section XIV.A.3 of CCI-140E required that deviations from the above guidelines be authorized in writing by the Manager-CCNPP or the individuals General Supervisor by use of Attachment (1) to CCI-140E.

7.3 Conclusions

Based on the NRC inspector's review of the timekeeping records, it did not appear that the use of overtime was excessive since most records reviewed indicated that licensee employees were getting at least one day off in any seven day period. However, failure to comply with the review and documentation requirements of CCI-140E is considered an apparent violation.

8.0 Overall Conclusions

The above findings indicate apparent violations in programs controlling measurement and test equipment (10 CFR 50, Appendix B, Criterion XII); document control (Criterion VI): welding, i.e., special process (Criterion IX); procedural control, i.e., the failure to properly prescribe activities affecting quality in appropriate written form or to accomplish such activities in accordance with written directions (Criterion V); and quality control activities (Criterion II). Individually, no findings of immediate safety concern were identified; however, taken collectively, it was concluded that aspects of the quality assurance program were either weak, absent, or not followed or enforced. This weakness which pervades a number of quality assurance program criteria may be better characterized and combined as a failure to effectively implement a quality assurance program. In addition, there was an apparent violation of internal overtime administrative requirements.

9.0 Exit Meeting

At the conclusion of this inspection, the inspection team presented the above findings to licensee management personnel. At no time during this inspection was draft material provided to the licensee.